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Charles Pickering

CHRONOLOGICAL

HISTORY OF PLANTS:

MAN'S RECORD

OF HIS OWN EXISTENCE ILLUSTRATED THROUGH THEIR NAMES, USES, AND COMPANIONSHIP.

By CHARLES PICKERING, M.D.,
AUTHOR OF "RACES OF MAN."

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"And out of the ground the LORD God formed every beast of the field, and every fowl of the air; and brought them unto Adam to see what he would call them."

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BOSTON:
LITTLE, BROWN, AND COMPANY.
1879.

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PREFACE.

THIS work, to the preparation of which the last sixteen years of DR. PICKERING'S life were devoted, forms the last of the contributions to knowledge due to the zeal and industry in the accumulation of facts which early distinguished him. Unhappily, he did not live to see its publication, but died March 17, 1878, while it was passing through the press.

The manuscript, however, was complete, even including the alphabetical index, the whole of which he had prepared, with the exception of the paging, which it was his custom to render conformable to the printed sheets of the work as fast as he received proofs of them. The manuscript was written with great care, and he had made very few changes in the pages, about six hundred and fifteen in number, which he had seen in type. The remainder of the work has accordingly been printed in exact conformity with the manuscript.

Three biographical notices of the author have been added; one from the "Unitarian Review" for April, 1878; another from the "Proceedings" of the American Academy of Arts and Sciences, Boston, Massachusetts; and a third from the "Proceedings" of the Academy of Natural Sciences, Philadelphia, Pennsylvania.

A steel engraving of a photograph of DR. PICKERING, taken a few years ago, has also been prefixed to the volume.

S. S. P.

BOSTON, U. S. A., May 1, 1879.

BIOGRAPHICAL NOTICES

OF

DR. CHARLES PICKERING.

THE Life of this distinguished naturalist is to be found in his works. His time, thought, and strength were given to them. They bear marks of the painstaking, patient, thoughtful, conscientious student, whose life was spent in the search after truth. He seemed to be the most equable and unexcitable of men; but underneath that quiet exterior was an enthusiasm which no dangers or difficulties could daunt, and which no amount of labor or length of time could chill. The love of knowledge in his chosen sphere was with him at once a governing principle and a ruling passion. It showed itself in his childhood, and continued as long as he lived. An early friend, Mr. John L. Gardner, speaking of the boyhood of Mr. John C. Lee, says: "You are right in supposing that our early rambles in Wenham were favorable to the cultivation and improvement of his natural liking for the wonders of animal and vegetable life; for our companion was CHARLES PICKERING, a born naturalist, who seemed instinctively to know all the habits and resorts of flying and creeping things, and has since become one of our most distinguished men of science."* At the time here referred to, Charles Pickering could not have been more than nine years old. But the passion which in his early boyhood gave him such an influence with his associates, only increased in strength with advancing years. It carried him into almost every corner of the earth in his search after facts pertaining to his favorite science. Nothing to him was common or unclean, if only it could throw some additional light on that. No weed was looked upon by him as worthless; no place seemed inaccessible; no ancient monuments or hieroglyphics were given up by him as illegible or unintelligible; no plodding through the dusty records of the remotest antiquity was wearisome to him,—if only it promised to furnish some new fact, which might add to the completeness of his work. We doubt if any one naturalist ever united in himself, so far as he did, the qualities of an exact original observer on the most enlarged scale and of an inquirer into all that had been learned before. His minute, laborious, and extended explorations into all possible records of past ages, seemed of themselves more than enough for the work of a lifetime. It almost makes one's head ache to

* Memorial of John Clarke Lee, by Rev. E. B. Willson, p. 8.

look at the index, which barely points to the authors whom he had consulted and the subjects which he had investigated. If, with his vast accumulation of facts, he was exceedingly cautious in his generalizations, and looked sometimes with a sort of amused distrust on the popular theories of the hour, it should be regarded rather as a virtue than a failing in these days of hasty inferences from very imperfect data. He not only visited every quarter of the earth, but went through the whole range of history wherever it could bear upon his subject, in quest of any thing that might help him better to understand "The Races of Man and their Geographical Distribution, The Geographical Distribution of Animals and Plants, and The Chronological History of Plants." The field was vast; the laborer did not shrink from the work which it imposed, but engaged in it and carried it on all the more earnestly on that account. The ripest fruits of his labors are here placed before the reader.

Instead of attempting a sketch of the author's Life, we give below Notices which appeared soon after his death from persons who had seen him under different circumstances and in different relations. It is hoped that the reader will excuse in them a few repetitions. J. H. M.

[The following Notice, written by Rev. JOHN H. MORISON, was published in the "Unitarian Review," April, 1878.]

DIED in Boston, March 17, of pneumonia, Dr. CHARLES PICKERING, a very remarkable man, whose life and uncommon powers of intellectual labor and attainment have been employed among us for the advancement of science and the improvement of our race.

He was the grandson of Colonel Timothy Pickering, a member of Washington's Cabinet, and one of the most distinguished men of his day. His father, Timothy, son of Colonel Pickering, died before he was thirty years of age. Charles was born in 1805, and with his brother Edward was brought up by their mother, Mrs. Lurena Pickering, a woman of rare excellence, and well fitted to fill the most responsible of all offices in the early training of two such sons. Very early Charles showed the strong bent of his mind towards natural history, and would come home from his boyish excursions loaded with plants, insects, birds, and quadrupeds. He was a member of the class of 1823 at Harvard College, and graduated from the Massachusetts Medical School in 1826. He practised medicine several years in Philadelphia, and while there devoted much of his time to the American Academy of Natural Sciences of that city, being an active member of that as of many other scientific societies.

In 1838, Dr. Pickering was appointed Naturalist of the United States Exploring Expedition, under the command of Charles Wilkes, U. S. N., and sailed with the expedition on board the "Vincennes." This must have given him grand opportunities for extending his favorite studies on a magnificent scale. And these oppor-

tunities for original observation were still further enlarged; for soon after his return from this voyage on the 11th of October, 1843, he left Boston, and visited Egypt, Arabia, India, and the eastern part of Africa, for observation. After his return, he published, in 1848, "The Races of Man, and their Geographical Distribution," being vol. ix. of the Exploring Expedition. In 1854, he had ready for the press "The Geographical Distribution of Animals and Plants," being vol. xv. of the United States Exploring Expedition; but, in consequence of the slowness of our government in such matters, only the first portion of this work has been printed.

The great work of Dr. Pickering's life, "The Chronological History of Plants," to which he had devoted sixteen years of laborious research, was only recently completed, and is now passing through the press.

One has only to reflect on the titles of these books, to see how vast an extent of knowledge was required to give to them the completeness at which Dr. Pickering always and conscientiously aimed. We are not competent to judge of their merits; but we have no doubt of the immense stores of accurate and thoroughly digested information contained in these volumes. He was himself a living encyclopædia of knowledge. We do not suppose that there was a more learned naturalist in the world, if there was indeed one who had made more extended and minute original explorations. His mind was capacious enough to hold, and tenacious enough to keep, all the vast stores of knowledge which he had treasured up; but no one ever had less a passion or a gift for display. He was the most modest of men. Only those who knew him best, and who from similar pursuits could sympathize with him, were able to see what a mine of knowledge he was.

His books are on too large a scale, and too much crowded with facts, ever to be popular. They must serve rather as vast storehouses; and from them teachers and writers on natural history will draw the treasures which they may hold forth as gems or jewels to attract and delight the popular mind. He had as little the faculty of showing himself off, or making a show of what he knew, as any man that we ever have known.

The great and solid qualities of such a mind, and such a character and life, cannot be too earnestly commended in this age of self-seeking, when men are so ingenious and fertile in expedients to make a grand exhibition of their slender attainments, — like a Roman shop, where all the goods are exposed in the window.

Here was a man of large capacity, of the finest moral sensibilities, and the most perfect integrity, engaged during a long life in the profoundest studies, asking neither fame nor money, nor any other reward, but simply the privilege of gaining knowledge and storing it up in convenient forms for the service of others. He was fortunate and happy in his nearest relationships, and most exemplary in all his connection and intercourse with others. But the love of knowledge was the one passion of his life. He asked no richer satisfaction than to search for it as for hidden treasure.

It is said that we are a superficial people, and that we are always striving for immediate effect. This is too much the characteristic of our age, though probably

not more so than of any previous age. The froth and effervescence of the moment pass away, and only the substantial qualities come down to us from distant generations; while the noise and excitement, and the superficial ambitions and agitations of the present hour, obtrude themselves upon us, and hide from us the more modest and enduring pursuits in which the ablest and best minds among us are engaged, and by which our age will be known among future generations. It is therefore very refreshing, and a great encouragement, to become acquainted with a man like Dr. Pickering, — so thoughtful, so able, so profound, so laborious, and far-reaching in his investigations, traversing distant continents and unknown seas, or exploring the records of distant ages, to extend and perfect our knowledge of the ways and works of God.

Dr. Pickering was married, in 1851, to Sarah S., daughter of the late Daniel Hammond, Esq., of this city, and leaves no children. His name and memory will always be dear to those who knew him; and his works will always be a helpful legacy to those who, with the same love of truth, shall be engaged in similar pursuits.

[At a meeting of the Academy of Natural Sciences of Philadelphia, May 7, 1878, the President, Dr. W. S. W. RUSCHENBERGER, read the following:]

IT is a custom of this Society to announce the death of every member or correspondent when it occurs, without accompanying the announcement with a notice of his career. From this custom may be excepted those members who have been conspicuous by their success in the cultivation of natural science, or who have won the general approbation of the Academy by generous contribution towards the advancement of science, or who have largely aided the progress of the Society by their labors.

For such reasons, it seems appropriate that the archives of the Society should contain a record to show why his contemporary and fellow-members entertained sentiments of sincere respect and cordial esteem for the late Dr. CHARLES PICKERING.

The records show that Charles Pickering, M.D., of Salem, Mass., was elected a correspondent of this Society Nov. 28, 1826. He had then just entered the twenty-second year of his age. Early in the following year (1827), he became a resident of Philadelphia, and therefore a member. From that date until 1838, he was rarely absent from any meeting of the Academy.

At that time, the details of the affairs of the Society were conducted chiefly by standing committees. Dr. Pickering served on the Zoölogical Committee from Dec. 25, 1827, until January, 1838, — ten years; on the Botanical Committee from Dec. 28, 1828 (of which he was the chairman from January, 1833), until January, 1837, — eight years; on the Publication Committee from December, 1829, until De-

cember, 1833, — four years; and on the Library Committee from January, 1837, until January, 1838, — one year.

He was Librarian from December, 1828, until December, 1833, — five years; and a Curator from December, 1833, until December, 1837, — four years.

The record tells us that he discharged faithfully and efficiently the duties of all the positions to which he was appointed.

To Dr. Pickering was intrusted the transfer to the Academy of the great collection of plants bequeathed by the Rev. Lewis David Von Schweinitz, who died in 1834. He prepared a catalogue of American plants in the collection of the Academy, and presented it at the stated meeting held May 13, 1834. Those plants which were previously in the collection, many of them Mr. Nuttall's types, he intercalated in the Schweinitz herbarium, attaching an appropriate label to each. On the 24th of March, 1835, on motion of Professor H. D. Rogers, it was unanimously resolved, "That the thanks of the Society be awarded to Dr. Charles Pickering for the highly successful manner in which he has executed the very arduous task of collating and arranging the extensive herbarium of the Academy."

The work done by Dr. Pickering has contributed much to facilitate the labors of his successors in the botanical department of the Academy.

On the 26th of January, 1836, on motion of Dr. Samuel George Morton, it was unanimously resolved, "That the grateful thanks of the Institution be tendered to Dr. Pickering for his voluntary journey to New Harmony, the faithful execution of the trust reposed in him of selecting from the library of Mr. Maclure such works as were designed for the Academy, and for the prompt and successful arrangements made by him for the transportation of said books to this city."

The mission just referred to occupied Dr. Pickering about three months, and brought to the Academy's library an addition of about 2,300 volumes of valuable scientific works.

The services of Dr. Pickering to the Academy were important in every sense, and are worthy of grateful remembrance.

While laboring for the Academy, he qualified himself perfectly to discharge efficiently those duties which devolved upon him in 1838, when he became a member of the United States Exploring Expedition. The means and facilities requisite for the instruction and training of students of natural science were at that period nowhere in the country more ample than in the Academy; and it is believed that at this time they are not better in any other institution in the United States.

On the 19th of October, 1827, Dr. Pickering read, at a meeting of the American Philosophical Society, a paper "On the Geographical Distribution of Plants," which was published in the third volume of the "Transactions," in 1830. He was elected a member of the American Philosophical Society Jan. 15, 1828, and resigned in November, 1837.

He was elected Recording Secretary of the Pennsylvania Horticultural Society February, 1830, and served till September, 1837, when he resigned.

In conjunction with James H. Dana, Dr. Pickering read, Feb. 20, 1838, before the Yale Natural History Society, of which he was a member, a "Description of a Crustaceous Animal belonging to the genus Caligus, C. Americanus," which occupies forty pages of vol. xxxviii. of Silliman's "Journal."

Dr. Pickering was appointed a member of the scientific corps attached to the United States Exploring Expedition, under command of Lieutenant Charles Wilkes. He was placed on board of the flag-ship "Vincennes." The expedition sailed from Hampton Roads Aug. 19, 1838, and arrived off Sandy Hook, N. Y., June 10, 1842, after an absence of nearly four years. He is recorded among those present at the stated meeting of the Academy July 5, and frequently afterwards until he again went abroad. The first record of his presence after his return is May 20, 1845, and from that date he occasionally attended meetings every year. He was last present Nov. 7, 1876.

Oct. 11, 1843, Dr. Pickering left Boston and visited Egypt, Arabia, India, and the eastern part of Africa, for the sake of extending and verifying observations made while attached to the United States Exploring Expedition. Upon his return he settled in Boston, and prepared his "Races of Man and their Geographical Distribution," quarto, pp. 447, published by Charles C. Little and James Brown, Boston, 1848, being vol. ix. of the Exploring Expedition.

In 1850 he contributed a paper, Enumeration of the Races of Man, to the "Edinburgh New Philosophical Journal," vol. xlviii.

His work entitled "The Geographical Distribution of Animals and Plants," quarto, pp. 212, being vol. xv. of the Exploring Expedition, was published by Little & Brown, Boston, 1854.

In the "Proceedings" of the American Academy of Arts and Sciences are recorded his observations on the Egyptian computation of time, October, 1849; on the Egyptian Astronomical Cycle, May, 1850; on Sulphur Vapor, Dec. 9, 1856; on the Coptic Alphabet, March 8, 1859; on the Geographical Distribution of Species, March 22, 1859, and Dec. 11, 1860; and on the Jewish Calendar, Oct. 11, 1864. At the request of the Secretary of the Institution he prepared a paper on the Gliddon Mummy Case in the Museum of the Smithsonian Institution, in June, 1867, which is published in vol. xvi. of the "Smithsonian Contributions to Knowledge."

The "Geographical Distribution of Animals and Plants. Part II. Plants in their Wild State," quarto, was published by the Naturalists' Agency, Salem, 1876. It is preceded by a note: "The following 524 pages comprise about one-half of a prepared volume, the printing of which was suspended in 1860. — Charles Pickering."

The great work of Dr. Pickering's life, "The Chronological History of Plants," to which he had devoted sixteen years of laborious research, was only recently completed, and is now passing through the press.

This imperfect summary of work completed is sufficient evidence of his unremitting industry, and suggests that he fully utilized his opportunities to qualify himself for research during the ten years he zealously wrought in the offices and on

the committees of the Academy. He was certainly a distinguished alumnus of the Institution.

Dr. Pickering was characterized by imperturbable firmness of purpose, and by his loyalty to truth, and integrity in every sense. He was extremely modest, averse to parade, and remarkably free from pretension of every kind. His acquirements were extensive, varied, and minutely accurate. His friends loved him for his unaggressive, always tranquil temper, and his obliging disposition.

To this imperfect outline of Dr. Pickering's scientific career, though a thing apart, may be added a few words on his heredity.

Colonel Timothy Pickering, his grandfather, was a native of Salem, Mass., but his active participation in the Revolution brought him to Philadelphia. He served in the army, took part in the battles of Brandywine and Germantown, and was present at the surrender of Yorktown. He was appointed postmaster-general, August, 1792, secretary of war, January, 1795, and secretary of state, December, 1795, from which office he was removed May 12, 1800, by President John Adams. His son, Timothy Pickering, jr., the father of Dr. Pickering, was born in this city Oct. 1, 1779. He graduated at Harvard College; was appointed a midshipman in the navy Jan. 17, 1799; served creditably one cruise under command of the famous Stephen Decatur, and resigned May 2, 1801.

His father, Colonel Pickering, had acquired extensive tracts of "wild lands" in western Pennsylvania. Finding himself in restricted circumstances when removed from office by President John Adams, he determined to transfer his family to those lands with a view to their settlement. Timothy Pickering, jr., joined his father, and settled at Starucca, now in Susquehanna County, Pa. There he married Lurena Cole, Dec. 29, 1804, and there Dr. Charles Pickering was born Nov. 10, 1805. His father died May 14, 1807, in the twenty-eighth year of his age. A few years prior to this date, Colonel Pickering had changed his place of residence to a farm at Wenham, near Salem, and thither he took the widow and her son to remain members of his own household. There Dr. Pickering was raised and educated, under the immediate direction of his mother and the supervision of his distinguished grandfather.

[The following article, by Dr. ASA GRAY, is reprinted from the "Proceedings" of the American Academy of Arts and Sciences, vol. xiii.]

CHARLES PICKERING, M. D., died in Boston, of pneumonia, on the 17th of March, 1878, in the seventy-third year of his age. He was of a noted New England stock, being a grandson of Colonel Timothy Pickering, a member of Washington's military family and of his first Cabinet as President; and he was elected into this Academy under the presidency of his uncle, John Pickering. He was born on Starucca Creek, on the Upper Susquehanna, in the northern part of Pennsylvania, at a settlement

made on a grant of land taken up by his grandfather, who then resided there. His father, Timothy Pickering, jr., died in the twenty-eighth year of his age, leaving to the care of the mother — who lived to a good old age — the two sons, Charles and his brother Edward, who were much united in their earlier and later lives, and were not long divided in death, the subject of this notice having been for only a year the survivor.

Dr. Pickering was a member of the class of 1823 at Harvard College, but left before graduation. He studied medicine, and took the degree of M. D. at the Harvard Medical School in 1826. Living in these earlier years at Salem, he was associated with the late William Oakes in botanical exploration; and it is believed that the two first explored the White Mountains together, following in the steps of the first botanist to ascend Mount Washington, Dr. Manasseh Cutler of Essex County, and of Francis Boott and Dr. Bigelow. His taste for natural history showed itself in boyhood, both for botany and zoölogy, and probably decided his choice of a profession. He may have intended to practise medicine for a livelihood when, about the year 1829, he took up his residence at Philadelphia; but it is probable that he was attracted thither more by the facilities that city offered for the pursuit of natural history than by its renown as a centre of medical education. We soon find him acting as one of the curators of the Academy of Natural Sciences, and also as librarian, and with reputation established as the most erudite and sharp-sighted of all the young naturalists of that region. His knowledge then, as in mature years, was encyclopedic and minute; and his bent was toward a certain subtlety and exhaustiveness of investigation, which is characteristic of his later writings. Still, in those days in which he was looked up to as an oracle, and consulted as a dictionary by his co-workers, he had published nothing which can now be recalled, except a brief essay on the geographical distribution and leading characteristics of the United States flora, which very few of our day have ever seen.

When the United States surveying and exploring expedition to the South Seas, which sailed under the command of then Lieutenant Charles Wilkes in the summer of 1838, was first organized under Commodore T. Ap-Catesby Jones, about two years before, Dr. Pickering's reputation was such that he was at once selected as the principal zoölogist. Subsequently, as the plan expanded, others were added. Yet the scientific fame of that expedition most largely rests upon the collections and the work of Dr. Pickering and his surviving associate, Professor Dana; the latter taking, in addition to the geology, the Corals and the Crustacea, and other special departments of zoölogy being otherwise provided for by the accession of Mr. Couthouy and Mr. Peale. Dr. Pickering, although retaining the ichthyology, particularly turned his attention, during the nearly four years' voyage of circumnavigation, to anthropology, and to the study of the geographical distribution of animals and plants; to the latter especially, as affected by or as evidence of the operations, movements, and diffusion of the races of man. To these the subjects of his predilection, and to investigations bearing upon them, all his remaining life was assiduously devoted. The

South Pacific exploring expedition had visited various parts of the world; but it necessarily left out regions of the highest interest to the anthropological investigator, those occupied in early times by the race to which we belong, and by the peoples with which the Aryan race has been most in contact. Desirous to extend his personal observations as far as possible, Dr. Pickering, a year after the return of the expedition, and at his own charges, crossed the Atlantic, visited Egypt, Arabia, the eastern part of Africa, and western and northern India. Then, in 1848, he published his volume on "The Races of Man, and their Geographical Distribution," being the ninth volume of the Reports of the Wilkes' Exploring Expedition. Some time afterwards, he prepared, for the fifteenth volume of this series, an extensive work on "The Geographical Distribution of Animals and Plants." But, in the course of the printing, the appropriations by Congress intermitted or ceased, and the publication of the results of this celebrated expedition was suspended. Publication it could hardly be called; for Congress printed only one hundred copies, in a sumptuous form, for presentation to States and foreign courts; and then the several authors were allowed to use the types and copper-plates for printing as many copies as they required and could pay for. Under this privilege, Dr. Pickering brought out in 1854 a small edition of the first part of his essay, — perhaps the most important part, — and in 1876 a more bulky portion, "On Plants and Animals in their Wild State," which is largely a transcript of the note-book memoranda as jotted down at the time of observation or collection.

These are all his publications, excepting some short communications to scientific journals and the proceedings of learned societies to which he belonged. But he is known to have been long and laboriously engaged upon a work for which, under his exhaustive treatment, a lifetime seems hardly sufficient, — a digest, in fact, of the history and migrations of all the animals and plants with which civilized man has had to do from the earliest period traceable by records. When Dr. Pickering died, he was carrying this work through the press at his own individual expense; had already in type five or six hundred quarto pages; and it is understood that the remainder, of about equal extent, is ready for the printer. This formidable treatise is entitled "Chronological History of Plants: Man's Record of his own Existence, illustrated through their Names, Uses, and Companionship." Its character is indicated in the brief introductory sentences: —

"In the distribution of species over the globe, the order of Nature has been obscured through the interference of man. He has transported animals and plants to countries where they were previously unknown; extirpating the forest and cultivating the soil, until at length the face of the globe itself is changed. To ascertain the amount of this interference, displaced species must be distinguished, and traced each to its original home. Detached observations have already been given in the twenty-first and succeeding chapters of my 'Races of Man;' but, when such observations are extended to all parts of the globe, the accumulated facts require some plan of arrangement. A list will naturally assume the chronological order, beginning

with Egypt, the country that contains the earliest records of the human family, and receding geographically from the same central point of reference."

Then, starting with "4713 B.C," and "4491 B.C., beginning of the first Great Year in the Egyptian reckoning," he begins the list, which, under the running heading of "Chronological Arrangement of accompanying Animals and Plants," first treats of the vegetables and animals mentioned in the book of Genesis, and of the "Commencement of Bedouin or Nomadic Life in the Desert;" passes to the "Colonization of Egypt," and to critical notices (philological and natural-historical) of its plants and animals, as well their earliest mention as their latest known migrations; reaches the beginning of the Christian era at about the 470th page; and so proceeds, till our wonder at the patience and the erudition of the writer passes all bounds. We are ready to agree with a biographer, who declares that our associate was "a living encyclopædia of knowledge;" that there never was a naturalist "who had made more extended and minute original explorations;" and we fully agree that "no one ever had less a passion or a gift for display;" "that he was engaged during a long life in the profoundest studies, asking neither fame nor money, nor any other reward, but simply the privilege of gaining knowledge and of storing it up in convenient forms for the service of others;" that "the love of knowledge was the one passion of his life," and that "he asked no richer satisfaction than to search for it as for hidden treasure." He was singularly retiring and reticent, very dry in ordinary intercourse, but never cynical; delicate and keen in perception and judgment; just, upright, and exemplary in every relation; and to those who knew him well communicative, sympathetic, and even genial. In the voyage of circumnavigation he was the soul of industry, and a hardy explorer. The published narrative of the commander shows that he took a part in every fatiguing excursion or perilous ascent. Perhaps the most singular peril (recorded in the narrative) was that in which this light-framed man once found himself on the Peruvian Andes, when he was swooped upon by a condor, evidently minded to carry off the naturalist who was contemplating the magnificent ornithological specimen.

Dr. Pickering married in the year 1851, and leaves a widow, but no children to inherit this honored name.

MAN'S RECORD

OF

HIS OWN EXISTENCE.

IN the distribution of species over the Globe, the order of nature has been obscured through the interference of man. He has transported animals and plants to countries where they were previously unknown; extirpating the forest and cultivating the soil, until at length the face of the Globe itself is changed.

To ascertain the amount of this interference, displaced species must be distinguished, and traced each to its original home. Detached observations have been already given in the Twenty-first and succeeding chapters of my Races of Man; but, when such observations are extended to all parts of the Globe, the accumulated facts require some plan of arrangement.

A list will naturally assume the chronological order, beginning with Egypt, the country that contains the earliest records of the human family; and receding geographically from the same central point of reference.

"4713 B. C." (= 4493 + ⅓ of a "phœnix," = 220 years = 1/7 of a "Great Year"), the so-called "Julian Period." The Egyptian years however being calendar years = 4711 B. C.

4491 B. C. (= 4493 in calendar years = 2953 + 1549), beginning of the first *Great Year* in the Egyptian reckoning.

Artemisia Judaica of the Sinai Desert. A kind of *wormwood* called in Egypt "shyeh;" in which we recognize the "shyh" of Genesis ii. 5, — xxi. 15, Job xxx. 4 to 7, and "shea" of Haly Abbas, and Avicenna: A. Judaica was observed by Rauwolf iii. 22. p. 456, and Hasselquist, in Palestine; by Forskal p. 198, and Delile, in the Desert around Suez, collected there for transportation to the drug shops of Egypt.

The "land of Havilah" containing *gold*, "*bdellium* and the *onyx-stone*" — (Gen. ii. 11) has been identified with a district on the Persian Gulf at the mouth of the Euphrates; where the principal of the Bahrein islands continues to bear the name Aval (Gen. x. 7 and 29, xxv. 18, Forster, and Sm. geogr. dict.).

Borassus dichotomus of the shores of the Persian Gulf. A branching palm called "oka-mundel" (Graham): the "vthlh" of the land of Havilah — (Gen. ii. 11), and of Numb. xi. 7, is identified by Josephus, Aquila, Symmachus, Theod . . . . , and Hieronymus, with "vthĕlliôn," the gum-like substance *bdellium*: "vthĕlliôn" is described by Dioscorides as the exudation of an Arabian tree; and among the Romans "bdellium" is mentioned by Plautus, and Pliny: the "dum" of Abu Hanifa is identified by Ebn Baitar with the "mukl;" Arabian bdellium according to Avicenna 206 is the product of a kind of palm called "rum" (read "dum" by Sprengel); and a second branching palm called "dum," but sometimes "tafi," was observed by Forskal cxxvi. under cultivation in Yemen. Eastward, bdellium is called in Hindustanee "gugal" or "muql" (D'roz.); "mokl asrak" or bdellium according to Kaempfer amoen. 668 is the inspissated juice of fruit of a flabellate-leaved palm growing on both sides of the Persian Gulf, but not met with by himself; its preparation "from the unripe fruit" was witnessed by Herbertus de Jager (who however gives the species as "B. flabelliformis"): B. dichotomus was observed by Vaupel "in various parts of Goozerat," also covering "the whole of Diu Island," and according to Nimmo "a solitary tree grows" as far South as the vicinity of Bombay, but its "fructification has not been examined" (Graham).

Balsamodendron agallocha of Northeastern Hindustan. A small tree called in Sanscrit "googula" (Lindl.), in Bengalee "googul" (Drur.); and its reputed product, called in Bengalee "guggul" and in Hindustanee "gugal" or "muql" (D'roz.), is possibly the "vthlh" in question: — the kind of "vthĕlliŏn" brought by the way of Petra from India is described by Dioscorides as inferior in quality, emitting less fragrance when burned as incense; and the "indicum" kind is distinguished from the Bactrian by Pliny xii. 19: B. agallocha is regarded by Royle antiq. hind. med. as the probable source of *Indian bdellium;* is termed "amyris commiphora" by Roxburgh ii. 244, is known to grow in Silhet and Assam, its trunk crooked with many drooping crooked branches, the branchlets often ending in thorn-like points, and the googul is collected from incisions in the cool season (Lindl., and Drur.). From transported specimens, is termed "commiphora Madagascariensis" by Jacquin hort. ii. pl. 249. (See B. mukul.)

Balsamodendron Africanum of Equatorial East Africa. Called in the Kinyoro language "m'gazoo," at Ugogo "katatee" (Grant); and possibly included in the "vthlh" in question: — observed by Grant frequent from "2° S. to 3° N." on the Nile, and affording *bdellium*, the "Wanyamuezi boil its gum, mix it with butter, and anoint their persons." The plant, received from Africa, is described by Arnott.

4271 B. C. (= 4141 + "130 years" of Gen. v. 3 = 4273 in Egyptian calendar years = 4493 — ⅓ of a "phœnix" or ¼ of a "Great Year"), Adam.

Ficus carica of the countries around the Persian Gulf. Called in Britain *fig*, in Greece "sukĕa" (Fraas), in Egypt and Yemen "tin" (Forsk.), in which we recognize the "tanĕ" whose leaves were sewed together for aprons — (Gen. iii. 7), mentioned besides in Numb. xiii. 23 and xx. 5, Deut. viii. 8, Micah iv. 4, 2 K. xx. 7, and Zechariah iii. 10: clusters of the fruit are figured among offerings under the Fourth dynasty at Gizeh (Leps. d. ii. pl. 10); figures of the tree with its peculiar leaves were observed by myself under the Twelfth dynasty at Benihassah, also under the Seventeenth and Eighteenth; and to the present day the tree is commonly cultivated in the gardens of Egypt (Del., and Lane). Farther North, the "sukē" is mentioned by Homer, Herodotus, Aristophanes, and other Greek writers; a "ficus" was standing on the site selected for the city of Rome, and dried figs carried by Helico home to Switzerland were among the novelties that brought on the First invasion of the Gauls (Plin. xii. 2 and xv. 20): F. carica, belonging to a Tropical genus, does not harmonize with the vegetable growth in the Mediterranean countries, but has at least become completely naturalized. Southward from Egypt, was observed by Forskal only under cultivation in Yemen; and I found it only in the cultivated state on Zanzibar. Eastward, is called "unjeer" in Persian and as far as Bombay, "dumur" or "dumbar" in Bengalee (D'roz. and Lindl.), occurs "in gardens all over India" (Graham), as witnessed also by myself; and is enumerated by Mason as "exotic" in Burmah. By European colonists, was carried to America, where it continues under successful cultivation in our Southern States.

Senecio Arabicus of Egypt and Northern Arabia. A kind of *groundsel* called in Egypt "kus" (Forsk.), in which we recognize the "kwtz" of the expulsion — (Gen. iii. 18), mentioned besides by Isaiah xxxii., 13, Jeremiah iv. 3, and Ezekiel xxviii. 24: S. Arabicus was observed by Forskal, and Delile, growing spontaneously around Cairo. From transported specimens, is described by Linnæus, and Moench (Pers., and Steud.).

Suæda hortensis of Arabia and Egypt. A salsolaceous plant called in Egypt "tartyr" (Del.), in which we recognize the "thrthr" of the expulsion — (Gen. iii. 18), and of Hosea x. 8: S. hortensis was observed by Delile growing spontaneously around Cairo; by Forskal p. 71, frequent there in gardens, growing also among rubbish around Taæs in Yemen, but called "mullah" in both localities. "S. trigyna" observed by Cavanilles iii. pl. 289 in Spain, is regarded by Schultes as probably identical (Steud.).

Anabasis aphylla of the Egyptian, Syrian, and Tartarian Desert. Another salsolaceous plant called in Egypt "tartir" (Forsk.), and therefore possibly the "thrthr" in question: — A. aphylla is not a weed, but grows in the sands of the Desert; was observed by Forskal p. 55 around the pyramids, and by Delile, near Alexandria. Farther North, by Sibthorp as far as Thyatira in Asia Minor; is known to grow also around Tripoli, and on the shores of the Caspian (Buxb. cent. i. pl. 18, Pall., and Pers.).

Second generation. September 1st, 4234, among living men.

The "tzan" of Genesis iv. 2 — is admitted to be the *sheep* (compare 1 Sam. xxv. 2); regarded even by Dicæarchus, as probably the first animal domesticated (Varro re rust. ii. 1). The sheep forms one of the original hieroglyphic characters; the breed being the remarkable one with spreading horns (Leps. d. ii. pl. 6), kept in flocks under the Third and Fourth dynasties; and after it became extinct, the pattern of the head continuing in mythological representations and hieroglyphic writing. Sheep with curled horns make their first appearance under the Twelfth dynasty, at Benihassan. The long duration of certain breeds of sheep is shown by Dinon's mention of the Somali

breed, covered with hair instead of wool; and by the further remark of Marco Polo 192, that the head is always black and the body white; a peculiarity I found true to the present day. In Switzerland, during the Stone Age, sheep were in some instances kept by the inhabitants; as appears from debris of the earliest villages (Herr, in Troyon). Eastward, the sheep is mentioned in the Sama Veda (Stevenson), and the Institutes of Menu (Braminical version); the head forms part of an imaginary animal in the Budhist cave-temples at Adjunta; and I remarked ram-headed personages in the Braminical cave-temples at Ellora. By European colonists, the sheep has been successfully introduced into America, the Hawaiian Islands, and Australia.

Abel slain by his brother Cain. Who departed to the land of "nwth" refuge, "east of Eden";—and building a stronghold "oyr," named it after "his son Enoch" (Gesen., and Greenf.).

Third generation. Jan. 1st, 4200, among living men: Enoch son of Cain.

Fourth generation. May 1st, 4167, among living men: Irad son of Enoch.

4141 B. C. (= 4036 + "105 years" of Gen. v. 6), Seth.

Fifth generation. Sept. 1st, 4134, among living men: Mehujael son of Irad.

Sixth generation. Jan. 1st, 4100, among living men: Methusael son of Mehujael.

Seventh generation. May 1st, 4067, among living men: Lamech son of Methusael and the second homicide on record, Adah and Zillah the two wives of Lamech.

4036 B. C. (= 3946 + "90 years" of Gen. v. 9), Enos. "Then it was begun to call on name of Jehovah"—(Gen. iv. 26); essentially the invocation continuing among the Arabs to the present day.

Eighth generation. Sept. 1st, 4034, among the living: Naamah daughter of Zillah.

Instruments of *music* invented by Jubal son of Adah (Gen. iv. 21).

The "knwr" or *harp* invented by Jubal—is admitted to be some form of that instrument. Harpers are figured in Egypt under the Fourth dynasty; and under the Twelfth, a different form of harp is carried by the foreigners at Benihassan. The "knwr" is again mentioned in Gen. xxxi. 27; was improved by David, Am. vi. 5, 1 Sam. xvi. 23 to xix. 9; was in use under Solomon and Jehoshaphat, 2 Sam. vi. 5, 2 Chron. xx. 27; and down to the captivity, Psalm cxxxvii. 2; and in some of these passages, is translated "kinura" in the Septuagint. The instrument figured on coins ascribed to Simon Maccabæus (Kitt. cycl. bibl. ii. p. 371 and 373), is probably the "knwr" of the Jews.

The "owgb" or organ invented by Jubal—is referred by Gesenius and others to the mouth-organ or *syrinx*, also called "Pandean pipe." The "surigx," according to Horapollo ii. 109, forms a hieroglyphic character; and a character not unlike the instrument occurs on the monuments from the time of at least the Twenty-sixth dynasty. The "owgb" is again mentioned in Psalm cl. 4, Job xxi. 12, xxx. 31; and the "surigx" is regarded as of remote antiquity by Pindar xii., Aristotle poet. 1, Virgil ecl. ii., and Athenæus iv. 182. To the present day, the Pandean pipe is in use in Egypt and Syria (Kitt. cycl. bibl.); and was seen by myself as far East as the Feejee Islands.

Tubal-cain son of Zillah is named in Gen. iv. 22 as the first worker of *metals*, "an instructer of every artificer in brass and iron."—Traditionary reminiscences of Tubal-cain appear to have reached the time of the Romans; etymology identifying him with the Latin "Vulcanus."

The "nhshd" is admitted to be *copper*, and may have been procured at Wadi Maghara in the Sinai peninsula; if so, here will be the commencement of *Monumental history*:—metals were known to the Egyptians as early at least as the Second king of the Third dynasty (Maneth.), and may have been procured from this very mine; containing at least the hieroglyphic oval of a successor in the same dynasty.

Commencement of Bedouin or *nomadic life* in the Desert, by another son of Adah, Jabal by name—and "the father of such as dwell in tents and (of such as have) cattle" (Gen. iv. 20). Confirmation is again found at Wadi Maghara, in the native figured under the Third dynasty, clearly belonging to the *White Race*, and in features, beard and costume well representing the Arabs inhabiting the Sinai peninsula to the present day.

Ninth generation. Jan. 1st, 4000, among living men.

II. COLONIZATION OF EGYPT.

In comparison with lands clothed with vegetation, Egypt presents a most uninviting aspect: an upland waste of bare light-coloured soil, even where exposed to the sea air of the Mediterranean; and on advancing inland, seeming interminable and destitute of vegetation.

The Desert is known to be intersected by a deeply-sunk narrow trench containing the river with its borders rendered level by the overflow, and thus far covered with grasses and other herbaceous and humble plants; a thread of green across a vast expanse from South to North, widening only on reaching the many channels of the outlet. There are naturally no trees; or at least, the *willow* (Salix subserrata) at the river-brink is very rare, and seems properly to belong to Nubia.

In the Desert however, where plants at first seem wanting and are only to be found by diligent search, there are at least two kinds of shrubs: a low bushy *Acacia*, and a *tamarisk*; alike inconspicuous, and very rarely met with. The other Desert plants are also inconspicuous and occur singly at long intervals.

On now including both Desert and river-flat, the flora of Egypt is mainly characterized by its meagerness, and by negative traits. The soil everywhere powdery is found to be devoid of cryptogamous plants, of Lichens, Mosses, and Ferns (the exceptions confined to artificial localities, as the top of pyramids and walls of cisterns, with a single Fern *Adiantum capillus-veneris* growing within reach of the sea air of the Mediterranean).

Of other tribes of plants abounding in Syria and on the nearest Greek islands, the following disappear: Saxifragaceæ, Droseraceæ, Primulaceæ, Violaceæ, Valerianaceæ, Gentianaceæ (with the exception of *Erythræa spicata* on the seashore), Orchidaceæ, the genus Carex (with the exception of *C. divisa* on the seashore), Hypericaceæ, Globulariaceæ (with the exception of *G. alypum* along the Mediterranean within reach of the sea air), Onagraceæ, Crassulaceæ, Dipsacaceæ (with the exception of *Scabiosa arenaria* on the seashore), Rosaceæ (with the exception of *Poterium sanguisorba* within reach of the sea air of the Mediterranean), and heaths with all Ericaceæ especially marking the striking change in climate and soil.

Though a careful observer throughout my stay in Egypt I did not make extended notes, nor seek to distinguish in all instances the imported plants. I did not anticipate ever being engaged in a work like the present, and have here to offer only a compiled account of the indigenous vegetable growth, to be revised and amended by future observers.

Beginning with the Desert, unchanged in aspect throughout the whole period of human history, no plants brought by the hand of man having found foothold, the *Desert plants* may be enumerated as follows: —

Menispermum leæba; not far from Cairo, Forsk.; and in Upper Egypt, Del.

Bunias spinosa, L.; not far from Cairo, Forsk.

Anastatica Hierochuntica, L.; not far from Cairo, Forsk. Extending to Barbary, Pers.

Ricotia Aegyptiaca, L.; in Syria not far from Salehyeh, Savign. and Del.

Lunaria parviflora, Del.; around the pyramids at Sakhara, Del.

Sisymbrium hispidum, Vahl; not far from Cairo, Forsk. and Del.

Cheiranthus lividus; not far from Cairo, Forsk. and Del.

Farsetia scabra, Cheiranthus of Desf.; not far from Cairo, Forsk.; and observed by myself around the pyramids of Gizeh. Extending into Arabia and Barbary, growing also near Smyrna, Pers. and Sibth.

Hesperis acris, Forsk.; not far from Cairo, Forsk.; Desert of "Qoubbeh" and at "Mataryeh," Del.

——— *pygmæa*, Del.; not far from Alexandria, also on the boundary between Egypt and Syria, Oliv., Savign., and Del.

Brassica terebifolia, Desf.; around the pyramids at Sakhara, Del. Extending to Barbary, Desf. and Pers.

Erucaria crassifolia, Brassica of Forsk.; not far from Cairo, Forsk.; and "near the pyramids of Sakhara," Del.

Capparis Aegyptiaca, Lam.; near Minyeh in Upper Egypt, Del.

Cleome Arabica, Cleome of L.; "around the pyramids," Del. Extending into Arabia and Barbary, Shaw, Desf., and Pers.

Roridula droserifolia, Forsk.; not far from Suez, Forsk.; ravines between the Nile and the Red Sea, Del.

Sodada decidua, Forsk.; throughout Yemen, Forsk; and in Upper Egypt, Del.

Reseda canescens, L.; not far from Cairo, Forsk. and Del.; "Salmantica," Pers.

——— *subulata*, Del.; Cairo to Alexandria, Del.

——— *pruinosa*; not far from Alexandria, also in Syria, Del.

Ochradenus baccatus, Del.; not far from Suez, also in Upper Egypt, Del.

Helianthemum Lippii, Cistus of L.; not far from Alexandria, Forsk. and Del.

——— *stipulatum*, Cistus of Forsk.; not far from Cairo, Forsk. and Del.

——— *glutinosum*, Cistus of L.; not far from Alexandria, Del. Extending to the Northern shores of the Mediterranean, Cav. and Pers.; but not yet found in Greece.

——— *roseum*, Cistus of Jacq.; not far from Alexandria, Del.

Frankenia revoluta, Forsk.; not far from Alexandria, Forsk. and Del.

Alsine succulenta, Illecebrum alsinifolium of L.; between Cairo and Suez, Del. Extending to Spain, Pers.

Gypsophila capillaris, Rokejeka of Forsk.; not far from Cairo, Forsk.; and near Suez, Del.

Paronychia Arabica, Illecebrum of L.; not far from Cairo, Forsk. and Del.

Polycarpæa fragilis, Del.; not far from Cairo, Del.

Erodium hirtum, Geranium of Forsk.; not far from Cairo, Forsk.; and Alexandria, Del.

——— *triangulare*, Geranium of Forsk.; not far from Cairo, Forsk.

——— *glaucophyllum*, Geranium of L.; not far from Cairo, Del.; Memphis, Pers.

——— *malopoides*, Geranium of Desf.; not far from Cairo, Del. Extending to Sicily and Barbary, Cav. and Pers.

Ruta tuberculata, Forsk.; not far from Cairo, Forsk.; also in Nubia, Del.

Peganum harmala, L.; not far from Cairo, Forsk.; and Alexandria, Del. Extending to Crete, Greece, Spain, and Siberia, Sibth. and Pers.

Nitraria retusa, Peganum of Forsk.; not far from Cairo, Forsk.; Alexandria and Damietta, Del.; Desf. and Pers.

Fagonia Cretica, L.; not far from Cairo, Del. Extending to Yemen, Crete, and Barbary, Forsk., Desf. and Pers.

——— *Arabica*, L.; not far from Cairo, Del.; and at Mor in Arabia, Forsk.

——— *glutinosa*, Del.; not far from Cairo, Del.

——— *mollis*, Del.; not far from Suez, Del.

——— *latifolia*, Del.; not far from Cairo, Del.

Tribulus pentandrus, Forsk.; not far from Cairo, Forsk.; and in Upper Egypt, Del.

Zygophyllum simplex, L.; not far from Cairo, Forsk. and Del.; at Mor and Ghorab in Arabia, Forsk.

——— *coccineum*, L.; not far from Cairo, Forsk. Extending to Barbary and Siberia, Shaw and Pers.

——— *album*, L.; not far from Alexandria, Forsk. and Del.; and at Ghorab in Arabia, Forsk. Extending to Cyprus, Barbary, and the Canary Islands, Sibth., Desf. and Pers.

——— *decumbens*, Del.; not far from Suez, Del.

Rhus oxyacanthoides, Desf.; Upper Egypt, Del.

Genista monosperma, Spartium auct.; not far from Cairo, Del.; and Suez, Forsk. Extending to Morocco and Spain, Pers.

Spartium Thebaicum, Del.; Upper Egypt and in Nubia, Del.

Ononis serrata, Forsk.; not far from Alexandria, Forsk. and Del.

——— *vaginalis*, Vahl.; not far from Alexandria, Forsk. and Del.

Alhagi Maurorum, Hedysarum of L.; Cairo to Alexandria, Forsk. and Del.

Hedysarum Ptolemaicum, Del.; between Cairo and Suez, Del.

Indigofera paucifolia, Del.; Upper Egypt, Del.

Astragalus trimestris, L.; not far from Cairo, Forsk.

——— *hispidulus*, Dec.; not far from Alexandria, Del. Extending to Persia, Mx.

——— *tomentosus*, Lam.; not far from Rosetta, Forsk.

——— *longiflorus*, Del.; not far from Suez, Del.

——— *tumidus*, Colutea of Forsk.; not far from Cairo, Forsk. and Del. Extending to Syria and Spain, Russel and Pers.

——— *trigonus*, Dec.; not far from Alexandria, Del.

Psoralea plicata, Del.; Thebes, Del.

Lotus dichotomus, Del.; not far from Cairo, Del.

Cassia acutifolia, Del.; Philæ, Del.

——— *senna*, L.; not far from Cairo, Forsk.; and in Upper Egypt, Del.

Acacia albida, Del.; above Philæ, Del.

——— *seyal*, Mimosa of Forsk.; Arabia, Forsk.; between the Nile and the Red sea, also near Thebes and Syene, Del.

——— *gummifera*, Mimosa of Forsk.; Arabia, Forsk.; Upper Egypt, Del.

——— *heterocarpa*, Del.; Upper Egypt not far from "Qoceyr," Del.

Neurada procumbens, L.; not far from Cairo, Forsk.; and Alexandria, Del. Extending to Arabia and Barbary, Pers.

Tamarix Gallica, L.; not far from Cairo, Del. Extending to the Caspian sea, Russia, Greece, Italy, France, and Spain, Sibth. and Pers.

——— *Africana*, Desf.; Upper Egypt, Del. Extending to Greece and Barbary, Bory & Chab., and Pers.

——— *passerinoides*, Del.; in the Fayoum, Jom. and Del.

Cucumis colocynthis, L.; not far from Cairo, Forsk.; Upper Egypt and Nubia, Del. Extending to Mor in Yemen, Forsk.

——— *prophetarum*.

Mesembryanthemum nodiflorum, L.; not far from Cairo, Forsk.; and Alexandria, Del. Extending to the maritime sands of Greece and Italy, Sibth. and Pers.; and to Spain, the Canary Islands, and Madeira, A. Dec.

——— *Copticum*, L.; not far from Cairo, Del.

Gymnocarpos decandrum, Forsk.; East of Cairo in the Desert, Forsk. and Del.

Aizoon Canariense, L.; not far from Cairo, Forsk. Extending to Canary Islands, Pers.

Reaumuria vermiculata, L.; not far from Cairo, Forsk.; and Alexandria, Del. Extending to Syria, Sicily, and Barbary, Pers.

Bupleurum proliferum, Del.; not far from Alexandria, Del.

Bubon tortuosum, Desf.; not far from Cairo, Forsk. Extending to Barbary, Pers.

Sonchus divaricatus, Desf.; Cairo to Alexandria, Del.

Prenanthes spinosa, Forsk.; towards Suez, Forsk.; and Cairo, Del. Extending to Barbary and Spain, Pers.

Senecio squalidus, L.; towards Cairo in the Desert, Forsk.; Alexandria, Del.

Chrysocoma spinosa, Stœhelina of Vahl; not far from Cairo, Forsk. and Del.

Santolina fragrantissima, Forsk.; not far from Cairo, Forsk.; and Suez, Del.

Artemisia Judaica, L.; (already mentioned). Frequent towards Suez, Del.; extending into Arabia, Palestine, and Numidia, Pers.

——— *monosperma*, Del.; not far from Cairo and Suez, Del.

——— *inculta*, Del.; towards Suez, Del.

——— *Valentina*, Lam.; Cairo to Alexandria, Del. Extending to Spain, Pers.

Gnaphalium cauliflorum, Desf.; not far from Cairo, Forsk.; and Rosetta, Del. Extending to Tunis, Pers.

Pulicaria undulata, Inula of L.; towards Suez, Del.

Francoeuria crispa, Aster of Forsk.; not far from Cairo, Forsk.; border of Desert near the Pyramids, Del. Extending in sunny situations to Senegal and the Ganges, Dec.

Cotula cinerea, Del.; around the pyramids at Gizeh and Sakhara, Del.

Bupthalmum graveolens, Forsk.; not far from Cairo, Forsk. and Del.

Centaurea crupinoides, Desf.; not far from Alexandria, Del. Extending to Barbary in the Desert, Pers.

——— *Lippii*, L.; not far from Cairo, Forsk.; and Rosetta, Del. Extending to Barbary, Pers.

——— *Aegyptiaca*, L.; not far from Cairo, Del.

Calendula Aegyptiaca, Desf.; not far from Cairo, Del.

Echinops spinosus, L.; not far from Cairo, Forsk.; and Alexandria, Del. Extending to Cyprus, the Greek islands, and Barbary, Sibth. and Pers.

Plantago cylindrica, Forsk.; not far from Cairo, Forsk. and Del.

——— *argentea*, Desf.; not far from Cairo, Forsk. Extending to Barbary and France, Pers.

Statice pruinosa, L.; not far from Alexandria, Forsk.; and along the shore of the Red sea, Del. Extending to Palestine, Del.

Linaria Aegyptiaca, Antirrhinum of L.; not far from Cairo, Forsk.; and Suez, Del. Extending to the Greek islands, Sibth.

——— *hælava*, Forsk.; not far from Cairo, Forsk.

Scrophularia Deserti, Del.; towards Suez, Del.

Acanthodium spicatum, Del.; "Ageroud" or Hahiroth, on the route to Suez, Del.

Salvia Aegyptiaca, L.; not far from Cairo, Del. Extending to the Canary Islands, Pers.

Lavendula stricta, Del.; not far from Suez, Del.

Heliotropium crispum, Desf.; not far from Cairo, Forsk. and Del.

——— *lineatum*, Vahl; not far from Cairo, Forsk.; and around the Pyramids, Del

Lithospermum arnebia; not far from Cairo, Forsk. and Del.

——— *callosum*, Vahl; not far from Cairo, Forsk. and Del.

Anchusa spinocarpos, Forsk.; not far from Cairo, Forsk.; near Salehyeh, in the Desert, Del.

——— *hispida*, Forsk.; not far from Cairo, Forsk.; and Alexandria, Del.

Borago Africana, L.; not far from Cairo, Forsk. and Del.

Convolvulus Forskalii; Sinai, Forsk.; between Cairo and Salehyeh, in the Desert, Del.

Convolvulus armatus, Del.; towards Suez, Del.
Hyoscyamus muticus, L.; not far from Cairo, Forsk.; and in Upper Egypt, Del.
Dæmia cordata; not far from Cairo, Forsk. and Del. Extending to Taæs in Yemen, Forsk.
Periploca secamone, L.
Cynanchum pyrotechnicum, Forsk.; Arabia, Forsk.; and towards Suez, Del.
——— *argel*, Del.; Philæ, Del.
Asclepias gigantea, L.; throughout Arabia, Forsk.; Upper Egypt and in Nubia, Del. Observed by myself in the Desert of the Thebaid, also on the Cape Verd Islands, and in central Hindustan.
Anabasis aphylla, L.; not far from Cairo, Forsk.; and Alexandria, Del. Extending to the Caspian, Asia Minor, and Tripoli, Sibth. and Pers.
Salsola alopecuroides, Del.; around the pyramids of Gizeh in the Desert, Del.
——— *villosa*, Del.; not far from Alexandria, Del.
——— *fœtida*, Del.; Upper Egypt, Del.
Traganum nudatum, Del.; not far from Cairo, Del.
Cornulaca muricata, Salsola of L.; not far from Cairo, Forsk.; and around the Pyramids, Del.
——— *monacantha*, Del.; not far from Cairo, around the pyramids at Gizeh and Sakhara, also in Upper Egypt, Del.
Pteranthus echinatus, Camphorosma of L.; not far from Cairo, Del. Extending to Cyprus and Barbary, Sibth. and Pers.
Rumex vesicarius, L.; not far from Cairo, Forsk. and Del.
——— *spinosus*, L.; not far from Cairo, Forsk.; and Alexandria, Del. Extending to Greece and Morocco, Sibth. and Pers.
Calligonum comosum, L'Her.; not far from Cairo, Del. Extending to Barbary, Pers.
Croton oblongifolium, Del.; "Ageroud" or Hahiroth on the route to Suez, Del.
Euphorbia retusa, Forsk.; not far from Cairo, Forsk. and Del.
Forskalea tenacissima, L.; not far from Cairo, Forsk.
Parietaria alsinefolia, Del.; among rocks near Cairo, Del.
Ephedra distachya, L.; not far from Cairo, Forsk. Extending to Mount Athos, and Barbary, Sibth. and Pers.
——— *altissima*, Desf.; near "Abouqyr & Etkou," Del. Extending to Barbary, Desf.
Pennisetum dichotomum, Panicum of Forsk.; not far from Cairo, and frequent throughout Arabia, Forsk.; towards Suez, Del.
Panicum turgidum, Forsk.; not far from Cairo, and frequent in Arabia, Forsk.; Gizeh, Del.
Andropogon foveolatum, Del.; towards Suez, Del.
Stipa.
Avena Forskalii; not far from Cairo, Forsk.; around the pyramids of Sakhara, Del.
Aristida ciliata; towards Suez, Del. Extending to Barbary, Desf.
——— *obtusa*, Del.; between Cairo and Suez, Del.
——— *pungens*, Desf.; Upper Egypt, and in Syria, Del. Extending to Barbary, Desf.
Rottbollia hirsuta, Vahl; Alexandria, Forsk.; towards Suez, Del.

The Desert plants, about one hundred and fifty in number, constitute all that is botanically interesting in the Egyptian flora. The Desert tribe of *Zygophyllaceæ* being unusual in variety, while the presence of *Neurada* and *spinescent Cruciferæ* is very striking. But of strictly Egyptian features, the most characteristic seem an unusual development of *Resedaceæ*, and especially of *Salsolaceæ*, the latter with plants resembling them in sensible properties everywhere dominant.

The river-flat green and grassy is altogether European, the indigenous plants nearly all occurring on the opposite side of the Mediterranean: and this continues even within the Tropics, the landscape as far as the First cataract hardly presenting a distinguishable Tropical feature.

The following list of the plants indigenous on the river-flat includes maritime species along the Mediterranean, also certain Greek and Syrian species occasionally found within reach of the sea air on the facing upland.

Adonis dentata, Del.; Alexandria, Del.
Delphinium nanum, Dec. (Steud.); upland at Alexandria, Delile. Extending to the Dardanelles, Forsk.
Nymphæa cærulea, Savign.; Rosetta, Damietta, and Cairo, Del.
Glaucium hybridum, Chelidonium of L.; Cairo to Alexandria, Forsk. Extending to Cyprus and Greece, Sibth.
Hypecoum patens, Mnemosilla of Forsk.; upland at Alexandria, Del.
Cakile maritima, Bunias of L.; Alexandria, Forsk. Extending in maritime situations to Greece and the Atlantic shores of both Europe and North America.
Vella annua, L.; Alexandria, Del. Extending to Greece and Spain, Sibth. and Pers.
Lepidium draba, Cochlearia of L.; upland at Alexandria, Del. Extending throughout Greece to Caucasus and middle Europe, Sibth. and Bieb.
Cochlearia Nilotica, Del.; along the banks of the Nile, Del.
Alyssum maritimum, Clypeola of L.; Alexandria, Del. Extending in maritime situations to Greece, Barbary, France, and Spain, Sibth. and Pers.
Biscutella depressa, Willd.; Alexandria, Del.
Sisymbrium ramulosum, Del.; near Minyet and Beni-Souef, Lipp. and Del.
Mathiola tricuspidata, Cheiranthus of L.; Alexandria, Forsk. and Del. Extending in maritime situations to Greece and Tripoli, Sibth. and Pers.
Hesperis? ramosissima, Hesperis of Desf.; around the pyramids at Sakhara, Del. Extending in maritime situations to Greece, Galatia, and Algeria, Gittard and Pers.
Brassica Tournefortii, Gouan; Rosetta, Del.
Sinapis Philæana, Del.; environs of Philæ, Nect. and Del.
——— *Allionii*, Murr.; in flax fields, frequent, Del.
——— *turgida*, Raphanus of Pers.
Raphanus recurvatus, Pers.; Cairo, Forsk.; Alexandria and Upper Egypt, Del. Extending to Syria, Crete, and the Peloponnesus, Labill., Tourn., and Bory & Chaub.
Erucaria myagroides, Bunias of L.; upland at Alexandria, Del. Extending to Crete, the other Greek islands, Syria, and Siberia, Sibth. and Pers.
Reseda alba, L.; Alexandria, Forsk.; upland at Cairo, Del. Extending to Greece, Barbary, France, and Spain, Sibth. and Pers.
——— *Mediterranea*, L.; Alexandria, Forsk.; upland at Cairo, Del. Extending to the Greek islands and Palestine, Sibth. and Pers.
Frankenia pulverulenta, L.; Alexandria, Del. Extending in maritime situations to the Greek islands, Sibth.
Silene rubella, L.; Damietta, Del. Extending to Cyprus, Rhodes, and Portugal, Sibth. and Pers.
——— *villosa*, Forsk.; Cairo, Forsk. and Del.

Silene Canopica, Del.; Rosetta, Del.
——— *succulenta*, Forsk.; Alexandria, Forsk. and Del.
Arenaria procumbens, Vahl; Alexandria, Del.
Spergularia rubra, Arenaria of L.; Alexandria, Rosetta, and Cairo, Del. Extending to Cyprus, Greece, and throughout Europe, Sibth. and Pers.
——— var. *marina*, A. media of L.; Alexandria, Oliv. & Del.
Lancretia suffruticosa, Del.; Silsilis, and rocks at the First cataract, Del.; to Dongola, Lippi.
Alsine prostrata, Forsk.; Cairo, Forsk. and Del.
Paronychia nitida, Illecebrum of L.; upland at Rosetta, Del. Extending in "dry sandy situations" to the Greek islands, France, and Spain, Sibth. and Pers.
Polycarpæa repens, Corrigiola of Forsk.; upland at Cairo, Forsk.; islands in the Nile near Cairo, growing in sandy situations, Del.
Althæa Ludwigii, L.; near "Belbeys," Del. Extending to Sicily, Pers.
——— *cannabina*, L.; near Cairo, Forsk. Extending to Greece, Hungary, Italy, and Southern France, Pers. and Sibth.
Malva Mareotica, Del.; Alexandria, Del.
——— *microcarpa*, Desf.; between Cairo and Belbeys, Del.
——— *parviflora*, L.; Del. Extending to Barbary, Pers.
Lavatera Cretica, L.; on the Mediterranean border of Egypt, Del. Extending to Crete and the Peloponnesus, Sibth.
Erodium cicutarium, Geranium of L.; upland at Cairo, Del. Extending to Greece, Sibth.
——— *ciconium*, Geranium of Tournef. inst. 268; around Cairo, Forsk. (omitted by Delile). Extending to Greece, Forsk. and Sibth.; to Italy, Southern France, and Spain, Pers.
——— *glabellum*, Del.; Alexandria, Del.
——— *laciniatum*, Geranium of Desf.; upland at Cairo, Forsk. and Del. Extending in maritime situations to Cyprus, Crete, and Barbary, Sibth., Tourn., and Pers.
——— *gruinum*, Geranium of L.; Alexandria, Del. Extending to Asia Minor, Greece, Italy, and Spain, Sibth. and Pers.
——— *malacoides*, Geranium of L.; Cairo, Forsk.; and Alexandria, Del. Extending to Cyprus, Greece, Italy, France, Spain, and the Canary Islands, Sibth. and Pers.
——— *Alexandrinum*, Del.; on the peninsula Ras el-Tyn, Del.
——— *pulverulentum*, Geranium of Cav.; upland at Cairo, Del. Extending to Greece, Spain, and Barbary, Bory and Pers.
Linum hirsutum, L.; not far from Salehyeh and in Syria, Savign. and Del. Extending to Cyprus, Greece, Asia Minor, Austria, and Tartary, Sibth. and Pers.
Tribulus terrestris, L.; Cairo, Upper Egypt, and Nubia, Del. Extending to Greece, Caucasus, Siberia and Lake Baikal, Abyssinia, and Senegal, Sibth. and A. Dec.
Ononis pubescens, L.; at the boundary between Egypt and Syria, Savign. and Del. Extending to Greece and "Southern Europe," Bory and Pers.
——— *Cherleri*, L.; upland at Alexandria, Del. Extending to Cyprus, Italy, France, Spain, and Barbary, Sibth. and Pers.
Dolichos lubia, Forsk.; cultivated at Cairo, Forsk.; and in Nubia, Del.
——— *Niloticus*; along the banks of the Nile at Rosetta, Forsk. and Del.
Rhynchosia Memnonia, Dolichos of Del.; Thebes to Syene, Del.
Vicia biflora, Desf.; Cairo, Del. Extending to Algeria, Pers.
——— *lutea*, L.; Forsk.; and Cairo, Del. Extending to Asia Minor, Greece, Germany, Italy, France, and Spain, Sibth. and Pers.
Hippocrepis multisiliquosa, L.; upland at Alexandria, Del. Extending to Cyprus, Italy, France, and Spain, Sibth. and Pers.
Onobrychis crista-galli, Hedysarum of L.; Alexandria, Del. Extending to Cyprus, the Peloponnesus, and Constantinople, Sibth.
Galega Apollinea, Del.; Erment to Elephantine, Del.
Astragalus Gyzensis, Del.; near the pyramids at Gizeh, Del.
——— *hamosus*, L.; Cairo, Del. Extending to Cyprus, Barbary, Sicily, and France, Sibth. and Pers.
——— *annularis*, Forsk.; Alexandria, Forsk.; and upland at Cairo, Del.
——— *Bœticus*, L.; Alexandria, Del. Extending to Cyprus, the Peloponnesus, Tauria, Barbary, Sicily, Spain, and Portugal, Sibth. and Pers.
——— *lanigerus*, Desf.; upland at Alexandria, Del. Extending to Greece, and in the "Desert sands" to Barbary, Sibth. and Pers.
——— *Mareoticus*, Del.; upland at Alexandria, Del.
——— *stella*, L.; upland at Alexandria, Del. Extending to Cyprus, Barbary, and Southern France, Sibth. and Pers.
——— *tribuloides*, Del.; upland at Alexandria, Del.
——— *peregrinus*, Vahl; upland at Alexandria, Del.
Trifolium radiatum, Del.; upland at Alexandria, Del.
——— *resupinatum*, L.; Cairo, Forsk.; Rosetta and Damietta, Del. Extending throughout Greece to middle Europe, Sibth. and Pers.
——— *tomentosum*, L.; upland at Alexandria, Del: Extending to Greece, Barbary, France, Spain, and Portugal, Bory and Pers.
Lotus oligoceratos, Lam.; Alexandria, Forsk.; Rosetta, Del.
——— *Arabicus*, L.; islands in the Nile, Del. Extending to the Greek islands, Sibth.
——— *Creticus*, L.; Alexandria, Forsk. and Del. Extending to the maritime rocks of Cyprus, Syria, Crete, the Peloponnesus, and Spain, Sibth. and Pers.
Dorycnium argenteum, Del.; upland at Alexandria, Del.
Trigonella maritima, Del.; Alexandria, Del.
——— *media*, Del.; Cairo, Del.
——— *laciniata*, L.; Cairo and Rosetta, Del.
——— *anguina*, Del.; Cairo, Del.
——— *occulta*, Del.; sand-islands in the Nile, Del.
——— *stellata*, Forsk.; Cairo, Forsk. and Del.
——— *hamosa*, L.; Cairo, Forsk. and Del. Extending to Cyprus, Sibth.
Medicago circinata, L.; Alexandria, Del. Extending to Cyprus, Caria, Constantinople, Greece, Italy, and Spain, Sibth. and Del.
——— *orbicularis*, L.; Alexandria, Del. Extending to Constantinople, Hungary, Carniolia, France, Italy, and Barbary, Sibth. and Pers.
——— *intertexta*, L.; Rosetta, Del. Extending to Barbary and Southern Europe, Pers.
——— *ciliaris*, L.; Alexandria, Del. Extending to Southern France, Pers.
——— *recta*, Desf.; upland at Alexandria, Del. Extending to Barbary, Desf. and Pers.
——— *truncatula*, Gaertn.; upland at Alexandria, and Rosetta, Del.
——— *marina*, L.; Alexandria, Del. Extending in maritime situations to Cyprus, Caria, the Bosphorus, the Peloponnesus, and other portions of Europe, Sibth. and Pers.
Mimosa habbas, Del.; in Upper Egypt on the border of Nubia, Granger and Del. Extending to Abyssinia, Bruce v. pl. 7.
Poterium sanguisorba, L.; upland at Alexandria, Del. Extending to Greece and middle Europe, Sibth. and Pers.
Lythrum thymifolium, L.; Alexandria and Cairo, Del. Extending in maritime situations to Crete, the shores of the Black sea, Hircania, Italy, and France, Sibth. and Pers.

Tillæa muscosa, L.; Cairo, Del. Extending to the Peloponnesus, and other portions of Southern Europe, Chaub. and Pers.

Eryngium campestre, L.; upland at Alexandria, Forsk. and Del. Extending to Greece and middle Europe, Sibth. and Pers.

——— *dichotomum*, Desf.: upland at Alexandria, Del. Extending to Barbary, Desf. and Pers.

Bupleurum semicompositum, L.; Alexandria, Del. Extending to Cyprus, the Greek islands, Montpellier, Algeria, and Spain, Sibth., Durv., and Pers.

Tordylium suaveolens, Del.; upland at Alexandria, Del.

Caucalis maritima, Desf.; Alexandria, Del. Extending in maritime situations to the Greek islands, other parts of Southern Europe, and to Barbary, Sibth. and Pers.

——— *glabra*, Forsk.; Alexandria, Forsk.; sand-hills at "Abouqyr" and Rosetta, Del.

——— *tenella*, Del.; upland at Alexandria, Del.

——— *anthriscus*, Tordylium of L.; Cairo, Forsk.; Damietta, Del. Extending to Greece, Constantinople, and middle Europe, Sibth. and Pers.

Torilis nodosa, Tordylium of L.; Alexandria, Del. Extending to Cyprus, Greece, Constantinople, and middle Europe, Sibth. and Pers.

——— *trichosperma*; known only as sent from Egypt by A. Tursa to Linnæus (Sm.).

Ammi majus, L.; Rosetta, Forsk.; and Alexandria, Del. Extending to Southern Europe, Pers.

——— *visnaga*, Daucus of L.; Alexandria, Del. Extending to the Greek islands, Barbary, and France, Sibth. and Pers.

Galium spurium, L.; Cairo, Del. Extending to middle Europe, Pers.

Crucianella angustifolia, L.; upland at Alexandria, Del. Extending to Mount Athos, and Montpellier, Sibth. and Pers.

——— *maritima*, L.; Alexandria, Forsk. and Del. Extending to Crete and Montpellier, Pers.

Scabiosa arenaria, Forsk.; Rosetta, Forsk.; sands near "Abouqyr," Del.

Urospermum picroides, Tragopogon of L.; Rosetta, Forsk.; Damietta, Del. Extending to Greece and Montpellier, Sibth. and Pers.

Picris altissima, Del.; Cairo, Del.

——— *lyrata*, Del.; Alexandria and Rosetta, Del.

——— *pilosa*, Del.; Alexandria, Del.

——— *sulphurea*, Del.; near Cairo, Del.

Sonchus chondrilloides, Desf.; upland at Cairo, Forsk.; and Alexandria and Rosetta, Del. Extending to the Peloponnesus, Sicily, and Barbary, Sibth. and Pers.

Hieracium bulbosum, Leontodon of L.; upland at Alexandria, Del. Extending to the Peloponnesus, Italy, Montpellier, and Barbary, Sibth. and Pers.

Picridium Tingitanum, Scorzonera of L.; upland at Cairo, Forsk.; and Alexandria, Del. Extending in "maritime situations" to Cyprus, Caria, Smyrna, and Barbary, Sibth. and Pers.

Crepis senecioides, Del.; Cairo, Del.

——— *breviflora*, Del.; Rosetta, Del.

——— *hispidula*, Del.; Cairo, Del.

Hyoseris lucida, L.; upland at Alexandria, Forsk. and Del. Extending to Greece, Bory and Chaubard.

——— *Cretica*, L.; upland at Alexandria, Forsk. and Del. Extending to the Peloponnesus and Mount Athos, Sibth.

Scolymus maculatus, L.; between Rosetta and Rahmanyeh, Del. Extending to the Greek islands, Smyrna, Italy, France, Portugal, and Barbary, Sibth. and Pers.

——— *Hispanicus*, L.; Cairo, Forsk.; and Alexandria, Del. Extending throughout Greece, to other parts of Southern Europe, and to Barbary, Sibth. and Pers.

——— *grandiflorus*, Desf.; Egypt, Lippi and Del. Extending to Barbary, Pers.

Cirsium Syriacum, Carduus of L.; Cairo, Forsk. and Del. Extending to Cyprus, the Greek islands, Syria, Barbary, and Spain, Sibth. and Pers.

Onopordon Græcum, L.; Alexandria, Del. Extending to Cyprus and the Peloponnesus, Sibth.

Carlina lanata, L.; upland at Alexandria, Del. Extending to the Peloponnesus, Italy, Southern France, and Barbary, Sibth. and Pers.

Atractylis flava, Desf.; upland at Alexandria, Forsk. and Del. Extending to Barbary, Pers.

Carthamus Creticus, L.; upland at Alexandria and Rosetta, Del. Extending to Crete, Tourn. and Pers.

——— *Mareoticus*, Del.; upland at Alexandria, Del.

Chrysocoma candicans, Del.; upland at Alexandria, Del.

Santolina maritima, Athanasia of L.; upland at Alexandria, Del. Extending in maritime situations to the Greek islands and Barbary, Sibth. and Desf.

——— *monanthos*, Tanacetum of L.; Cairo, Forsk. Extending to Cyprus, Sibth.

Balsamita tridentata, Del.; Alexandria, Del.

Gnaphalium stœchas, L.; upland at Alexandria, Del. Extending throughout Greece, Sibth.

——— *spathulatum*, Lam.; river-flat at Cairo, Del.

——— *pulvinatum*, Del.; river-flat at Cairo, Del.

——— *crispatulum*, Del.; islands in the Nile at Cairo, Del.

Conyza Aegyptiaca, Erigeron of L.; Cairo, Forsk. and Del. Extending to Sicily, Pers.

Phagnalon rupestre, Conyza of L.; upland at Alexandria, Forsk. and Del. Extending to Arabia, Forsk. and Pers.

Senecio Arabicus, L. (already mentioned); Cairo, Forsk. and Del.

——— *verbenæfolius*, Jacq.; near Mansourah, Del.

——— *Belbeysius*, Del.; river-flat at "Belbeys," Del.

——— *Aegyptius*, L.; Cairo, Del.

——— *glaucus*, L.; upland at Alexandria, Rosetta, and Damietta, Del. Extending to Barbary and Spain, Desf. and Pers.

Cineraria maritima, L.; Egypt, Alpin. Extending in maritime situations to the Greek islands, and the Atlantic shores of Europe, Sibth. and Pers.

Pulicaria Arabica, Inula of L.; Cairo, Del. Extending to Arabia, Pers.; Crete, Mauritan., Andalus., Dec.

Inula crithmoides, L.; upland at Alexandria, Forsk. and Del. Extending in maritime situations to the Greek islands, and the Atlantic shores of Europe and Britain.

——— *graveolens*, Erigeron of L.; Alexandria, Dec. Extending to Greece, Sibth.; Italy and Spain, Dec.

Cotula anthemoides, L.; Cairo, Del. Extending to Spain and the island of St. Helena, Pers.

——— *aurea*, L.; around Salehyeh, Del. Extending to Asia Minor and Southern Europe, Sibth. and Pers.

Anacyclus Alexandrinus, Willd.; upland at Alexandria, Del.

Anthemis retusa, Del.; upland and river-flat at Cairo, Forsk. and Del.

——— *indurata*, Del.; Alexandria, Del.

——— *melampodina*, Del.; upland at Cairo, Del.

Achillea santolina, L.; upland at Alexandria, Del. Extending to Rhodes, Sibth.

Buphthalmum spinosum, L.; upland at Alexandria, Del. Extending to the Greek islands, and Southern Europe, Sibth. and Pers.

——— *pratense*, Vahl; Forsk.; and banks of the Nile at Cairo, Del.

Centaurea prolifera, Vent.; Alexandria, Forsk.; upland at Alexandria and Rosetta, Del.

——— *calcitrapa*, L.; Alexandria, Forsk.; and Damietta, Del. Extending to Greece, Constantinople, and middle Europe, Sibth. and Pers.

——— *calcitrapoides*, L.; Cairo, Del. Extending to Palestine and Montpellier, Pers.

——— *penicillata*, Del.; Egypt, Coqueb. and Del.

Centaurea pallescens, Del.; sand-islands in the Nile, and route from Cairo to Salehyeh, Del.

——— *Alexandrina*, Del.; upland at Alexandria, Del.

——— *pumila*, L.; upland at Alexandria, Forsk. and Del. Extending to Athens, Sibth.

Calendula arvensis, L.; Cairo, Del. Extending throughout Greece to middle Europe, Sibth. and Pers.

Filago Mareotica, Del.; upland at Alexandria, Del.

Xanthium strumarium, L.; Rosetta, Forsk. and Del. Extending to Yemen, Greece, Constantinople, and middle Europe, Forsk., Sibth., and Pers.

Ambrosia maritima, L.; Cairo, Forsk.; and Alexandria, Del. Extending in maritime situations to the Peloponnesus, Cappadocia, and Etruria, Bory and Pers.

Cervicina campanuloides, Del.; sandy fields near Cairo, Del.

Plantago lagopus, L.; Cairo, Del. Extending in sunny situations to the Peloponnesus, Spain, and France, Sibth. and Pers.

——— *albicans*, P. ovata of Forsk.; upland at Cairo and Alexandria, Forsk. and Del.

——— *maritima*, L.; Damietta, Del. Extending in maritime situations to Cyprus, the Greek islands, and the Atlantic shores of Europe and North America, Sibth. and others.

——— *coronopus*, L.; Cairo, Forsk.; and Alexandria, Del. Extending to Greece, Barbary, and middle Europe, Sibth. and Pers.

——— *stricta*, Schousb.; Cairo, Del. Extending to Morocco, Schousb.

——— *squarrosa*, Murr.; upland at Rosetta, Del. Extending to the Greek islands, Sibth.

Statice limonium, L.; Rosetta, Del. Extending in maritime situations to Greece, and the Atlantic shores of Europe and North America, Sibth. and others.

——— *incana*, L.; S. speciosa in Egypt, Forsk. Extending to Arabia and Siberia, Pers.

——— *monopetala*, L.; Alexandria, Forsk. Extending to Sicily and Barbary, Pers.

——— *Aegyptiaca*, Viv.; upland at Alexandria, Del.

——— *tubiflora*, Del.; upland at Alexandria, Del.

Coris Monspeliensis, L.; upland at Alexandria, Del. Extending in maritime situations to Greece, and other portions of Southern Europe, Sibth. and Pers.

Utricularia inflexa, Forsk.; Rosetta, Forsk.; ditches at Damietta, Del.

Orobanche crenata, Forsk.; Cairo, Forsk.; Rosetta and Damietta, Del.

——— *ramosa*, L.; Alexandria, Forsk.; Cairo, Del. Extending to Cyprus, Caria, Greece, and middle Europe, Sibth. and Pers.

——— *media*, Desf.; Alexandria, Del.

——— *tinctoria*, Forsk.; Rosetta, and Mor in Arabia, Forsk.; islands of Lake Menzaleh, Del.

Veronica anagallis, L.; Rosetta, Del. Extending to Greece, throughout Europe to Iceland, Siberia, Kamtschatka, and Northern Japan, Sibth. and A. Dec.

Peplidium humifusum, Del.; moist situations at Damietta, Del.

Verbascum spinosum, L.; upland at Alexandria, Del. Extending to the mountains of Crete, Sibth.

——— *sinuatum*, L.; near Salehyeh, Del. Extending to Mount Sinai, Syria, the Caspian sea, the Crimea, Greece, and throughout the Mediterranean countries to Spain, the Canary Islands, and Algeria (A. Dec.).

Linaria virgata, Desf; brought from Egypt by Olivier, Del. Extending to Algeria, Pers.

Capraria dissecta, Del.; Belbeys, and sand-islands from Cairo to Upper Egypt, Del.

Buchnera Hermonthica, Del.; Erment to Philae, and in Nubia, Lipp. and Del.

Salvia verbenacea, L.; Alexandria, Del. Extending to Greece, Constantinople, and middle Europe, Sibth. and Pers.

Salvia lanigera, Desf.; Alexandria, Forsk.

Teucrium iva, L.; Alexandria, Forsk. and Del.

——— *polium*, L.; upland at Alexandria, Forsk. and Del. Extending to Greece, Asia Minor, Italy, France, and Spain, Sibth. and Pers.

Satureja capitata, L.; upland at Alexandria, Del. Extending to Greece, Palestine, and Portugal, Sibth. and Pers.

Mentha sylvestris, L.; Rosetta, Forsk. and Del. Extending in moist situations to Greece, Germany, France, and England, Sibth. and Pers.

——— *pulegium*, L.; upland at Alexandria, Del. Extending to Greece, and middle Europe, Sibth. and Pers.

Marrubium alyssum, L.; upland at Alexandria, Del. Extending to Spain, Pers.

Phlomis fruticosa, L.; upland at Alexandria, Del. Extending to Greece, Sicily, and Spain, Sibth. and Pers.

Stachys Palæstina, L.; upland at Cairo, Del. Extending to Palestine and throughout Greece, Sibth. and Pers.

Globularia alypum, L.; upland at Alexandria, Del. Extending to the Peloponnesus, and other parts of Southern Europe, Sibth. and Pers.

Heliotropium Europæum, L.; Egypt, Forsk.; Alexandria, Del. Extending to the Peloponnesus and Athens, and other portions of Southern Europe, Sibth. and Pers.

——— *supinum*, L.; Cairo, Forsk.; and Alexandria, Del. Extending in maritime situations to the Greek islands, Montpellier, and Barbary, Sibth. and Pers.

Lithospermum tenuiflorum, L.; Alexandria, Del. Extending to Cyprus, Sibth.

——— *tinctorium*, L.; upland at Alexandria, Forsk. and Del. L. tinctorium, Vahl. Extending to Greece, Bory and Chaub.

——— *ciliatum*, Vahl; canals at Cairo, Forsk.

Anchusa undulata, L.; upland at Alexandria, Forsk. and Del. Extending to the Greek islands, Siberia, Spain, and Portugal, Sibth. and Pers.

——— *asperrima*, Del.; near "Abouqyr," Del.

——— *Aegyptiaca*, Asperugo of L.; Alexandria, Forsk. and Del.

Echium rubrum, Forsk. (E. setosum of Vahl and E. diffusum of Sibthorp); Cairo and Alexandria, Forsk. Extending to Crete and the Peloponnesus, Sibth. and Bory.

——— *setosum*, Del. non Vahl; Alexandria, Del.

——— *longifolium*, Del.; river-flat at Cairo, Del.

——— *Rawolfii*; sand-islands in the Nile at Cairo, Del.

Echiochilon fruticosum, Desf.; upland at Alexandria, Del. Extending to Tunis, Desf. and Pers.

Cressa Cretica, L.; Egypt, Forsk.; shore of the Red sea at Suez, Del. Extending in maritime situations to Yemen, the Greek islands, the Peloponnesus, and Tunis, Forsk., Sibth., Chaub., and Pers.

Convolvulus Siculus, L.; Alexandria, Del. Extending to Crete, the Peloponnesus, and Sicily, Sibth. and Pers.

——— *althæoides*, L.; upland at Alexandria, Del. Extending to Greece, around the shores of the Mediterranean to Mogador, Madeira, and the Canary Islands, Sibth. and A. Dec.

Hyoscyamus reticulatus, L.; around Salehyeh and Qatyeh, vernal, Del. Extending to Syria and Crete, Pers.

Solanum coagulans, Forsk.; Yemen, Forsk.; Syene, Del.

Erythræa spicata, Gentiana of L.; in the Delta, Del. Maritime or at least submaritime; extending to Greece, Asia Minor, and the shores of the Caspian; and Westward along the shores of the Mediterranean to Barbary, the opposite European coast, and the Canary Islands (Pers., Sibth., and A. Dec.). Observed by myself along the seashore of the Delaware peninsula, possibly indigenous there; and by others near Norfolk and on Nantucket (see A. Gray).

Cynanchum acutum, L.; Alexandria and Rosetta, Del. Extending to the Greek islands, Astracan, Sicily, and Spain, Sibth. and Pers.

Salicornia fruticosa, L.; Alexandria, Del. Extending in

maritime situations to the Greek islands, Athens, and other portions of Europe, Sibth. and Pers.

Salicornia herbacea, L.; Alexandria, Forsk. and Del. Extending in maritime situations to Crete and other Greek islands, and to the Atlantic shores of Europe and North America, Sibth. and others.

——— *glauca*, Del.; Alexandria, Forsk. and Del.

——— *cruciata*, Forsk.; Alexandria, Forsk.; shores of the Red sea, Del.

——— *strobilacea*, Pall.; Alexandria, Del.

Chenopodium murale, L.; Cairo, Del. Extending to Constantinople, middle Europe, and Algeria, Sibth. and Pers.

Atriplex halimus, L.; Alexandria and on the upland at Cairo, Del. Extending in saline situations to Cyprus, the Peloponnesus, Siberia, Barbary, Spain, Portugal, and England, Sibth. and Pers.

——— *portulacoides*, L.; Rosetta, Forsk.; islands of Lake Menzaleh, Del. Extending in maritime situations to the Greek islands, and the Atlantic shores of Europe, Sibth. and Pers.

——— *glauca*, L.; upland at Cairo, Forsk.; Alexandria, Del. Extending to the Dardanelles, the Black Sea, Southern France, Spain, and Barbary, Forsk., Sibth., and Pers.

——— *coriacea*, Forsk.; Alexandria, Forsk.; sands there near the sea, Del.

——— *hastata*, L.; Damietta, Del. Northern Europe, Pers.

Beta maritima, L.; Alexandria and Cairo, Del. Extending in maritime situations to the Peloponnesus, the shores of the Black Sea, and the Atlantic shores of Europe.

Suæda baccata, Forsk.; Cairo, Forsk.; Alexandria, Del. Extending to Ghomfude in Arabia, Forsk.

——— *vera*, Forsk.; Alexandria, Forsk. and Del. Extending to Ghorab in Arabia, Forsk.

——— *vermiculata*, Forsk.; Alexandria, Forsk. and Del. Extending to Djidda in Arabia, Forsk.

——— *salsa*, Salsola of L.; Rosetta, Del. Extending in maritime situations to Athens, and the Atlantic shores of Europe and North America, Sibth. and Pers.

——— *hortensis*, Forsk. (already mentioned); Cairo, Del. Extending to Taæs in Yemen, Forsk.

——— *pinnatifida*, Del.; found by Olivier near Alexandria, Del.

——— *fruticosa*, Salsola of L.; Alexandria, Forsk.; and Rosetta, Del. Extending in maritime situations to Yemen, Athens, Persia, France, England, Spain, and Portugal, Forsk., Sibth., and Pers.

——— *mollis*, Salsola of Desf.; Alexandria, and around Salehyeh, Del. Extending to Barbary, Desf.

Salsola kali, L.; Alexandria, Forsk.; and Rosetta, Del. Extending in maritime situations to Greece, and the Atlantic shores of Europe and North America, Sibth., Pers., and others.

——— *tragus*, L.; Alexandria and Rosetta, Del. Extending in maritime situations to the Greek islands, and other portions of Southern Europe, Sibth. and Pers.

——— *oppositifolia*, Desf.; Alexandria, Forsk. and Del. Extending to Tunis, Pers.

——— *spinosissima*, Anabasis of L.; Alexandria, Forsk. and Del. Extending to Djidda in Arabia, the Greek islands, Persia, and Barbary, Forsk., Bory, Desf., and Pers.

——— *tetrandra*, Forsk.; Alexandria, Forsk. and Del.

——— *inermis*, Forsk.; Alexandria, Forsk. and Del. Extending to Sinai, Forsk.

——— *glomerulata*, Del.; Egypt, Lipp.

Rumex Aegyptiacus, L.; Cairo, Forsk.; Rosetta, Del.

——— *dentatus*, L.; Rosetta, Del.

——— *roseus*, L.; Rosetta, Forsk. and Del. Extending to Cyprus and Barbary, Sibth. and Pers.

Polygonum salicifolium, Del.; Rosetta, Del.

——— *tumidum*, Del.; Damietta, Del.

——— *melastomæum*, Del.; Egypt, Lipp.

——— *maritimum*, L.; Alexandria, Del. Extending in maritime situations to Crete, Cyprus, Rhodes, the Dardanelles, and the Atlantic shores of Europe and North America, Forsk., Sibth., Pers., and others.

Polygonum herniarioides, Del.; islands in the Nile, Del.

Passerina hirsuta, L.; upland at Alexandria, Forsk. and Del. Extending to Cyprus, Crete, Athens, Italy, France, and Barbary, Sibth. and Pers.

Thesium humile, Vahl; upland at Alexandria, Del.

Cynomorium coccineum, L.; Alexandria, Forsk.; moist sand near the mouths of the Nile, Del. Extending to Malta, Sicily, and Mauritania, Pers.

Ceratophyllum demersum, L.; Rosetta, Del. Extending in ponds and streams to middle Europe, England, and North America, Pers. and others.

Euphorbia peplis, L.; Alexandria, Del. Maritime; extending along the seashore to Greece and the other Mediterranean countries, Pers. and Sibth.

——— *parvula*, Del.; Alexandria, Del.

——— *punctata*, Del.; upland at Alexandria, Del.

——— *Alexandrina*, Del.; upland at Alexandria, Del.

——— *paralias*, L.; upland at Alexandria, Del. Extending in maritime situations to Crete, Greece, and the Atlantic shores of Europe, Sibth. and Pers.

——— *calendulæfolia*, Del.; river-flat at Cairo, Del.

Croton tinctorium, Willd.; near Cairo on the river-flat, Del.

Herniaria fruticosa, L.; upland at Alexandria, Del. Extending to Southern France and Spain, Pers.

Parietaria officinalis, L.; Cairo, Forsk.; Del. Extending throughout Greece to middle Europe and Denmark, Sibth. and Pers.

Salix subserrata, Willd.; cult., but according to the Arabs, indigenous, Forsk.; Del.

Arum arisarum, L.; upland at Alexandria, Del. Extending to Greece and other portions of Southern Europe, and to Mauritania, Sibth. and Pers.

Typha angustifolia, L.; Rosetta, Del. Extending to Smyrna, the sea of Marmora, Greece, middle Europe, and North America, Forsk., Sibth., Pers., and others.

Lemna hyalina, Del.; Damietta, Del.

——— *gibba*, L.; Rosetta, Del. Extending to the Canary Islands, Europe, Asia, the Philippine Islands, and North America, A. Dec. and A. Gray.

——— *polyrhiza*, L.; Rosetta, Del. Extending to middle Europe, and North America, Pers. and others.

Nayas fragilis, Caulinia of Willd.; Rosetta, Del.

——— *graminea*, Del.; canals at Rosetta and in the Delta, Del.

——— *muricata*, Del.; brackish water near Fareskour in Lower Egypt, Del.

Zannichellia palustris, L.; Damietta, Del. Extending to Constantinople, middle Europe, Sicily, Algeria, England, New Zealand, and North America to Oregon, Sibth. and A. Dec.

Ruppia maritima, L.; Alexandria and in Lake Menzaleh, Del. Extending in brackish water to Cyprus, the Peloponnesus, and the Atlantic shores of Europe and North America, Sibth., Pers., and others.

Potamogeton marinum, L.; Rosetta and Damietta, Del. Extending in brackish water to the Peloponnesus, and the Atlantic shores of Europe and North America, Sibth., Pers., and others.

——— *crispum*, L.; Rosetta and Cairo, Del. Extending to Constantinople, middle Europe, and Australia, Sibth., Pers., and A. Dec.

Alisma plantago, L.; Rosetta, Del. Extending to Greece, Denmark, Abyssinia, Australia, and North America, Sibth., Pers., A. Dec., and others.

Pancratium maritimum, L.; Alexandria, Del. Extending in maritime situations to Cyprus and Greece, Sibth.

Allium subhirsutum, L.; upland at Alexandria, Del. Extending to Cyprus, Crete, Greece, Italy, and Spain, Sibth. and Pers.

Allium roseum, L.; upland at Alexandria, Del. Extending to Crete, the Peloponnesus, Montpellier, and Algeria, Sibth. and Pers.

——— *pallens*, L.; upland at Alexandria, Del. Extending to the Greek islands, Pannonia, Italy, Montpellier, and Spain, Sibth. and Pers.

Asphodelus fistulosus, L.; upland at Cairo, Forsk. and Del. Extending through the Greek islands to Athens, France, and Spain, Sibth. and Pers.

Scilla maritima, L.; brought to Alexandria from the Desert, Del. Extending to the Peloponnesus and Attica, Syria, Barbary, Spain, and Portugal, Sibth. and Pers.

Muscari comosum, Hyacinthus of L.; Alexandria, Del. Extending to Cyprus, Bithynia, the Peloponnesus, and middle Europe, Sibth. and Pers.

Hyacinthus serotinus, L.; upland at Cairo, Forsk. and Del. Extending to Spain, Pers.

Iris sisyrinchium, L.; upland at Cairo, Forsk.; Alexandria, Del. Extending in maritime situations to Cyprus, the Peloponnesus, Barbary, Spain, and Portugal, Sibth. and Pers.

Asparagus aphyllus, L.; Alexandria, Forsk. and Del. Extending to Crete and Mount Athos, Sicily, Spain, Portugal, and Barbary, Sibth. and Pers.

Juncus acutus, L.; Alexandria, Del. Extending in maritime situations to Greece, and the Atlantic shores of Europe, Sibth. and Pers.

——— *maritimus*, Sm.; Alexandria, Forsk. and Del. Extending in maritime situations to Crete, and the Atlantic shores of Europe and North America, Sibth., Pers., and A. Gray.

——— *rigidus*, Desf.; moist sandy spots in the Desert, Del. Extending in maritime situations to Barbary, Pers.

——— *multiflorus*, Desf.; Del. Extending to Barbary, Pers.

Cyperus mucronatus, Rottb.; Rosetta, Forsk.; Fountain of Moses in the Sinai peninsula, Del. Extending to Arabia and India, Pers.

——— *fuscus*, L.; Rosetta and Cairo, Forsk.; Rosetta, Del. Extending to Smyrna and Constantinople, Denmark, and Barbary, Sibth., and Pers.

——— *Michelianus*, Scirpus of L.; canal at Alexandria, Del. Extending to Bithynia, Europe and Barbary, Sibth. and Pers.

——— *esculentus*, L.; Forsk.; Rosetta, Del. Extending to Greece, Italy, Montpellier, and Barbary, Gittard and Pers.

——— *fastigiatus*, Forsk.; Rosetta, Forsk.

——— *ornithopodioides*, Del.; Damietta, Del.

Schœnus mucronatus, L.; Alexandria, Forsk.; Rosetta, Del. Extending in maritime situations to Crete, the Peloponnesus, and other portions of Southern Europe, to Morocco, Sibth. and Del.

Scirpus maritimus, L.; Cairo, Forsk. Extending in "salt marshes" to Cyprus, Constantinople, the Peloponnesus, and the Atlantic shores of Europe and North America, Sibth., Pers., and others.

——— *fimbriscetus*, Del.; Damietta, Syria, France, Del.

——— *macronatus*, L.; Rosetta, Piedmont, and India, Del. Extending in maritime situations to Greece and England, Sibth. and Chaub.

Eleocharis palustris, Scirpus of L.; Cairo, Forsk.; Rosetta and the Fayoum, Del. Extending to Greece, Northern Europe, and North America, Sibth., Pers., and others.

——— *caducus*, Scirpus of Del.; Damietta, Del.

——— ? *pollicaris*, Scirpus of Del.; Damietta, Del.

Isolepis inclinata, Del.; around Salehyeh, Del.

——— *uninodis*, Del.; Damietta, Del.

Fimbristylis dichotoma, Scirpus of L.; Cairo, Forsk.; Rosetta, Del. Extending in maritime sands to the Black Sea, Arabia, and India, Sibth. and Pers.

Carex divisa, Huds.; Alexandria, Del. Extending in "salt marshes" to the Atlantic shores of Europe, Pers.

Lygeum spartum, L.; Alexandria, Del. Extending to Spain, Pers.

Saccharum Aegyptiacum, Willd.; Rosetta, Forsk.; sandy portions of the banks of the Nile, Del.

Andropogon annulatum, Forsk.; Rosetta, Forsk.; near Cairo, and in Syria, Del.

Phalaris Canariensis, L.; Cairo, Forsk.; Alexandria, Del. Extending to Constantinople, Greece, and the Canary Islands, Forsk., Sibth., and Pers.

——— *aquatica*, L.; Alexandria and Cairo, Del. Extending in watery situations to Asia Minor and the Tiber, Sibth. and Pers.

——— *paradoxa*, L.; around Salehyeh, Del. Extending to Greece and Portugal, Sibth. and Pers.

Panicum obtusifolium, Del.; margin of canals at Damietta, San, and Cairo, Del.

——— *Numidianum*, Lam.; Damietta, Del. Extending to Barbary, Pers.

——— *coloratum*, L.; Damietta and Cairo, Del.

——— *repens*, L.; Rosetta and Cairo, Del. Extending to Crete, Barbary, and Spain, Sibth. and Pers.

——— *sorghi*, Del.; Upper Egypt, Del.

——— *leiogonum*, Del.; Cairo, Del.

——— *prostratum*, Lam.; Damietta, Del.

Crypsis aculeata, Anthoxanthum of L.; Alexandria, Forsk.; Cairo, Del. Extending to Bithynia, Barbary, and Southern Europe, Sibth. and Pers.

——— *alopecuroides*, Heleochloa of Host; sand islands in the Nile near Cairo, Del.

Polypogon Monspeliense, Alopecurus of L.; Cairo, Forsk.; Del. Extending to Athens, Barbary, and the Atlantic shores of France and England, Sibth. and Pers.

Milium lendigerum, L.; Alexandria, Del. Extending in maritime situations to Asia Minor, Greece, Montpellier, and England, Sibth., Gittard, and Pers.

——— *arundinaceum*, Agrostis miliacea of L.; Alexandria, Del. Extending to Athens and Zacynthus, Sibth.

Agrostis pungens, Schreb.; Alexandria, Del. Extending in maritime situations to Greece, Southern France, and Spain, Sibth. and Pers.

——— *spicata*, Vahl; towards Suez in the Desert, and near Lohaja in Arabia, Forsk.; coast from "Abouqyr" to Rosetta, Del.

Poa divaricata, Gouan; Alexandria, Del. Extending in maritime situations to Cyprus, and Montpellier, Sibth. and Pers.

——— *Aegyptiaca*, Willd.; Cairo, Forsk.; sand island in Nile near Cairo, Del.

——— *cynosuroides*, Uniola bipinnata of L.; Cairo, Forsk.; well known throughout Lower and Upper Egypt, Del. Extending to India, Pers.

Dactylis repens, Desf.; Alexandria, Del. Extending in maritime situations to Barbary, Pers.

Chrysurus aureus, Cynosurus of L.; Alexandria, Forsk. p. 27. Extending to Cyprus, Asia Minor, Greece, other portions of Southern Europe, and Barbary, Sibth. and Pers

Festuca cynosuroides, Desf.; Alexandria, Del. Extending to Barbary, Pers.

——— *fusca*, L.; Cairo, Forsk.; river-flat in Lower Egypt and at Cairo, Del. Extending to Palestine, Pers.

——— *uniglumis*, Sm.; Alexandria, Forsk.; Rosetta, Del. Extending to the Peloponnesus and England, Sibth. and Pers.

——— *inops*, Del.; Rosetta, Del.

——— *ealycina*, L.; Alexandria, and on the upland at Cairo, Forsk.; Del. Extending to Spain, Pers.

——— *divaricata*, Desf.; Alexandria, Forsk.; and Rosetta, Del. Extending in maritime situations to Barbary, Pers.

Dinæba paspaloides, Dactylis of Willd.; Damietta, and Persia, Del. Extending to India, Pers.

Kœleria phleoides, Festuca of Villars; Cairo, Del. Ex-

tending to Greece, Barbary, and Southern France, Bory and Pers.

Bromus rubens, L.; Alexandria, Forsk. and Del. Extending to Crete and the Peloponnesus, Sibth. and Bory.

——— *purpurascens*, Del.; Alexandria, Del.

——— *Madritensis*, L.; Rosetta, Del. Extending to Spain and England, Pers.

——— *distachyos*, L.; Alexandria, Forsk. and Del. Extending to Constantinople, the Peloponnesus, and other parts of Southern Europe, Sibth. and Pers.

Stipa juncea, L.; Alexandria, Del. Extending to Crete, Lycia, Barbary, and middle Europe, Sibth. and Pers.

——— *paleacea*, Willd.; upland at Alexandria and Cairo, Del. Extending to Crete, the Peloponnesus, and Barbary, Sibth. and Pers.

Avena pumila, Desf.; upland at Cairo, Del. Extending to Barbary, Pers.

——— *arundinacea*, Del.; upland at Rosetta, Del.

Trisetaria linearis, Forsk; Alexandria, Forsk.; sand hills at Alexandria, Rosetta, and in the Delta, Del. Extending to Syria, Labill. and Del.

Lagurus ovatus, L.; Alexandria, Forsk.; on the upland there, Del. Extending to Greece, and other portions of Southern Europe, Sibth. and Pers.

——— *Aegyptiaca*, Desf.; Del.

Phragmites maxima, Arundo of Forsk.; Cairo, and Ghobeibe beyond Suez, Forsk. p. 24; islands in the Nile, Del. "Differing from A. phragmites," Bory and Chaub.

Calamagrostis vulgaris, Arundo of L.; Ghobeibe beyond Suez, Forsk. Extending to Smyrna, England, and Denmark, Sibth. and Pers.

Ammophila arenaria, Arundo of L.; Alexandria, Del. Extending in maritime sand to Greece, and the Atlantic shores of Europe and North America, Sibth., Pers., and others.

Aristida plumosa, L.; Alexandria, and on the upland at Cairo, Forsk.; Rosetta, Del. Extending to Armenia and Tunis, Pers.

Rottbollia incurvata, L.; Alexandria, Del. Extending in maritime sand to Cyprus, Zacynthus, and the Atlantic shores of Europe as far as Denmark, Sibth. and Pers.

——— *filiformis*, Roth.; Alexandria and Rosetta, Del. Extending to Southern Europe, Pers.

——— *fasciculata*, Desf.; Rosetta, Del. Extending to Barbary, Pers.

Aegylops triaristata, Willd.; upland at Alexandria, Del. Extending to Greece, perhaps a var. of Ae. ovata, Bory & Chaub. Ae. ovata growing at the Dardanelles, on the Greek islands, in other parts of Southern Europe, and in Barbary, Forsk., Sibth., and Pers.

Elymus geniculatus, Del.; in fields of barley at Alexandria, Del.

Hordeum maritimum, Vahl.; Cairo, Del. Extending in maritime situations to the Greek islands, and the Atlantic shores of Europe as far as Denmark, Sibth. and Pers.

Triticum bicorne, Forsk.; Alexandria, Forsk.; on the upland there, Del.

——— *loliaceum*, Sm.; Alexandria, Del. Extending in maritime situations to England, Pers.

——— *junceum*, L.; Alexandria, Del. Extending in maritime situations to Smyrna, Constantinople, the Greek islands, Morocco, and the Atlantic shores of Europe as far as Britain, Forsk., Sibth., and Pers.

Sorghum Halepense, Holcus of L.; Cairo, and in Nubia, Del. Extending to Syria, Smyrna, Tenedos, Constantinople, and Mauritania, Forsk. and Pers.

Chara vulgaris, L.; Rosetta, Del. Extending in river water to Crete, Athens, and throughout Europe as far as Denmark and England, Sibth. and Pers.

Marsilea Aegyptiaca, Del.; ditches in the Delta, and moist situations near Cairo, Del.

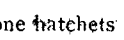
Adiantum capillus-veneris, L.; Cairo, Forsk.; Alexandria, Del. Extending to Kurma in Yemen, and among moist rocks throughout Greece, Forsk. and Sibth.

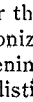
The river-flat along the Nile was originally a pastoral tract, at one time in all probability abounding in game. Frequented at first by the few species of birds and quadrupeds that have their home in the Desert, the valley soon became a route of migration among the animal tribes themselves: enabling antelopes, the lion, hyæna, genette (viverra), and ichneumon to cross the wide expanse of Desert; together with reptiles as the chameleon and monitor, and even some Tropical birds: affording at the same time ingress into the African continent to Northern migratory birds, and some Northern quadrupeds.

Tenth generation. May 1st, 3967, among living men.

Man may have entered Egypt in the hunter state, subsisting on fish and game; though I am not aware of any evidence of the fact. The absence from Egyptian soil of the rude stone relics which in other countries mark an initial period of barbarism is very striking.

Tradition of the existence somewhere of such a state of society seems to have been preserved among the Egyptians, — the hieroglyphic character of the *stone adze* occurring on the Gliddon mummy-case, while the usual representations clearly belong to the metallic adze. Another hieroglyphic character traceable as far back at least as the Fifth dynasty





(Leps. d. ii. pl. 44 and 64, Buns. and Birch 617) somewhat resembles the smooth stone hatchets called *celts* of the Stone period in Europe; is perhaps the "arvēlōs" for dividing leather, mentioned by Nicander ther. 423.

If Egypt was colonized by shepherds, men in the pastoral state, they probably resembled the Arabs of the Sinai peninsula above mentioned; — but who already under the Third dynasty are figured as physically distinct from and enemies of the Egyptians.

3946 B. C. (= 3876 + "70 years" of Gen. v. 12), Cainan.

Atriplex halimus of the seashore of Europe and the Mediterranean countries, and salines as far as Siberia. The *sea orach* is called in Germany "meldenstrauch," in Greece "almuria" (Fraas), in Egypt "gataf" (Del.), in Egyptian "arim" (transl. Sept. Job xxx. 4) or "shlĕh" (Kirch.), "shlō" meaning hedge (transl. Sept. Isai. v. 2 and Hos. ii. 6); and is one of the few indigenous plants of Egypt that affords sustenance to man: — the "kathaf el-bahri" is mentioned by Ebn Baitar; and A. halimus was observed by Delile from Cairo to the shore of the Mediterranean. Farther North, the "alimōn" is identified in Syn. Diosc. with the "ĕrmōn vasis" or "saphis" or "ōsirithōs

thiathēma" or "ēliōu stĕphanōs" or "iĕrōs kaulōs" of the prophets, and "athēnōrōs" of Pythagoras; is mentioned also by Theophrastus; by Antiphanes, as esculent "alima trŏgōntĕs" (Athen.); by Dioscorides, as cooked and eaten, growing along the seashore and suitable besides for hedges; by Pliny xxii. 33, as an "olus maritimum": A. halimus is known to grow in Siberia (Pers.); its tops were found by Belon, and Tournefort trav. p. 43, eaten in Greece; is termed by Tournefort inst. 505 "a. latifolia sive halimus fruticosus"; was observed by Sibthorp, Chaubard, and Fraas, on the seashore from Cyprus and the Greek islands to the Peloponnesus; is known to grow on the seashore of Barbary, Spain, Portugal, and even as far as England (Pers.). By European colonists, was carried to Austral Africa, and to Chili (Moquin, and A. Dec.); to Australia, observed by R. Brown; to the Hawaiian Islands, through the salt manufacture, as observed by myself.

Eleventh generation. Sept. 1st, 3934, among living men:

Twelfth generation. Jan. 1st, 3900, among living men:

The same year (= 3902 in calendar years = 2498 + "203 + 448 + 198 + 297 + 26 + 18 + 26 + 20 + 42 + 39 + 27 + 60" of the Euseb.-Maneth. table, the Afr.-Maneth. table giving 2857 + "274 + 214 + 302 + 253" = 3900), a date seemingly indicated by Manetho's numbers.

Papyrus antiquorum of Abyssinia. The Egyptians according to their own account originally subsisted on the *paper-rush* (Horap. i. 30), and the plant may have been known to the first colonists, its seeds floating down the Nile, — but its final disappearance from Egypt indicates an exotic maintained through cultivation: P. antiquorum was in Egypt before the invention of writing, the paper made from it constituting a hieroglyphic character; was observed by myself figured in standing crops under the Fourth dynasty and on subsequent monuments; continued in the days of Pliny xiii. 21 to be eaten by the Egyptians, but whether crude or boiled only the juice swallowed; was last seen in Egypt in 1800, by Delile near Damietta (not met with by Forskal); is not mentioned by Clot-Bey, and at the time of my own visit was regarded as extinct. Farther South, the "papyrōn" was found by Artemidorus on the margin of lakes in the Somali country (Strab. xvi. 4. 14); and specimens of P. antiquorum were procured by Bruce from lakes Tzana and Gooderoo in Abyssinia (Greville). Northward from Egypt, the plant in the days of Pliny grew along the Euphrates, also around a lake in Syria (the same perhaps where it continues to the present day), but in these localities as in Sicily and Southern Italy its presence is doubtless due to the hand of man.

In the absence of plants suitable for cultivation, *Agriculture* could not have originated on the banks of the Nile; but the first colonists may have brought knowledge of the art, and may even for a time have confined their attention to the above-mentioned Papyrus.

3876 B. C. (= 3811 + "65 years" of Gen. v. 15), Mahalaleel.

It is worthy of remark, that most of the objects of early cultivation in Egypt are Northern plants, from Palestine and the countries beyond; and as the dryer and main portion of the river-flat became occupied and irrigated, game became scarce and some of the larger kinds disappeared.

With the introduction of Agriculture came *weeds*, the climate eminently favouring the naturalization of exotics; reminding me in fact of our Northern greenhouses, where Subarctic and Equatorial plants are often subjected to the same amount of heat and moisture, and yet are found flourishing side by side. — At the present day, the soil having been upturned for ages, the spontaneous growth on the river-flat consists largely of imported weeds.

Thirteenth generation. May 1st, 3867, among living men:

Of the condition of mankind at this period we have some positive knowledge; the hieroglyphic characters including implements that had been long in use, implying often customs and associations by no means novel when the objects were selected for representation. The state of society seems in many respects not unlike Bedouin life, but the men were by no means inferior in intelligence nor less ambitious in their aims — than our leading spirits of the present day.

Names were given to birds and beasts before man had occasion to commune with his fellows, and the whole account in Genesis of his earlier history seems to imply the possession of language. Man's "natural language" of gestures, utterances, and exclamations is more expressive than words; but perhaps something may be learned from the hieroglyphic characters, the mouth representing the articulation "r," that (according to Plato) means rushing on: now we can conceive of a torrent of expletives, like the scolding of birds and certain quadrupeds, yet it seems more probable that the intellectual torrent proceeding out of the mouth consisted of regularly-formed words.

Fourteenth generation. Sept. 1st, 3834, among living men:

However it may have been with language, *writing* was certainly invented in Egypt. This appears from the hieroglyphic forms of objects peculiar to Egypt, also historically, the Greeks having preserved the name of the inventor of writing Thŏt. His name is besides found engrafted in the Egyptian language in the word "thŏt," having the same meaning — and pronounced like our English "thought"; may also have been the origin of the Greek "thōkĕin."

The original words of the Coptic or *Egyptian language* are not arbitrarily nor accidentally

chosen; but formed by system they bear such intimate relation to the hieroglyphic characters as to seem the work of one hand. — This continued to be the spoken language of Egypt in the time of Joseph and the Jewish Exodus (Gen. xli. 43 and 45, xliii. 23, and Psalm cxiv. *): in the days of Manetho there were two languages in Egypt (Jos. c. A.), the Coptic written with hieroglyphic characters as a sacred language (Rosetta Stone), while the spoken language may have been the Chaldaic or ancient Arabic: Greek characters were substituted for hieroglyphic by the early Christians, and the Egyptian language has thus been preserved in manuscripts, transmitted writings and translations, and in the services of the Coptic church.

Thŏt is the earliest Egyptian whose name has been preserved. Of his personal history we know nothing: except that a hieroglyphic character signifying both laughter and scribe (Horap. i. 37), it may be inferred that his invention was received with ridicule. — Plato was deterred from making disclosures on the subject by the fear of like consequences.

Where each character represents a word, some plan of association would of course be necessary: and besides the hint of Plato and the so-called "natural language," I have thought to distinguish human biography; each chapter corresponding to an articulate sound; the order — having been measurably preserved in the derived alphabets, Phœnician, Greek, and Roman.

ă guttural, the exclamations ah! aha!

"ahĕ" a cow, "ahĕ" to have need, "ahĕ" life (conception); "ahĕ" or "ahē" or "aha" verily; "ahĕ" to walk orderly, expect; — in Chaldaic "ahy" to grant life. The hieroglyphic character occurs as early at least as the Third dynasty, also in the Book of the Dead, and continues in use under the . . . . dynasty (Buns. and Birch, and Leps. d. ii. pl. 7). Serious consequences have followed this selection: indicated in the "molten calf" of the Israelites (Ex. xxxii. 4 to 24); veneration of the cow among the Egyptians, mentioned by Herodotus. Among the Hindus, of all nations most resembling the Ancient Egyptians, killing a cow has often proved a more serious affair than killing a man. Farther East, the cow is or has been at the foundation of the institutions of China, and Japan. Among the Phœnicians, the word "alwph" or "alph" (the Greek "alpha") by a remarkable exception is of both genders, and signifies "cow and bull." Among the earliest Romans, killing a cow was punished with hardly less than death (Pliny). And among the Greeks, "arhē" signifying beginning or foundation, is in pronunciation near enough to the Egyptian "ahĕ" to have originally meant cow. The inventor of writing very certainly had no intention of influencing the religious belief of thousands of millions of human beings: but it would seem, had he adopted a different mode of writing conception, cow-worship would not have become universal.

The progress of words geographically, is illustrated by another Egyptian name of the cow, "vahsĕ" or "vahsi" or "vĕhsi"; — in Hebrew "bkr," continued to the present day in the "bakar" of Syria, Arabia, and Egypt; in ancient Italy "vacca"; in France "vache"; but beyond, the word did not cross the Channel into England, as though the animal there was already provided with a name: this excluding name was doubtless "cow," occurring besides in the Scandinavian languages, and in German, Persian, Sanscrit, and even Chinese (see also the Egyptian word "kōōh"). Now as the male everywhere accompanied the female, precise correspondence in the progress of names might be looked for: and we find in Hebrew "thwr," continued to the present day in the "thour" of Syria, Arabia, and Egypt; in ancient Greece, "taurōs"; in ancient Italy, "taurus"; in France "taureau"; another word that did not cross the Channel: the excluding name being evidently "bull"; in Sanscrit "bali" (Mason).

The *cow* therefore was already the companion of man when writing was invented: — a historic reference under the Second dynasty to cattle, Bos taurus, has been preserved (Maneth.): under the Third and Fourth dynasties, cattle are figured in herds, a peculiar long-horned breed, which continues under the Twelfth, but afterwards disappears from the monuments, and doubtless became extinct. At Benihassan under the Twelfth dynasty, cattle in the state of secondary wildness are figured; some individuals particoloured, but hunted with other game, probably in a foreign country and North of Egypt. Cattle are mentioned in the history of Abram (Gen. iv. 20 and xi. 16); also by Homer, and Greek writers generally. In Switzerland during the Stone Age were kept by the inhabitants, as appears from debris of the earliest villages (Heer, in Troyon). From Europe, were carried to America, the Hawaiian, Taheitian, Samoan and Feejeean islands, New Zealand, and Australia; and in Austral America and on Hawaii, have relapsed into secondary wildness. (See hornless, and Indian cattle.)

"apas" ancient; "apĕ" or "apē" or "aphĕ" head; "aa" to do, to make; — in Hebrew "ab" father. The character occurs from the Third dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 5, and k. pl. 24 to 27).

"al" stone; "al" mute, deaf; (the number "a-l-ĕ" signifying "aphŏnian" silence, Horap. i. 28); "alō" to let alone; "at" or "ath" the negative prefix or particle; — in Hebrew "al" noth-

ing; in Arabic "Allah" (the stone worshipped by the Arabians in the time of Strabo?); in Greek "las" or "laos" stone, meaning also people. The character occurs from the Fourth to the Twenty-sixth dynasty (3d pyram. Vyse, and Buns. and Birch).

"anah" or "anh" to live; "ang" or "anak" or "anok" I; — in Bactrian "anhu" to live (Buns. and Birch v. p. 748). The character occurs on the Gliddon mummy-case and from the Third dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 2, and k. pl. 7 to 67).

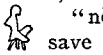
"allōu" "nōuval" pupil of the eye; "alōu" boy, also girl; "alŏōui" children; "athrĕu" or "hatrĕĕu" twins; "arĕj" or "arēj" or "arēēj" limit, end. — The character occurs under the . . . . dynasty (Champ. dict. 70 and 71, and Buns. and Birch).

ā, in Greek ĕi, the sound of wailing; in Egyptian "ōuĕi!," in Greek "ŏuai!," in Latin "vae!"

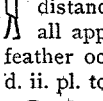
"nĕi" appointed time; "ĕĕt" pregnant; "ĕiĕ" therefore; "nĕh" to shake off, "nĕh" to save (i.e. deliverance), "nĕh" wailing; "tōuĕit" or "tōĕit" lamentation, to bewail; — in Hebrew "nĕyĕ" lamentation. The character occurs from the Fourth dynasty to the Roman conquest (Leps. d. ii. pl. 98, and k. pl. 56).

ibis-feather walking; "ōuĕi" "ĕi" I am; "ĕi" to labour; "ĕi" to come; "ōuĕi" divorce, distance. — This and the simple ibis-feather are painted green on the Gliddon mummy-case; to all appearance conventionally, being marked with the usual oblique parallel lines. The walking feather occurs also under the Third dynasty; and continues in use under Roman dominion (Leps. d. ii. pl. to iv. pl. 87, and k. pl. 6 to 29).

"vĕi" to lift the eyes; "ĕis" look!, behold!; "ouĕin" light. — The character occurs from the Tenth to the Eighteenth dynasty (Leps. d. ii. pl. 147, and iii. pl. 62).


(snake with tail in mouth, signifying world; also universal king, as the air that pervades the world; snake called by the Egyptians "mĕisi," Horap. i. 2, 56 and 61; "misi" snake, Kirch.); "mĕsiŏ" midwife; "misi" or "mĕs" born; "mĕst" or "mĕstĕ" to hate; "tshŏuĕit" or "tshĕuĕit" futile; "ōuĕĕi" or "ōuĕi" one, everyone; "ĕiĕr" to stand over or before; "aēr" air, — in Greek "aēr," in Latin "aer," in English "air." The character occurs from the Third to the Eighteenth dynasty (Leps. d. ii. pl. 5. 110, and k. pl. 15 to 29).

"ĕinĕ" or "ĕini" likeness, imitator; — in Greek "ĕithōs" image, fashion or form. The character occurs from the Third to the Twenty-ninth dynasty (Leps. d. ii. pl. 6, and k. pl. 5 to 49).


(pelican "pĕlĕkana" signifying love to the extreme of folly; for in striving to beat out fire around its nest, the bird sets its wings on fire and is thus captured, Horap. i. 51); "ōuĕinĕ" to be moved, stirred up; "mĕi" or "mai" love; "mĕ" or "mēi" to love; "ōuĕitĕ" to pine away, be consumed. — The character occurs as early as the Fifth dynasty (Leps. d. ii. pl. 63).

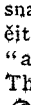
The *pelican*, Pelicanus onocrotalus, is known to be frequent in Egypt (Clot-Bey ii. 89): and farther South near the mouth of the Red Sea, flocks were observed by myself from Mocha.

v, the act of breathing, the pervading meaning saved.

"vĕt" or "vēt" rib; — in Greek the letter "vēta"; in Latin "vita" life; in Hebrew "ĕvi" breath, "hvĕ" life, Eve the mother of all living (Gen. iii. 20); in Greek "viŏs" life, in French "vie," in English "alive." The character occurs from the Third dynasty to the Fifth (Leps. d. ii. pl. 3 and 29).

(falcon or sparrowhawk, signifying soul; its Egyptian name "vai-ēth" literally meaning "soul within the heart," Horap. i. 7); "vait" or "vais" or "vēj" or "vēsh" hawk; "vĕrrĕ" or "vĕri" new, a youth; "vētsh" or "vētsh" or "vŏtsh" naked; "valhēt" simple, innocent, pure. — The character occurs from the Third dynasty to the end of hieroglyphic writing (Leps. k. pl 5 to 63). The character of the falcon resting on its perch, occurs on the Gliddon mummy-case.

Horapollo's further remark, That the falcon instead of water drinks blood, by which also the soul is nourished, seems to imply knowledge of the real function of the heart: that at the time when writing was invented, some idea of the continual supply or *circulation of the blood* already prevailed.


first shoot of the date-palm; "vai" (or "vais," Chaeremon in Porphyr. abst. iv. 7) palm-leaf, (palm signifying year, and its leaf month, Horap. i. 3 and 4), "avōt" or "ĕvat" or "ĕvēt" or "ĕvōt" or "ĕvŏt" month. The selection for chronological purposes is stated by Horapollo to be owing to the *date-palm* putting forth a leaf with every lunation, or twelve annually: — to the present day in Egypt (according to Clot-Bey), the lowest ring of leaves is cut annually, leaving cicatrices by which the age can be readily ascertained; some trees reaching several centuries. The source also of remarkable etymological interferences connected with the plant in various languages: as, ... , in Greek and Latin "phōinix" or "phoenix," in French "datte" and "date," in English "date" and "date"; also in Greek, "vaiōn" palm-leaf, a little while, "apŏ vaiēs" from infancy. The character of the palm-shoot occurs from the Fourth dynasty to the end of hieroglyphic writing

(Leps. d. ii. pl. 26, and k. pl. 13 to 63). The character of the palm-leaf occurs under the Third dynasty (Leps. d. ii. pl. 3).

Phoenix dactylifera of the countries around the Persian Gulf. Called in Britain *date*, in France "dattier" (Nugent), in Germany "dattelpalme" (Grieb), in Italy "palma" and the fruit "dattero" (Lenz), in Greece "phōinika" and the fruit "kōurmathēs" (Fraas), in Egypt and Yemen "nachl" (Forsk.), and at the time of the invention of writing already in the Mediterranean countries,—where its introduction has changed the whole aspect of the Southern shores: P. dactylifera is figured apart from hieroglyphic writing at Benihassan under the Twelfth dynasty, and in planted groves continues to the present day prominent in the landscape throughout Egypt. "Threescore and ten palm trees" were found by the Israelites at Elim in the Desert (Ex. xv. 27): and farther North, the "phōinikōs" planted on Delos was seen by Homer od. vi. 162; the "palma" is mentioned by Varro i. 22, Columella, and Pliny; and P. dactylifera continues cultivated for ornament on the Northern shores of the Mediterranean, except in Spain rarely ripening fruit (A. Dec.). Southward from Egypt, was observed by Forskal, and myself, under cultivation in Yemen, but the opposite Somali country supplied with imported fruit from Muscat; and two or three stocks planted on Zanzibar were barren. Eastward, seemed the pinnate-leaved palm figured in the cave-temples at Adjunta; is called in the environs of Bombay "kajooree" (Grah.), but does not in Hindustan produce edible fruit (Royle fibr. pl., and others), was observed by myself under cultivation with other palms for its crude sap called "toddy." Farther East, is enumerated by Mason as "exotic" in Burmah and called "swon-ba-lwon." (Compare P. sylvestris.)

night-heron; "avŏk" or "avŏk" raven, "vai" nycticorax (compare nycticorax destroying nestlings of crow at night, Horap. ii. 24); "vai-tshinĕ" messengers; "vŏki" maid-servant, "vōki" pregnant; "vĕnē" or "vĕnnē" door-post. The selection seems connected with the note quŏk uttered by the bird while flying high overhead in the night. — In Latin "voco" to call, "venio" to come. The character occurs in the Book of the Dead, and from the Seventeenth dynasty to the Nineteenth (Buns. and Birch, and Leps. d. iii. pl. 5 and 140).

The *night-heron*, Ardea nycticorax, indigenous and well known in Egypt when writing was invented. The bird is widely diffused over the Northern Hemisphere wherever there is water; and is frequent even in North America.

jackal; ("kuna" signifying sacred scribe, also laughter, Horap. i. 37), "sŏvĕ" or "sŏvi" laughter; "savĕ" wise ("svŏ" learning, Horap. i. 36); — in Hebrew "sfr" scribe; in Greek "sŏphŏs" wise; in Latin "sapiens," in Spanish "sabbe," in French "savant." The selection has given rise among Northern nations to the assignment of superior cunning to the fox; a persuasion at the present day too universal to be eradicated from the human mind. The character occurs from the Third dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 3, and k. pl. 35 to 67).

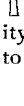
"vavĕ" or "vaavĕ" insipid; "vĕl" to enervate, weaken; "vēl" to liquefy; — in Hebrew "vĕw" inane, in English "veal." The character occurs under the Fourth dynasty, also in the Book of the Dead, and continues in use under the Twenty second (Leps. d. ii. pl. 10, and k. pl. 12 to 24).

"vōuhĕ" or "vōuhi" eyelids (discerning or diagnosis of life or death by the sacred scribe, Horap. i. 36); "vōur" or "hvōur" sinister; "vōōr" or "vōrvĕr" or "vĕrvŏr" to reject, cast away; "val" or "vĕl" eye; "vĕllĕ" or "vllĕ" blind; "vŏl" interpretation, solution; — The character occurs as early as the Fifth dynasty (Leps. d. ii. pl. 66, and Champ. dict. 384).

"vatshōur" a saw; "vatshōr" or "vatshar" fox (jackal; "vassara" of Herodotus iv. p. 192 Lybian fox); "vas" or "visi" to saw asunder; "vrvōrt" cut in two or rent; "viki" band or halter; "vasis" rope-maker; "vatshi" or "phatshi" half; "sĕvĕ" or "sĕvi" or "sēfi" sword; — in Hebrew "vtsr" to cut off or gather grapes, "vtso" to divide; in English "sever." The character occurs from the Fourth dynasty to the Nineteenth (Leps. d. ii. pl. 35, to iii. pl. 38).

(man eating hours signifying horoscope; for men eat at stated hours, Horap. i. 40); "ŏuĕv" or "ŏuĕv" or "ŏuēēv" priest; "ŏuĕĕv" or "ouaav" or "ēuav" clean, immaculate, holy; ōuavĕs" sincerity, sincere; — in English "wave." The character occurs under the . . . . dynasty (Champ. text p. 357).

"varŏt" or "varvōt" money; "vĕkĕ" or "vēkĕ" or "vukē" or "vĕhĕ" recompense, hire; "vŏtsh" to dismiss; "vŏk" servant; "vŏk" or "vēk" to depart. The character occurs under the . . . . dynasty (Champ. dict. 26).


(finger signifying stomach, Horap. ii. 6); "thēv" finger; "thēvi" basket; "thĕvi" or "thvai" cavern: "avĕ" or "ĕvi" or "ĕivĕ" or "ivi" or "ōvĕ" or "ōvi" thirst, to thirst; "thĕviō" or "thĕvia" or "thĕvvia" or "thvviĕ" or "thvviō" or "thvviēu" or "thviēu" humility, to be humiliated; — in Greek "thivis" basket. The character occurs from the Fourth dynasty to the Fifth (Leps. d. ii. pl. 22 and 101).

"kivĕ" or "ĕkivĕ" paps; "kēv" double; — in Hebrew "hv" bosom. The character occurs under the . . . . dynasty (Champol. gram., and Rosselin. cxlii. 1): and may be further traced in the form B of the Greek letter vēta.

(three water-jars signifying rising of the Nile, Horap. i. 21); "valkōu" water-jar; "vĕvi" or "vĕuvi" to pour forth; "mvĕvi" cisterns; — in Arabic "beybe" lake, cisterns. The character occurs from the Third dynasty to the Twenty-first (Leps. d. ii. pl. 3, and k. pl. 7 to 43). The character of four water-jars occurs from the Fourth dynasty to the Fifteenth (Leps. d. pl. 97, and k. pl. 7 to 15).

"vairi" or "vir" basket, pannier; "ĕtphŏ" burden. — The character occurs from the Third dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 7, and k. pl. 14 to 67).

portable furnace?; (burning censer signifying Egypt together with its immoderate heat and continual animal productiveness and procreation, Horap. i. 22); "vĕrvĕr" or "vĕrvr" or "vrvr" hot, to boil or effervesce; — in Latin "fervor" boiling, fervour, zeal. The character occurs from the Third dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 3, iii. pl. 147, and k. pl. 35 to 67).

The art of making *pottery*, known therefore when writing was invented; also various kinds of earthenware vases and implements in use, — as appears from figures on the Gliddon mummy-case, and on monuments under the Third and Fourth dynasties. The details of the manufacture are fully represented under the Twelfth dynasty at Benihassan.

(lioness signifying a woman with but one child, Horap. ii. 78); "lavai" or "lavŏi" lioness; "livi" or "livĕ" fury, madness, to be mad against; "livi" thirst, to desire; "lŏvlĕv" love, to love; "lĕvĕ" or "lōvi" or "lōvĕ" to be insane; — in Hebrew "lvya" lioness; in English "love." The character occurs under the . . . . dynasty (Champ. dict. 114).

("hĕlithōna," swallow or its burrow, signifying all the wealth of the parents left to the children, Horap. ii. 29); "vĕni" or "vēnĕ" or "vēni" swallow; "vēv" burrow, cave; "vē" nest, tomb; "valjĕ" or "vĕljĕ" or "vĕlj" or "vljĕ" earthen ware; "vō" or "vŏ" wood; "vĕtsh" or "vētsh" or "vŏtsh" to be stript; "vōl" or "ĕvōl" out; "vatshi" corpse; "val" or "vōl" end; — in Hebrew "bn," in Arabic "ben" son, in Latin "bona" estate. The character occurs as early as the Fourth dynasty (Leps. d. ii. pl. 25).

The *bank-swallow*, Hirundo riparia, observed by myself as far up the Nile as the Thebaid: and near Manfalout "Feb. 7th," numbers were "scooping out their holes, all in a line, about a foot below the" even summit of the river-bank; and here at least in Nile mud.

b, in Greek mp, inherently meaning beggar. The exclamation bah! (There is perhaps no evidence of the use b in the Egyptian language; and the inherent meaning of p, will be found strongly analogous.)

"vaĕmpĕ" or "vampĕ" goat; "jŏp" or "jŏv" beggar. — Compare the Persian "bg" food ("vĕkōs" in Herodotus ii. 2), the Hebrew "by" implore, the Greek "pai" child, and English "boy." The hieroglyphic character occurs under the Seventeenth dynasty (Leps. d. iii. pl. 15, and Buns. and Birch).

Other hieroglyphic characters furnish evidence, that the *goat*, Capra hircus, was already domesticated when writing was invented: — a historic reference to the goat under the Second dynasty, has been preserved: as distinct from the capricorn, the goat is figured in herds under the Fourth dynasty (Leps. d. ii. pl. 9), the horns more or less diverging, but presenting no peculiarity of breed; as in all the figures of this and later times examined by myself on the monuments. A variety with spreading horns, is however given by Bunsen and Birch as a hieroglyphic character.

The goat is mentioned in the history of Isaac (Gen. xxvii. 9 to 16); and by ancient writers generally. In Switzerland during the Stone period, the inhabitants kept goats; as appears from debris of the earliest villages (Heer, in Troyon). Eastward in Hindustan, the goat is mentioned in the Sama Veda (Stevenson); also in the institutes of Menu (Braminical version); but I looked in vain for figures in the cave-temples. By European colonists, the goat was carried to America, and to the islands of the Pacific; and at the time of my visit, had run wild on the Hawaiian, Taheitian, and Feejeean Groups, and had been recently introduced into the Samoan.

g hard or gh, its pervading meaning anger.

(wasp suspended in the air, signifying bloodshed, Horap. ii. 23); "gatĕv" or "gotĕv" slaughter, to be slain; "agō" wherefore?; "agĕm" or "agŏm" or "agŏm" eagle; "gĕtgĕt" or "gētgĕt" or "gōtgĕt" to inspect, investigate, scrutinize. — The character is placed over a king's oval from at least the Third dynasty, and continues over one of the two ovals to perhaps the end of hieroglyphic writing (Leps. k. pl. 5 to 66).

(bee signifying a people obedient to their king, Horap. i. 59); "ga" a people, nation; "agōri" or "agŏri" asp or cobra; "ĕgrĕi" beneath, against; "ga" under; "garat" under me; "garŏf" against him, under him; "garōn" against us, with us; "gĕn" or "gōun" or

"ĕgōun," to, from, with, against, into, out of; "gēivi" protection, cover, shadow. — The character occurs on the Gliddon mummy-case, and from the Third dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 2, and k. pl. 6 to 67).

The species of *cobra*, as appears from the painted figure on the Gliddon mummy-case, is the indigenous C. haje; — to the present day, tamed and kept by serpent-charmers. From early times, the reptile seems also connected with mythology: and hence perhaps the worship extended in Hindustan to a corresponding species.

(the bee efficient in governing on account of its sting, Horap. i. 59); "gŏl" to incite; "gĕlgĕl" or "gĕlgŏl" or "gōlgĕl" to stab, sting; "gisi" affliction, working, "gōsi" to work hard; "gĕmgĕm" or "gĕmgōm" or "gōmgĕm" to afflict with hardship or grief. — The character occurs under the Fourth dynasty, also in the Book of the Dead (Leps. d. ii. pl. 28).

(lion signifying anger, Horap. i. 17); "gĕm" or "gēm" to become heated, fervent, feverish; "gmōm" heat, "gmôm" anger; "gŏki" to gnaw; — in Chaldaic "hma" anger; in Hebrew "hmĕ" anger, "nkm" and "nkmĕ" vengeance; in Greek the third letter "gamma." The character occurs from the Fourth dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 28, and k. pl. 21 to 67).

a turnout; "gir" junction of two paths; "gatĕn" by the side; "gag" or "gĕk" or "gĕkh" or "gōkh" or "gŏk" or "gŏkh" to scrape or shave; "gajĕn" or "gajŏ" before, in front. — The character occurs under the Fourth dynasty (Leps. d. ii. pl. 28); and in modified forms

from the Twelfth dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 122, iii. pl. 260, and k. pl. 20 to 67).

"hag" neck; "gŏg" to draw up; "gĕk" or "gēk" or "gōk" or "gŏk" to gird up; "gēk" or "gŏk" to fight; "gŏrps" or "gŏrēs" fist; "gŏlk" or "kŏlj" bent, perverse; "gŏg" or "gagŏu" itching; "gag" or "gēt" neck; "gat" or "gath" or "gthai" or "gōt" or "gŏt" thick, thickness, fat; "gĕnt" or "gŏnt" to approximate. — The character occurs as early as the Fifth dynasty (Leps. d. ii. pl. 51).

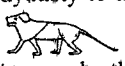
"hrōur" or "krōur" a frog; "hrŏ" or "hrōōu" or "hrau" or "grŏōu" voice; "gŏl" to be hoarse; "hōmhĕm" or "hĕmhĕm" to growl, roar; "fiahōm" or "atshahŏm" groans, to groan; "gĕngĕr" to snore, snoring or snorting. — The character occurs under the Twelfth dynasty (Leps. d. ii. pl. 142).

("ĕgmōs" angle of the eye towards the temples, Edw.); "ig" demon; — in Hebrew "ankĕ" groaning, in English "anguish," "anger" and its exacerbation "gangrene." The character occurs under the . . . . dynasty (Champ. mon. xxxviii, text 373).

(lion flagellating his young, signifying immoderate anger, Horap. ii. 36); "grōd" children, "gĕl" young one; "gĕllō" or "gĕllŏ" elder, old woman; "gōrf" or "kōrf" or "kŏrf" or "kĕrf" to abolish; "kōur" a slap; "gaĕ" or "gaē" end, final. — The character occurs under the . . . . dynasty (Champ. mon. iv. pl. 311).

g soft or j or dsh, its pervading meaning rage.

spring of a lion; "jōns" violence, unjust, unjustly; "jinjōns" or "jinshōns" injustice; "jnah" violence; — in colloquial English "jounce." The character occurs from the Fourth dynasty to the Nineteenth (Leps. d. pl. 15, and k. pl. 32).


(cynocephalus or baboon signifying rage, bones of lion-whelps clashing fire, Horap. ii. 36 and i. 14), "jŏnt" rage; "jol" waves, billows; "jĕtshphid" to foam; "grajrĕj" to gnash the teeth. — The character occurs under the . . . . dynasty (Champ. dict. 114). In the Phœnician alphabet, the camel has been substituted, as will be further explained in treating of this alphabet.

Apart from hieroglyphic writing, the *dog-faced baboon*, Cynocephalus, is figured under the Fourth dynasty (Leps. d. ii. pl. 13), and at Benihassan under the Twelfth, as observed by myself; and from at least the Seventeenth dynasty is connected with the mythology, as the monkey is to the present day in Hindustan. The species of Cynocephalus figured is probably either the Abyssinian, or the one inhabiting Yemen.

(spinal column or back-bone, signifying a stand, or the loins, Horap. ii. 8; "japhōji" spinal column, Kirch.); "jōkjĕk" or "jōkjk" obstinacy, contumacy, to contend; "jŏnt" or "shŏnt" or "shônt" to attempt, make trial; "jid" to wrestle; — in colloquial English "spunk." The character occurs under the . . . . dynasty (Champ. dict. 100).

(forepart of lion signifying power, Horap. i. 18); "jiē" or "jōɔ" or "jŏm" power; "jĕmjôm" to be powerful; "jōōr" or "jōr" or "jŏrĕ" or "jŏri" or "jŏŏr" or "jŏŏrĕ" strong, powerful; "ĕr-mĕtjŏri" to tyrannize, oppress by violence; "jōis" or "jōĕis" lord, master; "jas" or "jĕs" to exalt, be exalted; "jĕraĕit" or "jasi" or "jisi" high, superior; "jŏŏrĕ" generous; "ja" to allow. — The character occurs under the Third dynasty, also in the Book of the Dead, and continues in use under the Twenty-fourth (Leps. d. ii. pl. 3, and k. pl. 12 to 47).

(sparrow seeking protection of the owl, and finding oppression, Horap. ii. 48); "jaj" sparrow; "jajĕ" or "jaji" or "jajĕ" or "jĕji" enemy; "jijĕ" or "jijĕĕu" enemies; "jatchĕ" sinister; "jajvŏn" malignant; "jōl" or "jēl" to encompass; "jaljĕl" or "jōljl" or "jōljĕl" enclosure, fence; "jō" or "jōĕ" or "jōi" or "jŏ" wall; "jēr" jeer, derision. — The character occurs on the Gliddon mummy-case, and from the Third dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 3 to 6, and k. pl. 5 to 63).

From the coloured figure on the Gliddon mummy-case, the character is found to be the Fringilla domestica, or *house sparrow* of Europe and Western Asia; a bird very destructive to grain-crops. — Under the Third dynasty, the thick bill continues distinguishable; but later monuments present only a small bird.

(smoke ascending signifying fire, Horap. ii. 15); "shshōr" smoke; "jaivĕs" or "jvvĕs" or "jĕvs" sparks, coals; "jĕl" or "jĕla" to burn; "jŏf" or "jŏf" burning; "jrŏm" fire; "kva" or "jikva" vengeance. — The character occurs under the Third dynasty (Leps. d. ii. pl. 3).

(fire and water signifying purity, Horap. i. 41); "jŏkĕr" to temper, purge with fire; "jajŏ" frying-pan; "jŏi" caldron, warm bath, sweat-bath; "jakam" or "jakĕm" or "jĕkĕm" or "jŏkĕm" or "jŏkm" to wash; "jihap" adversary; "jōōu" to denounce, send; "jŏl ĕvōl" or "jĕl" to deny; "jĕ" or "ji" or "jŏ" to speak, dispute; "jahĕm" or "jahm" or "jŏhm" pollution, polluted; "jajh" pure; "jijnit" ordeal; — in vulgar English "to jaw." The character occurs from the Twentieth dynasty to the Roman conquest (Champ. gram. 535, Ross. mon. stor. 22 and 23, Buns. and Birch).

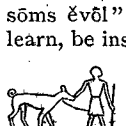
"jōkĕf" or "jookĕf" or "jŏkhf" a goad; — in English, the phrase "spur of the occasion." The character occurs under the . . . . dynasty (Rosell. m. civ. 77. 2, Buns. and Birch).

(writing materials, ink, rush-style, and sieve, signifying sacred scribe, also conclusion; a race of cynocephali acquainted with writing, Horap. i. 36 and 14); "jōrvĕs" a little vase; "jillĕs" a little bag or pot; "jŏi" band or tie; "jŏli" or "jŏlĕs" or "jōōlĕs" rust, corrosion; "jphēōut" ink; "jŏlĕs" or "jŏlĕs" little reeds; "jē" or "jēi" or "jōul" beam in the eye; "jphōi" accusation, calumny; "jvin" revenge, a stain; "shŏlj" accusation, stain; "jŏlj" or "jŏlj" or "jēs," to adhere, hold fast; "sōlj" or "sŏlj" to blot out, expunge; "jphiŏ" to confound, make ashamed, castigation, reproof; "jphiĕd" to abstain; "jiphiēd" shamefacedness, fear of disgrace; "jĕv" or "jĕv" sharp, pungent; "jŏkĕr" or "jŏkr" sharp; "jŏkĕr" to afflict; "jōtf" or "jŏth" or "jiĕi" to wound; "jŏl" to cover; "jŏŏvĕ" to darken; "ji-vōtĕ" or "ji-fōtĕ" to nauseate; "jōk" or "jŏk" end. — The character occurs from the Third dynasty to the Twentieth (Leps. d. ii. pl. 5, iii. pl. 224, and k. pl. 36). Apart from the hieroglyphic text, scribes in the act of writing are figured under the Fourth dynasty, as observed by myself at Gizeh.

Juncus spinosus of Egypt and the neighbouring countries. A kind of *rush* called in Greece "vrōulō," in Egypt "sammar" (Forsk.), and clearly the "shŏinŏ" used among the Egyptians to make sieves "kōskinōn," and exclusively for writing — to the time of Horapollo i. 36: sieves "cribrorum" made in Egypt of "juncorum" or "oxyschoenon" are mentioned by Pliny xxi. 65; "sammar" mats, by Abd-allatif; J. spinosus was observed by Forskal, and Delile, growing along the Mediterranean border of Egypt, but elegant mats made of it were brought from Upper Egypt and the region around Suez and exported to Constantinople. Words relating to mats as "shŏinōtŏnōs" and "shŏinōpŏlēs" occur in Herodotus and other Greek writers; and the living J. spinosus was observed by Forskal p. 75, and Hawkins (Sibth.), on the seashore of Crete and the Greek islands as far as the Dardanelles and Constantinople.

(the word "svŏ" signifying both instruction and plenary aliment, Horap. i. 36); "jōm" or "jŏm" or "jŏŏmĕ" or "jŏŏmi" or "jŏmĕ" scroll or book; "jŏvi" epistle; "jŏkĕ" or "jŏkĕ" enigma; "jĕk" or "jēk" or "jōk" to fill, plenary, perfect; "jŏtshjĕtsh" dry and soft bread; "jōōuf" paper-rush; "jaatĕ" or "jatĕ" to be nourished, increased; "jajh" to nourish, sustain; "jal" or "jĕlŏ" or "jŏili" to deposit; — in English "joke" used colloquially for affair. The character occurs under the . . . . dynasty (Champ. dict. 304): serving besides to mark the "end of sentences" (Buns. and Birch). In Greece (Homer as understood by Pliny xiii. 21 to 23) "pugillarium" or writing-tablets were in use before the Trojan war; and Pliny further states, that the Greeks continued unacquainted with paper until the conquest of Egypt by Alexander (see Papyrus antiquorum).

(ear signifying job impending, Horap. ii. 22); "maajĕ" or "majĕ" or "mĕĕjĕ" or "matshj" ear; "jismē" to hear, attend; "jinsŏtĕm" act of hearing, rumour; "jinsŏms ĕvōl" or "tshansōms ĕvōl" or "jōutsht ĕvōl" or "jinjōutsht" or "shinshŏtsht" or "shŏtsht" to expect; "jisvŏ" to learn, be instructed. — The character occurs under the . . . . dynasty (Champ. dict. 62).


(dog signifying magistrate or judge, from showing favour to nobody, Horap. i. 37 and 38); "jaar" solid; "jajŏ" or "jŏtn" neck; "jarĕv" or "jĕrĕv" pulled by the neck, exposed to view; "jinarĕh" keeper, guard; "jĕrĕj" or "jĕrēj" or "shĕrēsh" hunter; "jrōjs" a hunt; "jĕr" or "jĕrj" or "jŏrj" to enquire, hunt, seek, explore; "jōh" or

"jŏh" or "jinjōmjĕm" touch, to touch; "jajithŏl" tow, "shashinōu" undressed flax, "shashĕtŏl" tip of nose; "shashitŏn" upper garment; "thōuraji" sacred cloak (compare "royal robe" in Horap. i. 38); "jihvas," garments; "jat" or "jĕt" or "jŏt" or "jŏtĕ" to penetrate. — The character occurs under the Third dynasty (Leps. d. ii. pl. 3); and the dog without any accompaniment, under the Nineteenth (Leps. k. pl. 32).

The *dog*, from North America, known in Egypt nearly or quite as far back as the time of the invention of writing: — hunting with *greyhounds* is figured under the Third dynasty (Leps. d. ii. pl. 6); also under the Twelfth, at Benihassan; and I was assured, is practised to the present day in Nubia, the superior swiftness of the breed being recognized, as in Europe. Under the Fourth dynasty, in the one or two instances observed at Gizeh, the dog continued of the breed figured in Leps. d. ii. pl. 3, agreeing with the jackal in the pointed muzzle, but the tail curling. Under the Twelfth dynasty at Benihassan, the breeds were numerous, one of them being pretty distinctly the *turnspit*. In Switzerland during the Stone period, dogs were kept by the inhabitants; as appears from debris of the earliest villages (Rutim, in Troyon). Eastward in Hindustan, the dog is mentioned in the Sama Veda (Stevenson); in the Institutes of Menu (Braminical version); a horseman followed by hounds is figured in the Budhist cave-temples at Adjunta, but I met with no figures of the dog in Braminical cave-temples. The sign for dog enters into the "primitive" characters of Chinese writing (Pauth. 84): and a "large dog" was brought to the emperor Wou-wang by ambassadors from the country of Lou in the West (Chou-King), probably a *Thibetan mastiff*; such as are figured on the monuments at Niniveh, and mentioned by Greek and Roman writers, and by Marco Polo 116 as "chenz mastin qe sunt grant come asnes."

The Australians appear to be the only considerable portion of mankind destitute of the companionship of the dog; yet the *dingo*, according to Leidy, is only the domestic dog carried there and become wild (facts pointing to Hindustan). Eastward from China and the Malayan archipelago, the dog was carried by Polynesians throughout the islands of the Pacific (except only that I was unable to ascertain, whether it was aboriginally known in New Zealand). The American tribes, from the Arctic Sea to Cape Horn, had the companionship of the dog, and certain remarkable breeds had been developed before the visit of Columbus (F. Columb. 25): further, according to Coues, the cross between the coyote and female dog is regularly procured by our Northwestern tribes, and according to Gabb, dogs one-fourth coyote are pointed out; the fact therefore seems established, that the coyote or American barking wolf, Canis latrans, is the dog in its original wild state.

"matshi" or "tshi" balance-scales; "jatmĕ" a heap; "jŏt" or "mĕjt" or "mōujsh" or "mōujt" mixture, mingled, to mingle; "jpō" or "jpiō" or "jipĕ" or "jipō" to argue, argument; "mōutsht" circumspection, deliberation, to consider; "jitshojnĕ" to consult, deliberate; "phŏji" or "jĕj" to split; "tshiē" length; — in English "match." The character occurs from the Tenth dynasty to the Twentieth (Leps. d. ii. pl. 145, and iii. pl. 232).

"matshi" or "tshi" or "tshiĕ" weight; "tshiē" length; "tshi" or "jintshi" mensuration; "mjĕhē" or "ĕmjēh" or "mĕjénh" or "mjĕhē" eyebrows. — The character occurs under the Third dynasty, and continues in use (Leps. d. ii. pl. 3). A second form occurs from the Fourth dynasty to the Ptolemies (Leps. d. ii. pl. 22, k. pl. 52, and Rosselin. mon. stor. ix. 35). A third form occurs in the Book of the Dead 125. 9, and continues in use under the Twentieth dynasty (Rossel. mon. cult. xlix; "the weight or adjustment of the balance," Buns. and Birch.)

"jōlh" apex, an affair of no moment; "jōlh" or "jēlh" least; — in English the colloquial phrase "little end of the horn," the exclamation "fudge!". The character occurs from the Third dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 2, and k. pl. 23 to 63).

th soft, the Greek thĕlta, its pervading meaning soothing.

(two crows "kŏrŏnas" signifying matrimony, Horap. i. 9); "thĕnĭŏ" eclipse; "thĕitōuŏ" or "thĕtshĕ" neighbour; "thē" or "thē" like unto; "thŏn" or "tĕnthŏn" to assimilate, become similar; "thŏhthĕh" keeping company with, friendship; "tharin" confidence, "tharin" bond; "that" or "thēt" or "thŏt" good disposition, blessing, consolation; "thrimōs" gladness, joy; "thĕlēl" gladness, exultation; "thŏn" our. — The character occurs under the Seventeenth and Eighteenth dynasties (Leps. d. iii. pl. 13, 15, 65, 73, and k. pl. 53). The further signification of "Mars and Venus," given by Horapollo i. 8, belongs doubtless to a subsequent period: the cry of "ĕkkŏri," from "kōri" meaning "kōrŏnē," was kept up in his own day at Greek weddings.

"thē" prow of a ship: "thē" womb. — The character occurs from the Fourth dynasty and the Book of the Dead, to the Eighteenth (Leps. d. ii. pl. 18, and Buns. and Birch).

(scarabæus signifying only-begotten or principal, also race or family, also father, also the world or orderly arrangement, also male, Horap. i. 10); "thiŏt" father; "mauaat" or "mmauat" alone, only-begotten; "thatsh" or "thētsh" or "thōtsh" or "thŏtsh" arrangement, to dispose; "thēmsō" to establish; "thōuŏt" image (image of the world, Horap. i. 10); "thō"

habitable world; "thamiĕ" or "thamiō" creation, work, to make; "thamiēōut" accomplished. — The character occurs as early as the Fourth dynasty, also in the Book of the Dead, and continues in use until the end of hieroglyphic writing (Leps. d. ii. pl. 27, and k. pl. 11 to 77).

cottage-window, (compare vulture signifying beholding, or "ōuranian" firmament, or "athēnan" occupying the Upper hemisphere, Horap. i. 11); "thimarmĕnē" name of the Second sphere; "thimĕ" or "thimē" village; "thimĕ" woman, wife; "th" feminine particle; "thē" her, she. — The character occurs on the Gliddon mummy-case, and from the Third dynasty to the end of hieroglyphic writing (Leps. k. pl. 5 to 67): is an early if not the earliest form of the Greek thĕlta, and transferred by the Romans continues as our Western capital letter D.

(vulture signifying mother, also "ōriōn" limit, also compassion, Horap. i. 11); "maau" or "mĕōu" or "mau-th" or ("mōuth," Plutarch) mother; "thōtsh" or "thŏtsh" limit, bounds; "mĕthnaēt" compassion. — The character occurs from the Third dynasty to the Roman conquest (Leps. d. ii. pl. 2, and k. pl. 5 to 60).

falcon's perch: "thastō" or "tasthō" to return; "thŏtĕn" or "tha" or "thai" or "thē" of thee, thine; "thaē" end; — in English "thee." The perch with the bird resting on it, occurs on the Gliddon mummy-case, also under the Third dynasty (Leps. d. ii. pl. 3). The perch without the bird, occurs as early as the . . . . dynasty (Champ. dict. 331): seems besides the origin of one form of the Phoenician thld ⟑, or Hebrew ד, and the form ⊳ of the corresponding Greek letter thĕlta.

In the highly finished figure on the Gliddon mummy-case, the two appendages of the perch are found to be feathers: additional proof, that the art of *falconry* was known when writing was invented. *Falconry* seems to belong especially to the country on the Euphrates, — and was found by Layard practised among the Arabs there to the present day.

k initial or c hard, its pervading meaning compensation.

"kĕn" or "kōun" bosom. — The character occurs from the Third dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 6, and k. pl. 5 to 64).

a scroll; "kĕl" or "kōl" or "kŏl" to roll together. — The character occurs under the . . . . dynasty (Champ. dict. 339 and gr. 466, tab. and stat. Brit. mus., and Buns. and Birch).

"karira" hook, iron clasp; "kēli" or "kēlli" or "kĕlli" or "kllĕ" lock, bolt, lever; "kĕvvĕ" or "kvvĕ" folding or doubling. — The character occurs from the Third or Fourth dynasty to the end of hieroglyphic writing (Leps. k. pl. 5, 6, 7 to 67).

"kōōh" cup or bowl; "kĕlŏl" or "kaji" water-bucket; "kaa" or "ka" or "kĕ" or "kē" or "kŏ" to place; — in English "cow." — The character occurs from the Third dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 2, and k. pl. 5 to 67). The Egyptian drinking-cups (according to Herodotus) were made of copper; and the above shallow pattern is continued on the Assyrian monuments, and in the drinking-cups of copper or brass used to the present day by the Hindus. The above word "kōōh" may prove the origin of the name "cow," in the languages around the Mediterranean not applied to the animal, but occurring farther North and East (see cow).

hand folded in receiving payment: "kah" or "kahi" or "kĕhi" dust; "kahs" custom, conscience; "kad" or "kat" wisdom, prudence, shrewd; "kēn" sufficient; — in Hebrew "kph" hollow of the hand, the eleventh letter; corresponding to the tenth Greek letter kappa, and both indicating the number twenty. The character occurs under the . . . . dynasty (Champ. dict. 98). The form of the incurved hand is continued in the third letter of the Roman alphabet, or our capital C.

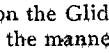
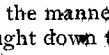
(vulture signifying two drachmas, unity consisting of two lines according to the Egyptians, Horap. i. 11); "kĕĕs" or "kas" bone; "kas" a small piece of money ("the earliest Egyptian money being perhaps rounded and bone-shaped, like that by the Greeks called ōvŏlŏi," Zoeg.; compare "ŏvĕlŏi" obelisks); "kēv" or "kitĕ" or "kidi" drachma or di-drachma; "kŏv" or "kŏv" multiplication; — in English "cash" The character occurs on the Gliddon mummy-case, also under the Third and Fourth dynasties (Leps. d. ii. pl. 3 and 25). The flat ring of silver occurs from the Fourth dynasty to the Nineteenth (Leps. d. ii. pl. 18 and 98 to iii. pl. 10, and k. pl. 36).

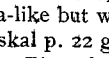
"kōria" the two clavicles and fore part of the throat; "kŏria" painted; "karia" red leather lining, helmet; "kĕktōs" variegated, spotted; "klam" or "klŏm" garland; "kthĕmōs" ornament, adorned; "kēmōs" ear-ring; "kaněfŏi" or "haněu" curls; "klal" collar; "kĕnhĕ" shoulder; "klaria" left shoulder of the constellation Twins; "kal" cincture or garment ("kal-asiris" of Herodotus). — The character occurs from the Third dynasty to the Ptolemies (Leps. d. ii. pl. 2, iii. pl. 138 and 254, and iv. pl. 3).

"kid" sport; "kĕmtō" or "kōmtŏ" or "kmtō" agitation, concussion, earthquake; "kim" or "kin" vibration, bounding, to leap; "kĕmkĕm" a timbrel or tambourine; "kŏlh" to beat. — The character occurs under the Nineteenth dynasty (Leps. d. iii. pl. 162).

kneading-trough; "kŏv" or "kŏp" leaven; "kōt" or "kŏt" or "kat" wicker basket; "kam" rush of which cords are made; "ham" rush; "kēmĕ" or "kēmē" or "kēmi" Egypt; "katsh" reed; "kĕrousia" prison; "kalibi" hut, house of reeds; "kalibŏs" house of reeds. — The character occurs on the Gliddon mummy-case, and from the Third dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 7, and k. pl. 7 to 67). The kneading-trough was found by C. C. Felton lett. used to the present day for a cradle in Greece.

Tyiodia pungens of the shores of the Southern portion of the Red Sea. The character checkered with black — on the Gliddon mummy-case, as is a drinking-cup under the Tenth dynasty (Leps. d. ii. pl. 145), after the manner of the shallow baskets made in Yemen at Makulla; which baskets are sometimes brought down the Nile through Nubia to Egypt: I did not compare the material, but I remarked a creeping grass of rattan-like hardness in the maritime sands at Mocha, the spikelets Festuca-like but with soft hairs among the florets. T. pungens called "schoucham," was observed by Forskal p. 22 growing in sandy places from Lohaia to Mocha.

Pinnotheres, the parasitic crab in oysters and other bivalves; ("pinna" and crab, or "pinnōphulax," signifying cared for by his household, Horap. ii. 102); "harakinōs" crab; "karkinōs" the constellation Cancer in the Zodiac; "kĕv" or "kŏv" debility, infirmity; "kōōvĕf" weak; "kōui" or "kouji" small, young; "klētōs" relatives; "kaphĕōs" uncle; "kauréa" aunt by the father's side; "kĕ" or "kĕōuĕi" or "kaŏui" or "kōōu" or "kōōuĕ" others; "kĕsĕĕpĕ" the rest. — The character occurs under the Fourth dynasty (Leps. d. ii. pl. 10). A second form from the Tenth dynasty  to the Twenty-second (Leps. d. ii. pl. 150, and k. pl. 27 to 44). A third form  under the Eighteenth dynasty (Leps. d. iii. pl. 50).

a hinge; (pinnotheres by its claw warning its protector, Horap. ii. 102); "kĕljĕ" angle; "klĕ" or "kĕli" knee; "kŏlj" or "kĕlj" to incline, bend; "kĕljkĕli" to bend knee; "kĕrsō" door; "kĕrs" kind of fish; "kōulaji" a little fish; — in English "the cardinal point." The character occurs from the Third dynasty to the Fifth (Leps. d. ii. pl. 3, 39, and 65) and in a modified form  under the Nineteenth (Leps. d. iii. pl. 162, and Rosell. m. cul. xxix. 1).

(pinna closing its shell, Horap. ii. 102); "kōulŏl" to wrap, envelop; "kĕms" or "kĕmts" obscurity; "klōōlĕ" clouds; "kaki" or "haki" or "kakĕ" or "kĕkĕ" darkness; "kĕkĕ" pupil of the eye; ("hēmian" black part of the eye, Plut. is. & osir. p. 364); "hamĕ" or "kamĕ" or "kamē" or "kēm" black; "kŏd" around, circuit. — The character occurs as early as the Nineteenth dynasty (Leps. d. iii. pl. 162, and Rosellin. mon. cul. xliv. 4).

ă, ĕ, ĭ, ŏ, ŭ, or the short guttural. The interjection eh!, used for interrupting.

(crocodile rendered immovable by touch of ibis-feather, Horap. ii. 77); "ĕ" or "ĕhrēi" or "ĕhrĕn" or "ĕhrai" or "ĕhlĕi" or "ĕrat" or "ĕrm" or "ĕrn" to; "ĕmpō" or "ĕvō" or "ĕvŏōu" mute; "ĕt" or "ĕti" who; "ĕthĕ" how; "ĕtvĕ" or "ĕthvĕ" on account of; "ĕti" yet, — in Greek "ĕti," in English "yet." — The character occurs on the Gliddon mummy-case, and from the Third dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 3, and k. pl. 5 to 67): is further traceable in the form of the fifth letter of the Phœnician, Greek, Roman, and West European alphabets.

(star signifying five, from the five planets; also night; also god inhabiting the world, the Egyptians thinking that nothing would stand or hold together without god, Horap. i. 13 and ii. 1); "dĕ" five; "ĕvē" obscurity; "ĕjŏrh" or "ĕjōrh" night (the Egyptians thinking night the beginning of all things, Aristot. xii. 6, and Damasc., compare Gen. i. 2); "ĕhi" an age. — The character occurs from the Fourth dynasty to the end of hieroglyphic writing (Leps. k. pl. 7 to 67). The star within a circle occurs from the Twenty-eighth dynasty to the end of hieroglyphic writing (sarcoph. Amyrt., Champ. dict. 13, and Leps. d. iv. pl. 85): is besides the "pĕntalpha" of the Greeks, described by Lucian (compare the above five guttural vowel-sounds).

shrine; "ĕlam" portico or piazza; "ĕlpēĕi" or "ĕrpĕ" or "ĕrphĕi" temple; ("ĕrvit" sacrina, gestatoria, Edw.); "ĕthēp" hidden mystery, sacred vow; — in Greek "ĕlpis" hope. The character occurs under the Fourth dynasty (Leps. d. ii. pl. 19). A second form under the Fifth dynasty, and continues in use more or less modified until the Roman conquest (Leps. d. ii. pl. 63 to iv. pl. 37).

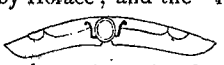
"ĕnkōt" bed; "ĕjĕn" or "ĕjn" or "ĕjm" or "ĕjŏ" upon; "ĕnkōt" or "ĕnkat" or "ĕnkōtk" sleep, to sleep; "vtshĕ" or "ēvtshĕ" or "ĕvtshĕ" or "ĕvtshē" or "ĕvtshi" or "ōvtsh" or "ŏvtsh" or "ŏvētsh" to slumber, be unconscious, incoherent, absence of care, torpor, oblivion; — in Hebrew "byd" (pronounced "bĕd" by my Egyptian guide) house; in English "bed." The character occurs from the Third dynasty to the Roman conquest (Leps. d. ii. pl. 3, and k. pl. 7 to 59).

(ant and "nuktĕrithōs" wings signifying staying in the house, for if the wings are placed on an ant-hill none of the ants will come out, Horap. ii. 60); "ĕrvi" or "ĕrsŏ" or "ĕrshŏ" habitation; "ĕrj" bird. — The character occurs under the . . . . dynasty (Champ. gram. 371, 372).

"mōtnĕs" or "mōthnĕs" cessation, rest, ease; "ĕmtan" or "ĕmtōn" cessation, repose; "mōtn" or "mōtĕn" or "mŏtĕn" tranquil, more easy, to be quiet; "ĕthmōtĕn" level, straight; "ĕat" horizon, region from which the winds blow; "ĕsthŏn" spacious; "ĕski" interval, space between. — The character occurs from the Third dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 3, and k. pl. 5 to 67).

("aiga" goat or capricorn, signifying superior excellence in hearing, on account of breathing through its ears and nostrils, Horap. ii. 64; "ĕhĕōn" goat, Edw.); "satĕm" or "sŏtĕm" or "sĕtĕm" or "sĕtm" hearing, to hear, to obey; — "aix" in Greek signifying both goat and the constellation Capricorn. The character occurs under the . . . . dynasty (Champ. dict. 126).

From some mountainous district, probably the Sinai peninsula, *capricorns* were brought to Egypt as early as the invention of writing; — and were kept in at least a semidomesticated state, one being a regular attendant on the herds of cattle figured under the Third dynasty (Leps. d. ii. pl. 6); also under the Fourth and Fifth (as observed by myself), and down to the Twelfth. In Switzerland during the Stone period, the Capra ibex or capricorn descended occasionally or in winter to the base of the mountains, and was hunted with other game, as appears from debris of the earliest villages (Rütimeyer, and Heer, in Troyon p. 272 and 442). The constellation "capricornus" is mentioned by Horace; and the "ibices" of "the Alps," by Pliny viii. 79.



"mĕhĕ" or "mĕhi" wing; "rĕttĕnh" to unfold the wings; "ĕnkōts" snares, ambush; "vĕrsĕlia" goatsucker lying in wait for sleeping boys, mother of boys (mother stealthily visiting her sleeping babe); "jiōuĕ" or "jiōui" stealth, stealthy; — The character occurs from the Eighteenth dynasty to the end of hieroglyphic writing (Leps. d. iii. pl. 68, and cornices of temples in Egypt).

f, puffing or forcible breathing, its pervading meaning foul. The interjection fie!.

("anĕmŏnēs" flower, signifying malady, Horap. ii. 7); "phiē" bud; "phĕriŏōu" or "phriŏōu" beautiful, splendid; "phĕri" or "phēri" or "phiri" or "phōri" splendour, brilliant, to bloom; "ĕfĕphiri" it will bloom; "iavi" or "tshavĕ" or "tshaphĕ" or "tshafĕ" or "jĕvis" malady; — in English, the phrase "Under the rose a serpent." The character occurs from the Third dynasty to the Twentieth (Leps. d. ii. pl. 3, and k. pl. 14 to 41). A second form of perhaps the same character, occurs in the Book of the Dead, and from the Twelfth dynasty to the Roman conquest (Leps. d. ii. pl. 121, iii. pl. 148, and k. pl. 14 to 59).

Papaver hybridum of the East Mediterranean countries. A kind of *poppy* called in Greece "paparōuna" (Fraas), in Egypt "aub el num" (Forsk.), but in Coptic "nĕman" (Kirch.), and possibly the "anĕmŏnēs" in question: — P. hybridum was observed by Forskal, and Delile, at Alexandria on the Mediterranean border. Farther North, the "mĕkŏn tritē agriŏtĕra" having according to Dioscorides more powerful medicinal properties and an oblong capsule, is referred here by Fraas: P. hybridum, regarded by Bieberstein as wild in the Crimea, by Grisebach as wild along the Propontis and Ægean sea, and by Reuter on Zante (A. Dec.), was observed by Sibthorp, Chaubard, and Fraas, a weed only in cultivated ground throughout Greece. Westward, is described by Gerarde, and Morison ii. pl. 14; is termed "p. erraticum capite oblongo hispido" by Tournefort inst. 238; and is known to occur in Italy (Lenz), and in grain-fields throughout middle Europe as far as Britain (Engl. bot. pl. 43, and Pers.).

Adonis æstivalis of the Mediterranean countries. Called in France "goutte de sang" (Fee), in Greece "agriō paparōuna" together with Anemone stellata (Sibth.), and possibly the "anĕmŏnēs" in question: — the "agrias anĕmŏnēs" being confounded according to Dioscorides ii. 207 with "argĕmŏnēn" called "ĕupatŏriŏn," and the "argĕmŏnē" is identified in Syn. Diosc. with "anthĕmis," and in the illustrated Vienna manuscript with A. æstivalis (Sibth.): the last-named plant was observed by Sibthorp, and Bory, frequent in fallow ground in Greece; and by Forskal, and Delile, on the Mediterranean border of Egypt. Westward, is termed "ranunculus arvensis foliis chamæmeli flore phœniceo" by Tournefort inst. 291, and is known to occur in fallow ground as far as middle Europe (Jacq. austr. pl. 354, and Pers.; see A. autumnalis).

Adonis dentata of Egypt. A yellow-flowered species — observed by Delile in grain-fields around Alexandria. In seeming correspondence with the conventional yellow colour of hospital flags.

(serpent signifying mouth, for it avails by the mouth only, Horap. i. 43); "hōf" asp or viper, serpent; "hfŏ nkauri" deaf serpent; "phŏgi" valid; "phagĕr" magician; "phagri" witchcrafts, charmer; "phagri" poisoner; "phanikōts" subtle contriver, double-dealer; "fĕj" or "fĕj" or "fĕsh" or "fōsh" fraud, to defraud, circumvent; "fŏji" to defraud, be defrauded; "krōf" deceit; "phi" a kiss; "phai ĕ phai" together; "phai" here, this; "phōōu" to day; "phēĕt" or "phĕ" who; "phē" or "nthōf" he; "phŏtĕn" you; "phŏk" yours; "phŏi" mine; "phŏlh" a wound; — in Hebrew "aphoĕ" viper; "phdn" valid, firm. a viper; the letter "pha" or "phĕ" or "phy" signifying mouth: in Greek, the corresponding letter "phi." The character occurs on the

Gliddon mummy-case, and from the Third dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 3, and k. pl. 5 to 66).

The *Cerastes* or horned viper of Egypt, is said to be frequent there; and may probably extend into Palestine: — for it appears to be the "phdn" of Isaiah xi. 8, and Psalm xci. 13, and lviii. 4, in the passage, "the deaf adder" that "stoppeth her ear; which will not hearken to the voice of charmers, charming never so wisely." In fact, I have not seen the Cerastes made use of by serpent-charmers.

"phōrŏs" eyelashes, "phōrōs" terror; "fōt" to be anxious, troubled; "fōi" or "fŏi" or "fŏ" or "vŏ" hair; "phunōs" hedgehog; "fŏd" artery, vein; "fō" canal, river; "fōi" flowing water; "vŏtĕ" or "fŏtĕ" or "fŏd" or "fōd" perspiration; "phĕn" or "phēn" or "phōn" or "phōnpĕn" or "phōnphĕn" to superabound, overflow; "phōn" to grow cold; "phrŏ" cold; "fŏda" fundament; "phēĕtphŏn" bursting of contained waters; "fōjsh" to cast down; "tshōuf" to evacuate. — The character occurs under the Twenty-sixth dynasty (Leps. d. iii. pl. 276).

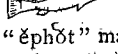
The *hedgehog* called "phunōs" in Egyptian — is doubtless the long-eared species, Erinaceus auritus, figured on the monuments as early as the Third dynasty (Leps. d. ii. pl. 3); carried in cages as though regarded sacred under the Fourth, Fifth, and as late as the Twelfth dynasty; and observed by myself to inhabit Lower Egypt.

"thifi" a bile; "noutf" a bile, to be discharged, set free; "iavi" sickness; "ĕiaavĕ" corrupt blood, serous effusion; "fōrfĕr" to flow from, drop from; "thōftĕf" to distil, drop, fall; "phōshi" fused, spread out, drained; "phĕrphŏr" to diminish, dissolve. — The character occurs in the Book of the Dead, also under the Seventeenth dynasty (Leps. d. iii. pl. 5).

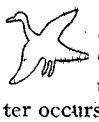
joint of meat; "af" or "afōui" flesh; "lĕflifi" crumb, morsel; "lōvlĕf" or "lōflĕf" to putrefy, become corrupt. — The character occurs from the Third dynasty to the Roman conquest (Leps. d. ii. pl. 3, and k. pl. 23 to 59): is besides the origin of the form Φ of the Greek letter phi. The full Egyptian sound of f, though not occurring in Greek, is continued in Latin and English; confirmation being found even in the name of the letter "ef."

meat fly; "af" fly; "fĕnt" or "fnt" worms; "er-phent" or "rfnt" to produce worms; "af-hŏns" to smell foully. — The character occurs under the Nineteenth dynasty (Leps. d. iii. pl. 162).

The *meat-fly*, Musca vomitoria, known therefore at the time of the formation of the Egyptian language. — "Three flies of solid gold," were found with the body of queen Aahotep of the Seventeenth dynasty (newsp. account). That M. vomitoria produces meat-maggots, was known to Homer il. xix. 25; the blue colour of its abdomen, is alluded to by Pausanias x. 28; and the young or maggot state "galba" is mentioned by Suetonius. By European colonists, M. vomitoria was introduced into America; and at the present day, has become widely distributed over the globe: but I do not remember meeting with the insect on the islands of the Pacific.

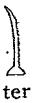


(fish signifying wickedness, pollution, Horap. i. 42); "tvt" or "tĕvt" fish; "fōri" *mullet;* "tshafōuri" sole or flounder; "fōukasi" eel or muræna; "lĕifi" scale fish; "ĕphŏt" mailed fish, tortoise; "fŏtĕ" or "vōtĕ" or "vŏtĕ" " or "vad" or "ŏrĕv" pollution, abomination; "vĕ" to loathe, cause disgust; "sĕf" or "saf" or "sōōf" or "sōf" or "sŏŏf" to pollute, be polluted, wantonness; "shlōf" filthy, base; "thŏlĕv" stain, pollution, to be defiled; — in English "fish-story." The character occurs from the Third dynasty to the Twenty-sixth (Leps. d. ii. pl. 3 to iii. pl. 264).



(hawk with expanded wings, signifying wind, Horap. ii. 14); "phōrtsh" or "phŏrtsh" to expand, stretch forth; "ōuŏf" lungs; "nivĕ" or "nifĕ" or "nifi" wind, to inspire, blow; "nif" or "nifĕ" clouds; "ĕphlēōu" or "phlēōu" futile, in vain, idle; — in Hebrew "nphh" to blow, "aph" nostrils or nose, "owf" to fly; in Greek "nĕphĕlē" cloud. The character occurs under the Third dynasty, also in the Book of the Dead, and continues in use under the Persian emperors (Leps. d. ii. pl. 6, and k. pl. 24 to 49).

"phŏi" bench on which the Orientals are accustomed to recline in shops and temples; "phōuĕi" from afar; "phiri" narration; "phanishlōf" out of employment, to no purpose; "phōtsh" to be many, to stretch out; "phŏrtsh" to strew, spread, recline; "phanitshōfth" ribaldrous, base, empty; "tshlōf" or "tshlaf" base, turpitude; "fiprōōutsh" to prattle, trifling talk; "phĕnh" or "phōnh" or "phŏnh" to turn, pervert; "phahōu" backwards. — The character occurs under the . . . . dynasty (Champ. dict. 255).



"fikōhi" weaver's cylinder; "phapilas" or "phapilaps" instrument acuminated like a tongue; "phapilas" weaver's implement, implement with which anything is sharpened; "phimōlia" Armenian stone; "sĕvtshŏv" or "tshōvtshĕv" or "tshĕvtshŏv" to whet or sharpen. — The character occurs as early as the Twelfth dynasty (Leps. d. ii. pl. 121). A second form occurs under the Fourth dynasty (Leps. d. ii. pl. 98).

"athav" or "atkŏv" unleavened; "phas" or "phĕs" or "phōsi" or "phisi" to cook, "han-phisi" cooked cakes, dainties; "nōf" or "ōunōf" joy; "phŏlj" immoderate joy;

"phanitshfŏ" delirium, to be out of one's wits. — The character occurs in the pyramid at Dashour, under the Twelfth dynasty (Vyse iii., and Leps. k. pl. 42).

(mouse signifying abolishing, also criticism; for among different kinds of bread it selects the best, Horap. i. 47); "pin" or "pein" or "phin" mouse; "phĕrj" or "phōrj" or "phŏrj" separation, to separate, "ōu-phŏrj ĕvōl" to distinguish; "phag" or "phŏg" or "phah" to rend in pieces; "phĕljĕ" or "phĕlji" or "phōlji" rags; "phĕnj" or "phōnj" or "phŏnj" subversion, to overthrow; "phōt" to obliterate; "ōuŏsf" abrogation; "ōuōjf" or "ōuōjp" to destroy, cut off; — in English "fine, refinement." — The character occurs under the Tenth dynasty (Leps. d. ii. pl. 150). A second form occurs from the Nineteenth dynasty to the Roman conquest (Leps. d. iii. pl. 140 and 199 to iv. pl. 47.)

The *mouse*, Mus musculus, known therefore in Egypt at the time of the invention of writing: — is figured entire in an Egyptian caricature, probably later than the Twentieth dynasty; is mentioned in the Batrachomyomachia, by Herodotus; and among Roman writers, by Plautus. From Europe, was unintentionally introduced into America; and afterwards into the Hawaiian, and other frequented islands of the Pacific.

(fly signifying impudence, for when continually driven away, it nevertheless returns, Horap. i. 48); "af-nōuhōr" biting fly; "ŏrf" to avoid; "ŏrf ĕgōun" to circle around; "attshphit" or "atval" impudent; "mŭtatval" impudence; "tshōp" effrontery; "shafē" confidence; — in Hebrew "orv" biting fly, "orv" Arabia. — The character occurs under the . . . . dynasty (Champ. dict. 85).

The *biting fly*, stomoxys, known therefore in Egypt at the time of the invention of writing: — the "orv" was one of the plagues induced by Moses in Egypt (Ex. viii. 16, "kunōmuia" 21 and 22 of Sept. translation); is mentioned also in Psalm lxxviii. 45 and cv. 31. The "kunōmuia" is mentioned by Homer il. xxi. 394, Philo vit. Mos. i. p. 401, Tertullian adv. Marcion. i. 14, and Athenæus iii. 37 and iv. 74; and the "cynomyia," by Pliny. By European colonists, the biting fly was unintentionally introduced into North America, where it has become frequent in houses; but I did not meet with it on the islands of the Pacific.

(ant signifying knowledge, because man cannot hide away anything from it, and in all its wanderings it never loses the way home, Horap. i. 49); "jafjif" or "japjip" or "shajiv" or "shajif" ant; "phōh" to anticipate, bring about. — Foresight was attributed to the ant in the days of Solomon prov. vi. 6 to 8; and Pliny xi. 36. adds, that ants alone of all animals except man, bury their dead. The character occurs in the Book of the Dead, also under the . . . . dynasty (pap. Burt. 120, and tabl. Belm. 15. 571).

The species referred to by Horapollo, is clearly the *house ant*, Formica . . . . ; known therefore in Egypt at the time of the invention of writing. — By European colonists, this small troublesome insect was carried to North America, where it has become frequent. I did not meet with it on the islands of the Pacific.

"vi" or "fi" to tolerate; "fai" or "fĕi" to bear; "fari" to burden; "phĕh" ripe; "phōh" end; — in Greek "phĕrŏ," in Latin "fero," to bear. The character occurs from the Fourth dynasty to the Ptolemies (Leps. d. ii. pl. 19 and 23, and Rosetta stone).

w, in Greek ōu, its pervading meaning awry, wrong. The exclamation whew!

(oryx signifying uncleanness, because it bellows indignantly at the rising moon and sun, and pollutes water-holes in the Desert, Horap. i. 46); "ōua" blasphemy; "ōuĕm" threatening countenance; "ōuĕtsh" or "ōuŏtsh" or "ōuatsh" will, to will; "hōōu" wicked; — in English "war." The character occurs under the . . . . dynasty (Champ. dict. 126).

The *oryx*, a large African antelope, well known if not already domesticated in Egypt at the time of the invention of writing: — is figured under the Third dynasty (Leps. d. ii. pl. 3); and under the Fourth and Fifth dynasties, as appears from monuments examined by myself, was kept in herds, like other cattle. Horapollo also speaks of the oryx being used for riding or sitting upon by the "ancient kings."

(wolf and stone, signifying consternation, Horap. ii. 70); "ŏurtshĕ" or "ōuĕrtshi" watch night-watch; "ōuŏnh" apparition, vision; "ŏuŏnh" or "ōuōnh" or "ōuanh" to be manifest; "ōuĕh" to be revealed; "ōuŏntsh" or "ŏntsh" wolf; "ōutshsnĕ" or "ōutshshnĕ" suddenly; "ŏuah" to invade, make irruption; "ōōrj" earnest; "ōuōshĕ" or "ōuji" or "ōji" cheek, unjust; — in English "wolf" and "wan" and "watch." The character occurs under the . . . . dynasty (Champ. gram. 72).

The *wolf*, Canis lupus, known therefore in Egypt at the time of the invention of writing: — to the present day (according to Clot-Bey) the "dyb" or wolf occurs there, differing however somewhat from the Northern kind. The "zab" of Genesis xlix, 27, Isaiah xi. 6 and lxv. 25, Jeremiah v. 6, and Zephaniah iii. 3, is clearly the wolf. The wolf was well known in Switzerland during the Stone period, as appears from debris of the earliest villages (Rütimeyer, in Troyon p. 272 and 442); the

"lukōs" is mentioned by Homer, and other Greek writers; and in Italy, the "lupus" or wolf was connected with the founding of Rome, is mentioned also by Terence, and Pliny.

(kicking a wolf's track, signifying abortion, Horap. ii. 42); "ōuǒnhf" or "ōuōmf" or "ōuamf" stable; "ōuĕhsǒi" or "ōuahsǒi" roof; "ōuŏ" rumour; "ōuĕinĕ" to be agitated; "ōuan" or "ōuōn" who, a certain one; "ōuahĕv" to mutter or growl; "nōutshp" consternation; "ōhŏim" trampling upon; "ōōt" to groan; "ōōtĕ" womb, "ōuiĕthmĕsiō" to act as midwife; "ōuhĕ" or "ōugĕ" or "hōuhĕ" or "ōuhōuhĕ" or "ouhōuhē" abortion; "ōuĕi" or "ōuĕiō" to repudiate. — The character occurs from the Eleventh dynasty to the Twenty-sixth (Leps. k. pl. 11 to 48). A second form (donkey's leg) occurs under the Twelfth dynasty (Leps. d. ii. pl. 121).

"ŏilĕ" or "ōili", or "ŏili" ram; "ōuōi" onset; "ōuaĕ!" or "ōuai!" or "ōuĕi!" or "ōuŏĕi!" or "ōuōi!" woe!; "hōĕ" flock; "ĕsōōu" or "ĕsŏōu" sheep; "ōuŏlĕ" or "ōuŏŏlĕ" or "ōuōǫlĕ," abundance, to abound; — in Greek "ōuai!", in Latin "vae!". The character occurs from the Fourth dynasty to the end of hieroglyphic writing (Leps. k. pl 5 to 67).

(herb "kŏnuzan" signifying spendthrift, through slaughtering his sheep and goats, Horap. ii. 75); "kiŏōu" amaranthus; "kiŏōu" gore, blood mixed with dust; "ōētsh" or "tshōēitsh" or "ouan" dust; "mōōut" to slaughter; "ŏsht" or "ōsht" or "ouosht" to strangle, suffocate; "ōuŏsh" or "ōuōsh" or "ōuĕshōuŏsh" or "ōuōjōuĕj" to chew; "ōuĕshp" or "ōuŏshp" to break; "ōuŏtshĕ" or "ōuŏtshm" or "ōuĕtshĕm" or "ōtshĕ" to consume; "ōuĕtĕv" or "ōuŏtĕv" to carry away, remove, change, "ōuŏtĕv ĕvōi" be sacrificed. — The character occurs from the Fifth dynasty to perhaps the end of hieroglyphic writing (Leps. d. ii. pl. 49, 102, and 129, and Rosellin. mon. civ. xxvii. 6). A second form occurs under the . . . . dynasty (Champ. dict. 217 and gram. 112, 122).

Matthiola livida of Egypt. Called in Egypt "nægeist" or "schudjara" (Forsk.), and the "kōnuzan" killing by inducing thirst — (Horap. ii. 75) may be compared: M. livida fatal to goats "capris funestissima," and employed by the inhabitants as a strong purgative, was observed by Forskal p. 119 along the margin of cultivated ground in Lower Egypt; by him also, and Delile, farther inland in the Desert.

Inula crithmifolia of the shore of the Mediterranean and Atlantic as far as Britain. Possibly the "kōnuzan" in question: — the "kōnuza" was known to Athenaeus x 67 in Egypt; and I. crithmifolia was observed there by Forskal p. 149, and Delile, in the maritime sand of the Mediterranean border. Farther North, the "kōnuzēs thusōsmŏu" is described in 1 Morb. mul. 108 and 2 Morb. mul. 63 as resembling "sĕlinŏ ōulŏ" curled parsley, growing in sandy places near the sea and its odour barely endurable; I. crithmifolia was observed by Sibthorp, and Chaubard, on rocks exposed to the sea around the Peloponnesus and the Greek islands. Westward, is described by Cæsalpinus f. 61; is termed "aster maritimus folio tereti crasso tridentato" by Tournefort inst. 483; and is known to grow along the Atlantic as far as Britain (Pers., and Engl. bot. pl. 68. See Inula viscosa and I. graveolens).

(hawk signifying superiority, also victory, Horap. i. 6); "ōōu" or "ŏōu" or "ēōōu" glory; "ōualĕ" to increase; "ōuōtĕv" or "ōuōtv" excelling, mightier; "ōuĕt" to excel; "ōulē" or "hōuĕit" or "hōuit" leader, chief; "hōuad" first. — The character occurs under the Third dynasty (Leps. d. ii. pl. 2, and Champ. dict. 137).

(vulture signifying limit, in its flight defining beforehand the battle-field and place of greatest slaughter, Horap. i. 11); "auēr" or "ōuĕr" how much; "mōri" or "nōurĕ" or "nōuri" vulture; "mōrĕ" or "mōr" or "mōur" to gird, tie around; "mōōtshĕ" or "mōutsht" to traverse around, examine, depart; "mōjg" or "mōujg" or "mōujh" belt, girdle; "nōuōshĕ" limit; — The character occurs under the Ptolemies (Leps. d. iv. pl. 12).

"ōuamĕ" digging implement; "ōuōi" or "ōuōĕiĕ" or "ōuŏi" peasant; "ōuōtŏri" anclebone; "ōuah" or "ōuĕh" or "ōuōh" or "ōuōh" adherent, to adhere, add to, follower; "ōua" or "ōuat" one, "ōuata" many; "ōuōn" any one, rest of the multitude, "ōuōnnim" everybody; "ōuatōu" or "ōuōtsh" or "ōuŏtsh" of their own accord, spontaneously. — The character occurs under the Fifth dynasty (Leps. d. ii. pl. 42).

"ōuĕitĕ" or "mōōunk" or "mōunk" to diminish, fall away, eclipse. — The character occurs as early as the . . . . dynasty (Champ. dict. 14).

("ŏtis" *bustard* signifying pursued by a more powerful enemy, because it hastens away at sight, Horap. ii. 47); "ōuiŏs" quickly; "ōuōj" thief; "ōuēōu" or "ōuōs" to flee, recede afar off; "ōuĕ" or "ōuĕi" distance, afar off; — "ōuĕinin" Ionia; in English "away." The character occurs from the Fifth dynasty to the Twenty-second (Leps. d. ii. pl. 68, and k. pl. . . . . to 46).

"ōimĕ" or "ōimi" or "ŏimi" hook; "ōuōhĕ" or "ōuōhi" or "ōuŏhĕ" or "ōuōŏhĕ" fisherman, the catch; "ōuŏntsh" or "ōntsh" end, to make an end. — The character occurs under the Third dynasty (Leps. d. ii. pl. 3). A second form occurs from the Fourth dynasty to the end of hieroglyphic writing (Leps. d. ii. pl 21, and k. pl. 25 to 62). The same implement is often figured in the hands of gods and kings as one of the emblems of ruling; seems in fact a sceptre in the

form of a shepherd's crook: I found however this pattern of cane used in Eastern Arabia, in contradistinction to the hoopoe-headed cane of the West.

sh or zh, its pervading meaning shame: inspiration through the teeth on feeling the thrust of a sharp instrument. — The Hebrew letter "shyn" or "shn," meaning tooth; the French "ch" pronounced sh, and French "j" pronounced zh.

(stairs or ladder signifying siege, on account of the inequality, Horap. ii. 26); "shlōshĕ" or "shlōōshĕ" or "shlōōshtĕ" ladder or stairs; "shŏlĕ" to encompass; "shōl" to invest, besiege. — The character occurs in the Book of the Dead, also under the Seventeenth dynasty (Leps. d. iii. pl. 5 and 84).

"shĕpē" or "shēpĕ" haste, to hasten; "hashĕ" noose; "jōrj," or "jōrjs" or "jŏrj" or "shŏrsh" or "shōrshs" noose, to lie in ambush, to ensnare; "shĕp" or "shōp" or "shŏpĕ" or "shŏpi" to capture, lay hold of; "shēp" to be captured, defendant; "shlēv" a muzzle, to muzzle; — in English "sheepish." The character occurs from the Third dynasty and the Book of the Dead to the end of hieroglyphic writing (Leps. d. ii. pl. 3, 19, and k. pl. . . . . to 66).

("pĕristĕran" pigeon with raised crest, signifying borrowing gall, Horap. ii. 45); "shlŏt" liver; "shrēn" irritation; "shtshnt" to be indignant; "shnĕt" anger; "nōushs" anger, bitterness of mind, to grow angry; "shnau" delay; "shnat" to murmur; "shjir" spittle; "shalp" fist. — In colloquial English "dander rising." The character occurs in the Book of the Dead, also under the Nineteenth dynasty (Leps. d. iii. pl. 151).

"shĕ" or "shē" therefore; "shnrat" to investigate; "shnarkĕ" to accuse, condemn; "shaĕiō" condemnation, obnoxious; "shŏlp" bundle of reeds; "shĕrōf" or "shĕrōōv" or "shĕrŏv" or "sharŏm" or "shēni" rods, "shat" to pay, quality, quantity, so much; — in English "sheriff." The character occurs from the Fourth dynasty and the Book of the Dead to the end of hieroglyphic writing (Leps. d. ii. pl. 18, 24, 73, and k. pl. 5 to 63).

"shlĕmlōm" or "shlĕmlŏm" or "shlmlŏm" or "shlōmlĕm" to entangle, fold together; "shōlp" to form, bind fast; "shnōuf" iron mallet. — The character occurs as early as the Fourth dynasty, also in the Book of the Dead (Leps. d. ii. pl. 21, 25).

"shlŏvi" shears; "shŏi" curls; "shŏp" or "shŏp" or "tshōp" to shave, be shaven. — The character occurs under the . . . . dynasty (Champ. dict. 363).

"shari" or "shōt" or "shĕjshŏj" or "shŏjshĕj" or "shŏjshj" to beat; "shnŏōu" threshing; "shlak" punishment. — The character occurs from the Fifth dynasty to the Twelfth (Leps. d. ii. pl. 47, 107, 138).

("trugōna" *turtle-dove*, signifying fond of music and dancing, Horap. ii. 51); "shrmptshan" or "shrōmptshal" turtle-dove; "fōsh" or "vōsh" or "vŏshĕ" or "shipheĭ" or "shōsjĕs" or "shōsshĕs" or "shōshs" or "spheĭ" to skip, dance; "shak" or "shask" to applaud, clap hands; "shas" or "shĕs" or "shisi" to be elated; "shrō" victory, to conquer. — The character occurs from the Fourth dynasty to the Twelfth (Leps. d. ii. pl. 19 to 145).

(wolf with tip of tail lost, having bitten himself loose, signifying escape from persecution, Horap. ii. 69); "shimkah" to be afflicted, in distress; "sapshla" narrowness, pressure; "shēu" narrow; "shŏōu" to be straitened; "shiē" extreme or border; "shra" extreme part of the body; "ships" extremity of skin of eyes and ears; "shisak" to be reduced to extremity; "shŏth" or "shŏlk" or "shrē" to dig; "ĕshau" or "ĕshōu" forceps or nippers; "shilapsĭ" or "shōlpsĭ" to bite; "sham" or "shōm" strength; "shĕmsham" or "shmshōm" to have strength; "shŏshn" or "shĕtshŏt" to pare off, cut off; "shinĕ" to find, "shineĭ ĕvōl" egress. — The character occurs in the Book of the Dead, and from the Twelfth dynasty to the Ptolemies (Leps. d. ii. pl. 128, iii. pl. 141, and k. pl. 32 to 51).

"shōrtĕ" or "tshlish" sword, knife; "shiĕrgōt" or "shiĕrgŏt" or "shipĕ" to wound, be wounded; "shanah" maimed, mutilated; "tshōōshĕ" or "tshŏshĕ" or "tshŏŏshĕ" wounds, to make blind, mutilate; "ŏshĕ" to wound, make sick; "shŏs" or "ŏshr" congealed, "ōshr" to shiver, quake; "ŏshv" or "ŏshĕv" cold, to grow cold; "shahshĕh" or "shahshh" teeth-chattering. — The character occurs under the Third dynasty (Leps. d. ii. pl. 3). A second form occurs under the Nineteenth dynasty (Leps. d. iii. pl. 139).

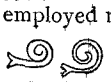
"shălĕ" or "tshal" lame; "shra" thigh; "shalaj" or "shalŏj" foot; "shimĕ" or "shimĕ" dizziness, satiety; "shŏft" or "shĕvvĕ" to grow weak; "shlj-pat" or "klj-pat" genuflexion, to bend the knee; "shnĕjŏ" to subject, subdue, "shnŏn njŏ" to be subjected; "shŏtp" or "shŏt" to be conquered, subjugated. — The character occurs from the Third dynasty and the Book of the Dead to the end of hieroglyphic writing (Leps. d. ii. pl. 6 to iv. pl. 27, and k. pl. to 37).

("phassan" wood-pigeon holding a laurel leaf, signifying restored to health through response of oracle, Horap. ii. 43); "shlōj" or "shlŏsh" bed; "shvvĕ" or shŏŏv" or "shŏv" or "shŏj" or "shōjv" or "shajĕ" weak, debilitated; "shinōunai" wretched; "shitshtshēn" or "shitshēm" or "shitshŏm" augury; "shini" to draw omens, to divine; "shōrp" or "shŏlp" to reveal, revealing;

"shin-ōuŏtshv" response; "shaimĕ" bird; "shv" or "shŏvĕ" or "shŏŏvĕ" leaf. — The character occurs under the Third dynasty (Leps. d. ii. pl. 5). The lower portion detached and more resembling a leaf, occurs in the same hieroglyphic inscription under the Third dynasty.

The *wood-pigeon*, Columba oenas, though well known throughout Europe, has not perhaps been observed in Egypt. — The "phassa" of Homer il. xv. 238, and Aristophanes av. 303, is referred here by some writers; as also the "palumbes" of Cato, Nigidius, and Virgil, described by Pliny viii. 41 and x. 35 as healing themselves with laurel leaves (see above), as departing from Italy in the winter season, whither they go, being unknown, and as breeding only twice a year.

Laurus nobilis of the Northern shores of the Mediterranean. Called in Britain *bay* or *sweet bay*, but by Chaucer "laurer," in France "laurier" (Prior pop. names), in Germany "lorbeer," in Italy "alloro" or "lauro" (Lenz), in Greece "thaphnē" (Sibth), in which we recognize the leaf in question, laurel leaves having been imported into Egypt possibly as early as this date: — leaves and branches of "thaphnē" were carried in the coronation-procession of Ptolemy II. (Callixen., and Athen.); laurel leaves are enumerated by Alpinus as used medicinally in Egypt, and were ascertained by Forskal mat. med. to be imported from Greece. Among the Greeks, the "thaphnē" was sacred to Apollo (Plin. xii. 2), is mentioned by Hesiod op. 435, Homer od. i. 183, Ibycus, Theophrastus, and Dioscorides; and L. nobilis was observed by Forskal, Sibthorp, Bory, and Fraas, from Crete and the Peloponnesus to Constantinople. Westward, the consul Postumius Tubertus in the first triumphal procession at Rome was crowned with "laurus" for his bloodless victory over the Sabines, and Pliny xv. 38 and xvii. 11 further speaks of the tree as growing in Italy on the mountains and besides cultivated: L. nobilis is known to grow also in Spain (Pers.), is termed "l. vulgaris" by Tournefort inst. 597; is cultivated throughout middle Europe, and its aromatic leaves and berries continue to be employed medicinally (Lindl.).



"shŏvshŏvĕ" an incurved wooden shaving that inverts upon a bird; "shi" to take, obtain; "shrōmpĕ" or "shrōmpi" or "shrōōmpĕ" or "shrŏmpi" pigeon; "shalĕ" or "shal" or "shalōl" or "shalŏ" or "shōilĕ" to commit, place in charge; "shajĕ" ear-ring; "shrēji" or "shrēshĕ" dowry or nuptial present; "shaĕiēu" delivered up; "shaamĕ" or "shōōush" prevaricator, to prevaricate; "shagĕm" or "shŏgĕm" impurity, unclean; "shi" to marry. — The character occurs as early as the Third dynasty (Leps. d. ii. pl. 3 to 6, Champ. gram. 77 and 381, and Buns. and Birch).

There seems included allusion to the custom — mentioned in Deut. xxii. 14 to 21. The healing bird among the peasantry of Egypt was ascertained by myself to be the *domestic pigeon*, Columba vulgaris, adapted to the purpose from its silence under captivity: detested therefore by the Jews, and held sacred to Venus by the Greeks. Apart from hieroglyphic writing, the pigeon is figured at Sakara under the Fifth dynasty (Leps. d. ii. pl. 70); but elsewhere on the monuments I was unable to find distinct representations. The "ywnĕ" was sent out from the ark by Noah (Gen. viii. 8); is mentioned also in Levit. v. 7, and Cant. ii. 14 to iv. 1; a pigeon from Egypt was connected with the founding of the oracle at Dodona (Herodotus); "pĕristĕra" and "pĕristĕrĕŏn" pigeon-houses are mentioned by Aristophanes lys. 755, and Plato theæt. 198; and the "columba" by Pliny x. 74 as breeding several times in a year. Eastward, the pigeon is mentioned in the Sama Veda (transl. Stevenson); was observed by myself lingering in numbers about the secluded and long-abandoned cave-temples at Adjunta; and according to Mason, is well known in Burmah. By European colonists, was carried to Northeast America, where it has become abundant, and if naturalized, keeping notwithstanding in the vicinity of dwellings.

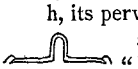
("hēnalŏpĕka" Egyptian goose signifying offspring, son, Horap. i. 50); "shĕtshĕ" goose; "tshmtshēshĕ" hissing; "tshōutshits" hissing (of serpents, Edw.); "shjĕ" or "tshjĕ" grasshopper or locust; "shi-tshipi" or "shi-tshōtsh" or "shi-tshŏtsh" confusion, shame, to be disgraced; "shrŏsh" or "shrŏŏsh" fruit, offspring; "shmōh" end, consummation; — in Hebrew "shrk" or "lhsh" to hiss. The character occurs from the Third dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 6, and k. pl. 5 to 66). That the character represents the "hēnalŏpēx," appears also from Herodotus ii. 72, and Aristophanes av. 1295.

The *Egyptian goose*, Anser chenalopex, is an indigenous species that does not appear to have been domesticated: — apart from the hieroglyphic writing, flocks are captured in nets under the Fourth and Fifth dynasties at Gizeh: and at Benihassan under the Twelfth dynasty, the bird is separated from the domestic goose. In Middle Egypt, Feb. 2d, the living A. chenalopex was observed by myself in immense flocks on the sand-bars near Gebel Shekh Embarak; when disturbed, flying away in files or lines, some of them plicated and wedge-like after the manner of our A. Canadensis.

The articulation z seems wanting in the Egyptian language; — though in use among the population of the present day, the *domestic goose* being called "ouizzah." An ancient form of the Phœnician letter "zyn" ƶ, clearly taken from a goose's neck, is continued in Etruscan, and Oscan (Gesen. monum. Phœnic.); in Greek also, though often reversed, and possibly transferred to sigma, a differ-

ent sibilant. This reversed form constitutes the S of the Romans and the alphabets of Western Europe.

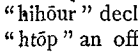
h, its pervading meaning held: The exclamation "hush!"


arms with the thumb pointing downward; "halōk" or "hamēr" or "amēr" breast, arms; "hĕrtshĕ" cubit, fathom; "hfŏt" or "hpŏt" fathom; "hētĕn" or "hētōu" thumbs; "hrak" or "hrōk" or "hĕri" or "hōrōu" to quiet, hush, make still; "hrōur" or "hōurŏōu" or "harō" or "harŏ" to keep silence, hush; "tahnō" or "tshŏtsht" prohibition, to prohibit; "hmōōs" or "hmsō" to cause to sit. — The character occurs from the Fourth dynasty to the Thirteenth (Leps. d. ii. 81, and k. pl. 7 to 14).

cow-bell; "harikiōn" bell; "has" although; "hĕljĕ" kind; "ha" or "has" to permit; "hiĕv" or "hiēv" lamb; "hē" to be, to remain; "hatm" or "hatn" or "hahtm" or "hahtn" or "hahtē" with; "hah" many. — The character occurs as early as the . . . . dynasty (Champ. gram. 372 and 373).

"ōhĕ" or "ōhi" herd or flock; "ĕiŏhĕ" or "ōhĕ" or "ōhi" fold or sheepfold; "ōhi" to tarry; "hĕnōufĕ" or "hinōufi" tranquillity, abundance; "hōr" or "hŏr" to milk; "hrĕ" or "hrē" food; — in Hebrew the eighth letter "hyd" supposed to signify sheepfold; in English "enough." The character occurs from the Fourth dynasty to the Roman conquest (Leps. d. ii. pl. 23, and k. pl. 7 to 58).

(*cuttle-fish* "sēpian" signifying, in striving to do well, meeting with misfortune; the animal escaping capture by discharging a black fluid, Horap. ii. 107); "hōrpi" to try; "hihōur" declivity; "htōp" or "hĕ" or "hĕi" disgraceful fall; "hulē" or "lōihĕ" or "lŏihi" mire; "htōp" an offence; "hapōu" where; "hamnai" here; "ha-mnē" there; "hēn" near; "hamōi" as yet; "hathē" or "hatē" or "hihĕ" or "hihē" before; "phahōu" or "pahōu" or "hipahōu" behind, afterwards; "hasiĕ" to be submerged; — in Latin "hic," in English "here." The character occurs under the Twelfth dynasty (Leps. d. ii. pl. 140). A second form occurs in the Book of the Dead, and from the Twelfth dynasty to the Eighteenth (Leps. d. ii. pl. 125, and k. pl. 29).


"hōjps" to shut, stop; "tathō" to hold, bind; "sōnh" prisoner; "hēētĕ" or "hĕitĕs" behold!; "hnhĕ" to be overtaken, circumvented; "hŏls" or "hŏlsh" to be encompassed. — The first character occurs from the Eighteenth dynasty to the Roman conquest (Leps. d. iv. pl. 25, 27, and k. pl. 28 to 59). The second character occurs under the . . . . dynasty (Champ. gram. 459).

"hatĕr" pestle; "mjaht" or "harŏji" a mortar; "hatĕ" to bruise, "hŏlhĕl" bruising; "hiōu" or "hiōuĕ" to beat; "hiŏli" public flagellation; "hiōni" or "hiŏni" or "hiŏnē" to stone. — The first character occurs from the Fourth dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 30, 98, and k. pl. 7 to 66). The second occurs under the Nineteenth dynasty (Leps. k. pl. 36). The third occurs under the Ptolemies (Leps. k. pl. 53).

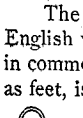
"alĕh" or "arĕh" custody, prison; "ĕnauh" or "snauh" bonds, fetters; — The character occurs from the Twelfth dynasty to the Ptolemies (Leps. d. ii. pl. 121, 138, and k. pl. 56); and seems the origin of the following forms of the Phœnician letter "hyd," 𐤄, continued in the Greek "ēta," and Roman H.

The character seems besides a modification of the stocks. — The stocks are mentioned in the English version of Prov. vii. 22; "sth" in Job xiii. 27 and xxxiii. 11; and were observed by myself in common use among the Arabs of Zanzibar. In Italy, the "numella," confining the neck as well as feet, is mentioned by Plautus (Ainsw.).

"hlal" yoke; "hihōh" to upbraid; "hŏōutsh" reviling, contumely; "hila" to be calumniated. — The character occurs as early as the Fourth dynasty (Leps. d. ii. pl. 22 and 102).

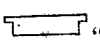
"hĕvi" or "hvvĕ" or "hēvi" a plough; "hĕvĕ" or "hĕvi" or "hēvi" or "hēvĕ" grief; "hva" sad, unwilling; "hĕlhilĕ" grief, trouble; "hētsh" or "hēj" or "hōjhĕj" or "hĕjhŏj" to be afflicted; "lōjh" or "lŏjh" affliction; "hlĕplŏp" or "hlōplp" to be in a strait; — in English "heavy" and "to come to grief." The character occurs from the Fourth dynasty to the Persian emperors (Leps. d. ii pl. 98 and k. pl. 49).

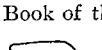
"hēt" heart, mind; "hēt" to trust to, confide in; "r-hēt" to repent, ponder; "hēt-hēt" inside of the heart; "hēt" womb; "hēts" or "hē" or "hōuad" or "hōuit" or "hōuĕit" or "hōuĕitĕ" beginning; — the name is continued in the Greek "ēta," supposed to have been originally pronounced h. The character occurs from the Third dynasty and the Book of the Dead to the Roman conquest (Leps. d. ii. pl. 2, and k. pl. 5 to 59).


(ibis signifying "karthian" heart, mind, reason; the bird being dedicated to Mercury, the master of all thinking and reasoning, Horap. i. 34); "haviōui" or "hip" or "hippĕn" ibis; "hrai" or "hm" or "hn" in; "hōun" or "hihōun" within; "t-hihōun" in the interior, the intellectual faculties; "hak" wise, intelligent; "hōuĕ" wiser; "hōp" to think; "hap" or

"hĕp" judgment; "hĕthŏt" or "hōthĕt" to investigate, seek, doubt; "hŏd" or "hōd" or "haps" or "hōps" it is proper, it must needs be; "thŏhthĕh" or "htor" or "hōdpĕ" necessity; — in Hebrew "ĕyphy." The character of the ibis-standard occurs in the name-ring of the second king of Egypt, and from the Fifth dynasty to the Roman conquest (Leps. d. ii. pl. 56, k. pl. 5 to 58).

The living bird, *Ibis religiosa*, though not met with by myself, is known to be indigenous in Egypt. The fact of being associated with Thot and the *art of writing* under the second Egyptian king, goes far towards establishing Egypt as the locality of the invention.

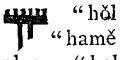

"gai" or "ha" or "has" winnowing-fan; "hŏf" or "hŏv" or "hvēuĕ" work; "hasĕ" or "hasē" or "hast" or "hisĕ" or "hisi" or "hōsĕ" labour, to labour, toil, become fatigued; "hĕishla" assiduity, to cause to turn. — The character occurs under the Twelfth dynasty, also in the Book of the Dead xxxvi. 17 (Leps. d. ii. pl. 129, and Champ. gram. 80 and 373).


(ape urinating, signifying to conceal one's defects, for the animal conceals its urine, Horap. ii. 63); the sight suggesting concealment; "kahēu" or "kĕhēu" naked. — The character occurs under the Fourth dynasty, also in the Book of the Dead (Leps. d. ii. pl. 26, and Buns. and Birch). The "Concealed Ammon" of the ancient Egyptians, or Concealed Supreme, is our current idea of God, expressed in a different mode of writing.

"kah" or "kahi" or "kĕhi" land; "kahi" top or head; as head of a book; "hra" or "ha" or "hō" face; — The character occurs as early as the Fourth dynasty (Leps. d. ii. pl. 19, and k. pl.).

"hōuklias" snail or cockle; "hōtĕ" or "hŏd" or "had" fear; "ĕl-had" to be cautious; "hĕnf" or "hōur" to be afraid; "hĕmi" solicitude, care; "hŏmi" to go upon. — The character occurs as early as the Twelfth dynasty (Leps., and Buns. and Birch). A second form occurs under the Twenty-sixth dynasty (Leps. d. iii. pl. 276).

"hŏl" or "hōl" hole, cavern; "hēpi" covering, roof; "hiĕit" or "hēpi" pit; "hlōl" obscure; "hamĕ" black; "hrĕms" or "hĕms" or "haki" or "hiōmtm" darkness; "hikma" hidden place; "halmi" or "hairĕ" or "hŏirĕ" or "hŏiri" or "hŏri" dung. — The character occurs from the Twentieth dynasty to the Twenty-eighth (Buns. and Birch).


"hŏvs" lid or cover; "hvs" or "hĕvs" or "hēvs" or "hōvs" or "hōfs" or "hōft" to cover; "hĕp" or "hēp" or "hōp" to hide; "hōti" hiding; "hŏp" hidden. — The character occurs from the Fourth dynasty to the Roman conquest (Leps. d. ii. pl. 19, and k. pl. 7 to 58).

"hōk" or "hŏk" or "hēk" to bind around, gird, arm; "hŏk" armour, belt, corslet; "hiŏt" or "dhiŏt" to put on. — The character occurs from the Fourth or Fifth dynasty and the Book of the Dead to the Roman conquest (Leps. d. ii. pl. 85, iii. pl. 77 and 151, and iv. pl. 13).

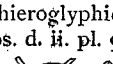
(hyena conquered turning to the left, Horap. ii. 67); "hōitĕ" or "hŏid" hyæna (badger, Mingar. and Kirch.); "hōitĕ" or "hōĕitĕ" or "hōtĕ" or "hvŏs" or "hvŏs" garment; "hĕvsŏ" or "hvsŏ" or "hsŏ" robe; "hēvs nahv" cloak; "hvŏŏs" or "hvōōs" linen; "hvōur" the left. — The character occurs under . . . . dynasty (Champ. gram. 369, and dict. 197).

("ōriganōn" signifying departure of ants, for when placed in their midst it drives them away, Horap. ii. 32; i.e. inquirers); "hal" deception; "hĕr" or "hŏl ĕvōl" to expel; "hĕl" or "hēl" or "hŏl" or "halai" to depart, fly, fly away; "halad" or "halĕd" or "halēt" bird. — The character occurs under the Fourth dynasty (Leps. d. ii. pl. 21).

Origanum Ægyptiacum of Middle Asia? Called in Egypt "saatar" (Forsk. p. 110), and corresponding to the "ōriganōn" in question: — "aegyptium origanum" is mentioned by Pliny xix. 50: O. Ægyptiacum was observed by Alpinus pl. 95, and Delile, in the gardens of Egypt, but is not known in its indigenous state. (The name "sater" given by the Turks to O. Smyrnæum, celebrated in ancient times, is in confirmation).

"hōt" or "hŏt" leather bag, blown up bag; "hŏt" to navigate; "hiallf" much speaking; — in English "bag of wind." The character occurs under the Twelfth dynasty (Leps. d. ii. pl. 148).

"hiē" rudder; "hiē" or "hiĕ" way, course, to direct; "ha" or "hŏ" to establish, institute; "hŏn" decree, edict; "hŏn" or "hĕnhŏn" or "hĕnhĕn" to command; "hmmĕ" government, steering; "hŏv" position; "hētsh" prepared; "hŏimi" or "hiōimi" waves, storm; "hōpt" or "hōtp" carved work resembling waves. — The character occurs under the . . . . dynasty (Wilkinson mann. and cust. ii. pl. 47).

(leopard signifying hypocrite, Horap. ii. 86); "hŏv" skin; "hĕli" alarm, threats; "hŏvk" to threaten; "hĕft" or "hŏft" to take away, steal; "hŏlĕm" rapine, spoils; "hĕila" to oppress, spoil; "ahŏ" or "hagŏ" or "hik" magician, poisoner; "nahk" to be healed. — The character occurs under the . . . . dynasty (Champ. gram.). Apart from the hieroglyphic writing, figures of Egyptians clad in a leopard-skin occur under the Fourth dynasty (Leps. d. ii. pl. 9. and 21, and observed by myself at Gizeh). The character of the separate leopard-skin  occurs under the Twelfth dynasty (Leps. d. ii. pl. 126).

The *leopard*, Felis pardalis, once inhabited Egypt; by this route reaching Palestine; — where

the "nmr" or leopard is mentioned by Habakkuk i. 8, and Jeremiah v. 6. The "pardos" of "Africa and Syria," are mentioned by Pliny viii. 23. Equatorial Africa appears to have been the original home of the leopard; and skins were doubtless imported thence into Egypt at a very early period. At Mocha, I found them for sale, forming a regular article of traffic.

(swan signifying old musician, Horap. ii. 37); "hunōn" (or "halēt ulōupō," ms. Par.) swan; "hllō" or "hĕlla" old man or woman, "el-hella" to grow old; "hĕmsēōud" familiarity; "kahs" custom, habit; "haĕ" or "haē" or "haĕuĕ" the last. — The character occurs as early as the Fourth dynasty (Leps. d. ii. pl. 98).

t, its pervading meaning toil.

"tōts" a tablet; "tnēvĕ" or "taivĕ" or "taivi" a chest; "ŏtshd" or "tĕkm" to draw or drag; "rahts" prostrator; "tĕvnē" or "tvnĕ" quadruped. — The character occurs as early as the Fifth dynasty (Leps. d. ii. pl. 49). A second form occurs under the Twelfth dynasty (Leps. d. ii. pl. 129).

(baboon. "kunōkĕphalōn" sitting, signifying the two equinoxes, day and night being then equal, Horap. i. 16); "tēōn" os sacrum; "tĕrtōr" fixed; "tōts" or "tŏts" seat, to be fastened in; "talō" or "talĕ" sitting; "hŏd" a balance or balance-scales; — "tŏri" a gnomon. The character occurs under the . . . . dynasty (Champ. dict. 117, Sharpe 73. 3. 14). The following and illustrates Horapollo's account of the Egyptians placing an image of the cynocephalus on water-clocks.

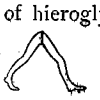
combination occurs under the . . . . dynasty (Champ. text 206, Buns. and Birch);

"phat" foot; "rat" foot, legs; "ratphat" hairy-foot or hare; "gărĕshŏŏuts" (jerboa, Lacroz.); — in Bali the learned language of China "bat" (Laloub., and Tattam); in English "foot." The character occurs under the Third dynasty (Leps. d. ii. pl. 3, Bonom., and Buns. and Birch).

Two species of *jerboa*, Dipus hirtipes and D. sagitta, are known to inhabit the Desert around Egypt; — and Clot-Bey ii. 68 further states, that when captured they cannot be kept in wooden cages on account of their powerful teeth. The "thipōthas" of Lybia, are mentioned by Herodotus iv. 192: and a figure of the jerboa is given by Paul Lucas ii. p. 58.

"tats" sole of foot; "tah-ĕrat" to stand; "tajrēu" firm, stable; "tajra" standing, firmness; "tajrō" the firmament; — in English "stand." The character occurs under the Fourth dynasty, also in the Book of the Dead, and continues in use under the Twelfth (Leps. d. ii. pl. 30 and 118); the second form occurs under the Seventeenth dynasty (Leps. d. iii. pl. 12).

leading-string; "tasthō" rope by which a ship's sail is directed; "tasthō" to turn aside, avert; "tahtĕh" to incline, convert; "tōujō" to keep, to liberate; "tnau" or "thnau" when. — The character occurs on the Gliddon mummy-case, and from the Third dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 3, and k. pl. 10 to 61).


(two feet joined together and walking, signifying course of the sun in the Winter solstice, Horap. ii. 3); "tŏk" to confide, trust; "tphĕ" or "tphō" to dismiss, send away, take leave; "ratf" or "tatsi" or "tashsĕ" foot-tracks; "trahŏs" pair of compasses; "tŏrtr" or "tŏtĕr" steps or stairs, an instrument graduated into minute divisions. — The character occurs from the Third dynasty to the Roman conquest (Leps. d. ii. pl. 3, 23, and k. pl. 5 to 57).

"tatshō" to weigh down, to be lame; "tahĕ" or "thigi" or "dhĕ" drunkenness, to be drunk. — The character occurs in the Book of the Dead.

"stōt" or "stŏt" or "strtĕr" or "tŏt" shuddering, fright, tremor. — The character occurs as early as the . . . . dynasty (Champol. mon. i. 98 and iii. 336).

"slad" or "slaatĕ" to slip, fall; "slatlĕt" a slip, false step, fall; "paht" or "pŏht" to fall prostrate; "rŏht" epilepsy; — in English "slide." The character occurs under the . . . . dynasty (Champollt gram. 370).

"tsmŏs" or "raktk" or "mĕtshŏd" or "mĕtshŏt" or "metshtshŏt" plains; "tŏĕ" or "tōi" or "tĕr" a portion, a part; "taj" sod; "tōuŏt" green; "tĕshnē" or "tĕshmĕs" or "tĕsh" herb, herbage; "tarinōn" a bed of young sprigs; "tŏs" or "tŏsi" dry, to become dry; "tmmi" hair or wool. — The character occurs from the Third dynasty to the end of hieroglyphic writing (Leps d. ii. pl. 3, and k. pl. 5 to 66).

"tĕsh" or "tĕshĕ" or "tishĕ" or "tŏsh" or "tŏshĕ" or "tŏji" plantation, to plant; "tŏng" arise; "tŏoun" or "tŏn" or "tōĕis" to rise up. — The character occurs under the . . . . dynasty, and continues in use under the Ptolemies (Champ. dict. 213, and Leps. k. pl. 51).

(hand signifying desirous of building, Horap. ii. 111); "tōt" or "tōōt" hand; "tē" or "tiōu" the number five; "tŏvs" or "tĕvs" or "tvs" to instigate. — The character occurs from the Third dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 2, and k. pl. 7 to 66).

"trĕsis" cheek, part of the upper jaw projecting under the eyes (cheekbone); "tassĕ" or "smnts" to bargain, make an agreement; "tarkĕ" or "tarkō" to bind by oath,

swear, adjure; "tama" or "tamĕ" or "tamō" to declare, make known. — The first character occurs in the Book of the Dead, also under the . . . . dynasty (Buns. and Birch). The second character occurs in the Book of the Dead, and from the Twelfth dynasty to the Ptolemies (Leps. d. ii. pl. 129, and k. pl. 44 to 58).

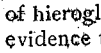
(finger signifying measurement, Horap. ii. 13); "tĕv" or "tēv" or "tēvĕ" or "tēēvĕ" finger; "tĕvs" ring, seal-ring, stamp, seal, mark; "tĕv" or "tŏv" or "tŏvs" or "tŏps" or "taōv" to sign; "tēvi" or "tēpi" prescribed labour. — The character occurs in the Book of the Dead, also under the Eighteenth dynasty (Leps. d. iii. pl. 77). To the present day, I found everything in Egypt done by contract, prominent persons in general wearing a seal-ring.

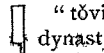
"tŏvi" or "tōvi" brick; "tŏvĕ" or "tŏŏvĕ" or "tōuĕiō" recompense; "tōh" or "tŏh" straw. — The character occurs from the Third dynasty and the Book of the Dead to the end of hieroglyphic writing (Leps. d. ii. pl. 5, and k. pl. 49 to 55 and 62). The character presents additional evidence to that above given, that *dobi* or sun-dried brick were in use when writing was invented.

"tŏvi" receptacle; "tahō" or "tōhō" to place. — The character occurs as early as the Fourth dynasty (Leps. d. ii. pl. 15). Apart from the hieroglyphic writing, the implement is employed in bricklaying under the Eighteenth dynasty (Leps. d. iii. pl. 40).

"tōm" wall; "tōmi" contiguous, joined together; "tŏr" or "tōsh" or "tōm" or "tŏm" or "tōmi" or "tēm" confederate, to adhere to, join together; "tashs" to cement, agglutinate; "tashtash" to continue; — in Hebrew "tyrĕ" wall. The character occurs from the Third dynasty and the Book of the Dead to the Twenty-first (Leps. d. ii. pl. 7, and k. pl. 42).

"tĕuntrōm" a columnar whirl of dust; "tōunĕs" or "tōunōs" or "tōunas" to excite, stir up, place together upon (superimpose); "kĕt" or "kēt" or "kōt" or "kŏt" to build; "tēk" strong; "tēnē" great, strong. — The character occurs from the Third dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 2, 147, and k. pl. 5 to 61).

 "tēnē" a bridge; "tlŏ" scala portabilis; "tnōm" or "tlōm" furrow, vale. — The character occurs under the Fourth dynasty (Leps. d. ii. pl. 20). A modification occurs under the Fifth dynasty (Leps. d. ii. pl. 43).

 "tōthĕ" track, footpath; "mōĕit" or "mŏit" road, way; "mitŏōui" paths, roads; "pēt" or "phēt" or "phŏt" to run, flee; "ĕrat" to, unto. — The character occurs as early as the Fourth or Fifth dynasty (Leps. d. ii. pl 13). A modification occurs from the Fifth dynasty and the Book of the Dead to the Ptolemies (Leps. d. ii. pl. 65 to iv. pl. 14, and k. pl. 12).

"tal" hill; "talēu" elevated place; "tau" or "tŏōu" or "tōuĕiē" mountain, mountainous region, Desert; "tŏōu" to migrate, change sides; "tōuĕiō" separation, divorce; "tēnh" or "tnih" or "tĕnh" or "tnh" pinnacle; "tēf" summit, tip; "talĕ" to ascend. — The character occurs from the Third dynasty and the Book of the Dead to the Ptolemies (Leps. d. ii. pl. 2, and k. pl. 24 to 58).

(muræna or speckled eel signifying intercourse with foreigners, Horap. ii. 104); "tĕlmōnia" spotted serpent; "tĕh" or "tēh" or "tŏh" to mingle, hold communion; "tĕu" to buy; "tēi" or "tōuĕ" or "taaf" or "taa ĕvōl" to sell; "tēif ĕvōl" sale; "tmō" or "tĕmmō" or "tĕ" to feed; — in Hebrew, the ninth letter "tyd," said to mean serpent, or according to others convolute (Gesen.). The character occurs under the . . . . dynasty (Champ. dict. 171). Horapollo speaks of the "murainan" coming out of the water to mingle with serpents; and this was the belief among the common people of Italy in the days of Pliny ix. 35 to 39.

"tar" sail-yard, branch; "tŏrĕ" ship's oar; "trp" or "tarp" or "tōrp" or "tŏrp" to rob, spoils; "tahth" or "tartr" to disturb. — The character occurs in the Book of the Dead xxxvi. 99, 17 (Buns. and Birch).

"taktōn" inverted, entangled, involved; "tō" turning; "toki" a knot, braid; "tanai" or "taithĕ" so; "tŏn" where; "trrĕ" or "tŏn" or "tnnō" to be worried; "tĕnōu" or "dnōu" now; "mtō" or "emtŏ" or "takō" to perish, perdition. — The character occurs from the Sixth dynasty to the Ptolemies (Leps. d. ii. pl. 76, 150, and iv. pl. 25).

"taktē" greaves, knee-hose; "tahĕm" or "tahm" or "tĕhm" to call; "tēl" or "tēr" all; "tnnō" or "tnōōu" or "taō" or "taōuĕ" or "tau" or "taua" or "tōuōĕ" to send; "takta" or "taktē" or "taktō" to place around, compass about; "tahĕ" to be hunted, hunter; "taaps" intense desire; "tanhĕ" or "tanhō" or "tangō" to preserve alive; "tōuja" or "tōujĕ" to save. — The character occurs from the Third dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 2, and k. pl. 7 to 66).

(wolf or dog turned away signifying aversion, Horap. ii. 21); "tsthō" to be averse; "taktō" to bring back; "tŏv" or "tphŏ" or "taphō" or "taphĕ" to restore. — The character occurs under the . . . . dynasty (Champ. dict. 116).

("tivōus" *Pistia stratiotes*, Syn. Diosc.); "tvvō" or "tōuvō" purification; "tvvĕ" or "tōuvĕ" to cleanse, purify; "talshō" to desist, make an end; "tōtsh" or "tēnĕ" limit, end. — The character occurs under the . . . . dynasty (Champ. gram. 77).

Pistia stratiotes of Equatorial Africa. A floating lettuce-like plant called in Egypt "hay a'lem el-ma" water-houseleek (Del.) and used medicinally against menorrhagia (Alpin.), by the prophets "aima ailōurōu," in Egyptian "tivōus" — (Syn. Diosc.): the "mnasiŏn ĕtĕron" growing in pools of the Nile is described by Theophrastus iv. 8. 6 as leafy with the root not reaching the soil, leaves side by side as if in a double series, and employed medicinally in fractures and menstrual affections; the "pōtamiōn stratiōtēn" according to Dioscorides grows without root on the top of the water, its leaves resembling those of the "aĕizŏōu" houseleek but larger, refrigerating, and restraining hemorrhage from the kidneys: P. stratiotes was observed by Calliaud in Sennaar; by Grant, in "floating rosettes" carried in flood down the Nile from the Equator "to about 13° N., beyond which scarcely one is visible"; was observed also by Adanson in Senegal. Eastward, is called in Sanscrit "koombhika," in Bengalee and Hindustanee "taka panna," in Telinga "neeroo boodookee" (Lindl.) or "antarei-tamara," in Tamil "agasatamaray" (Drur.); was observed by Rheede xi. pl. 32 in Malabar; by Graham, "common throughout the Concans," but by myself chiefly in artificial reservoirs; by Roxburgh, and Drury, in other parts of Hindustan, and used medicinally by the natives; by Mason v. 504, in Burmah, occasionally transferred to tubs of water near public buildings, said "to keep the water fresh"; by Loureiro, in Anam; by myself, apparently indigenous throughout the Malayan archipelago; by Blanco, called on the Philippines in Tagalo "guiapo," in Ylocano "loloan." Westward from Africa, may have floated without human intervention across the Atlantic to the West Indies, observed by Browne frequent at Jamaica, and known to occur in Florida; but possibly carried to Peru, where I found it only around Callao on the Pacific.

i, in Greek "ai," its pervading meaning I, self.

the all-seeing eye; "ai" to be, exist; — in Hebrew, the sixteenth letter "iyn," meaning eye, fountain. The character occurs on the Gliddon mummy-case, and from the Fifth dynasty to the end of hieroglyphic writing (Leps. k. pl. 5 to 67).

(sun and moon signifying "aiŏna" perpetual, eternal, Horap. i. 1); "sou-ai" first day of the new moon or month; "ōuaĕitsh" or "ōuaitsh" time, "ōuaitsh nim" always; — in Hebrew "iylm" or "iylwm" eternity; in Greek "aĕi" always, ever; in English "ever and aye." The character occurs from the Nineteenth dynasty to the Twenty-sixth (Leps. d. iii. pl. 171, and k. pl. 49). A second form ◎ occurs under the . . . . dynasty, and continues in use under the Ptolemies (Champ. dict. 14, and Leps. d. iv. pl. 47).

(lion's head signifying sentinel, watchful, the lion closing its eyes while watching and keeping them open in sleep, Horap. i. 19; eye the sentinel of the body, Diodor. iii.; "iri" eye, Plut. is.); "arĕh" to guard; — in Hebrew "iyr" or "iwr" keeper, sentinel, watchful. The character occurs from the Eleventh dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 150, iii. pl. 152, and k. pl. 23 to 63).

(eagle signifying isolation, for it builds its nest in uninhabited places and flies higher than other birds, Horap. ii. 53); "jaiĕ" or "jaĕiĕ" or "jaĕiē" or "jaiē" or "tshaiĕ" the Desert, solitary; "raths" free; "aiŏōu" or "ĕsaiŏōu" swift; — in Hebrew "iyt" rapacious bird, eagle; in Greek "aĕtōs" or "aiĕtōs." The character occurs from the Third dynasty and the Book of the Dead to the end of hieroglyphic writing (Leps. d. ii. pl. 2, and k. pl. 5 to 67). Further connection is found in the adoption of the *eagle* as the bird of Jupiter among the Greeks.

(hawk able to rise perpendicularly upwards, Horap. i. 6; and towards the East rising upwards, signifying winds, Horap. ii. 14); "tshai" nose, nostrils; "tshai" the East, to spring up; — "the breath of life," Gen. ii. 7. The character occurs as early as the . . . . dynasty (Champ. dict. 236).

Arnopogon picroides of Egypt and the Mediterranean countries. Hawk "iĕraka" signifying the sun, for alone among birds it can gaze on the sun: and hence the "iĕrarkia" herb is used in maladies of the eyes (Horap. i. 6): "thrimithōs" is the Egyptian name of the "hieracium growing in Egypt" (Edw.); and A. picroides, having a yellow flower somewhat resembling the sun's disk, was observed along the Mediterranean border by Hasselquist, Forskal, and Delile. Farther North, the "iĕrakiōn" is mentioned by Cratevas (Plin.), and Aetius, and the "iĕrakiōn tō mĕga" of Dioscorides is referred here by Gesner, and Fraas; A. picroides is termed "sonchus asper laciniatus creticus" by Tournefort inst. 474, was observed by Sibthorp, Chaubard, and Fraas, frequent in waste ground especially near the sea from the Peloponnesus throughout the Greek islands. Westward, hawks were supposed by the Romans to make use of the "hieraciam" herb (Plin. xx. 26); A. picroides is known to grow in Italy (Lenz), and was observed by Forskal on Malta and near Marseilles (Lam. ill. pl. 646, and Pers.).

"ai" or "mmai" or "ĕlai" myself, I; "ōuai" the numeral one; "ōuaĕĕt" or "ōuaĕt" single, alone; "aiai" or "aiaĕi" or "aiaĕĕi" increase, to augment, grow, be magnified; "jai" or "jaiō" or "jaiŏōu" sad. — The character occurs by itself and as a numeral under the Third dynasty, and continues in use until the end of hieroglyphic writing (Leps. d. ii. pl. 4, and k. pl. 6 to 67): is clearly

the origin of the later form I of the Greek letter iota, the Roman letter I, and as a numeral continues in use among nations generally to the present day.

(seeking protection, Horap. ii. 48); "aĕiŏ" wooden peg; "haivs" or "haivĕs" or "thaivĕs" shadow, protection. — The character occurs from the Third dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 3, and k. pl. 7 to 67).

phantom of the imagination, griffin; "tarah" to indulge in, be disturbed by vain imaginings. — The character occurs as early as the . . . . dynasty (Champ. gram. 497). The same figure occurs at Beni hassan under the Twelfth dynasty, but whether in the hieroglyphic text I do not now remember. The "gryps" or "gryphus" as described by Virgil, and Pliny, entirely corresponds: the imaginary monster "himaira" chimera, is mentioned by Homer il. 179 to 181.

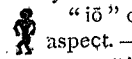
(voice of the air or thunder signifying voice from afar called "ōuaiĕ," Horap. i. 29); "hrōōu" voice; "hrōu-vai" or "hrōu-vvai" thunder; "mainĕ" or "maĕin" or "maĕinĕ" a sign; "haiō" yea. — The character occurs as early as the Tenth dynasty (Leps. d. ii. pl. 149). A second form occurs also under the Tenth dynasty at Hamamat (Leps. d. ii. pl. 149). The form of the Phœnician letter yod, and the original form of the Greek letter iota, seem also taken from the zigzag line of lightning. Compare Homer's sign from Jupiter.

y consonantal, its pervading meaning you.

"iō" or "tōuiō" to be weaned; "iōrh" pupil of the eye; "ianōs" iris; "ĕiĕrh" or "ĕiŏrah" aspect. — The character occurs in the Book of the Dead, lxxix. 164, 13 (Buns. and Birch).

"iĕhrai" peers, nobles; "iŏnam" right hand; "aōuŏ" or "ĕōuŏ" a pledge, "aōuō" to pledge; "aōuōt" or "ĕiŏhĕ" or "iōhĕ" hall, abode; "iōhi" or "iŏhĕ"-field, vineyard, flocks; "ĕiomĕ" mud (see bank swallow, and Horap. ii. 29); — in Hebrew "ymyn" right hand, pledge. The character occurs from the Third dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 3 and k. pl. 5 to 67).

The geographical names of many places around Egypt inhabited by the White race, appear to have been framed in reference to the inherent meaning of consonantal y; as, "iantŏōu" hill country, — "iantŏōu" (or "iantōōu," Mingar. p. 73, or "ianhōōt" or "ĕiahōōut," ms. Par.) or "ĕiantōōu," onager or wild mule (of Palestine). In facing the North, Yemen is on the right hand: and we find transmitted in Hebrew and Greek, "Yrthn," in Greek "Iōrthanēs; Yphw," in Greek "Iōppa; Ybnĕ," in Greek "Iamnia; Ybk" of Numb. xxi. 24; "Yrhw," in Greek "Iĕrihō; Ywbb" of Gen. x. 29, in Greek "Iŏvav; Yizr," in Greek "Iazēr; Ybws" and "Yrwshlym," in Greek "Iĕrōusalēm; Yĕwth," in Greek "Iōuthaia; Ywn," in Greek "Iŏnia"; and of names of nations or families, "Yphd," in Greek "Iapĕtōs; Yikb," in Greek "Iakŏv;" and "Yshral," in Greek "Israēl."


(crocodile's eyes emerging from the deep, signifying sunrise, the East, Horap. i. 65); "iĕvt" or "ĕivt" or "ĕiĕft" or "ĕiēft" or "pĕiĕvt" the East, sunrise; "iĕv" or "iĕp" or "iōpē" or "ĕiōpĕ" or "iōppĕ" manufactures, arts; "iōp" artisan; "ĕiōpĕ" to spin. — The character occurs under the Third dynasty (Leps. d. ii. pl. 7). A second form occurs from the Fourth dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 17, and k. pl. 5 to 63).

(dew falling from heaven, signifying instruction; for it falls on all, but profits only the susceptible, Horap. i. 35); "iōtĕ" or "iŏtĕ" or "iŏd" or "ĕiŏtĕ" dew; "iatĕ" or "iad" or "iōd" or "iŏt" or "ĕiŏt" father, forefathers; "ĕiat" or "ĕiaat" or "iat" or "niat" attention, to observe, mark, consider, perceive. — The character occurs under the Nineteenth? dynasty (Rosellin. m. real. 108).

"iōt" or "iŏt" *barley;* "iĕs" or "iŏs" quick; "iĕthē" profiting, to progress, advance. — The character occurs as early as the . . . . dynasty (Rosellin. m. civ. 23).

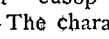
Hordeum vulgare of the Tauro-Caspian countries. Called in Britain *barley*, in Anglo-Saxon "barlych" or "bærlic" or "bær-cræs" or "bere" (Prior), in Germany "gerste" (Grieb), in France "orge" (Nugent), in Italy "orzo" (Lenz), in Greece "krithari" (Fraas), in Egypt and Yemen "shayr" (Forsk.), and cultivated at the time of the invention of writing: — standing crops, distinguished by the inferior height and stouter beardless spikes, are figured under the Fifth (Leps. d. ii. pl. 47, and Champ. 417), Seventh, and Seventeenth dynasties: the "shoirĕ" is mentioned in Leviticus xxvii. 16, Ruth ii. 17, Joel i. 11, and Job xxxi. 40; H. vulgare was observed under cultivation in Egypt by Forskol, Delile, and Clot-Bey; and by Forskal, and myself, in Yemen. Northward, the "krithē" or "kri" is mentioned by Homer, Aeschylus ag. 1625, Herodotus, Thucydides, Theophrastus, and others; the "hordeum," by Virgil, Columella, and Pliny; H. vulgare was cultivated in Switzerland during the Stone Age, relics occurring in debris of the earliest villages (Heer, and Troyon); was observed by Forskal, Chaubard, and Fraas, under cultivation in Greece; is known to be cultivated throughout Europe to "Lat. 70°," in Lapland, farther North than any other kind of grain (A. Dec.), succeeding equally within the Tropics, as witnessed by myself under the burning climate at Mocha: is derived by Berosus from Babylonia; by Moses of Chorene, from the Kur flowing into the

Caspian; was observed by Olivier, Chesney, Koch, and Kotschy, in Mesopotamia, Persia, and along the Caspian. Eastward from Persia, was found by Alexander under cultivation in Hindustan (Theophr.); is mentioned in the Sama Veda (transl. Stevenson) and Institutes of Menu (transl. Deslonch.); has a Sanscrit name (Pidd., and Royle ill. him. p. 418), is called in Bengalee "jab," in Hindustanee "jau" (D'roz), in the environs of Bombay "jow satoor," but sometimes "sheer" (Graham), indicating introduction by the Arabs. Farther East, is enumerated by Mason as "exotic" in Burmah; was observed by Kaempfer, and Thunberg, under cultivation in Japan and called "o muggi." By European colonists, was carried to America, where in our Northern States it continues extensively cultivated.

"ĕuni" millstone, mill. — The character occurs as early as the Thirteenth dynasty (Leps. d. ii. pl. 149).

(ass-headed man "ōnŏkĕphalōn" signifying untravelled; because knowing nothing of history, nor of other countries, Horap. i. 23); "ĕŏ" or "ĕiŏ" or "iŏ" donkey; "iar" not sagacious, noseless; "iai" to fear. — The character occurs in the Book of the Dead, also under the . . . . dynasty (pap. Ath. xv. 3, Buns. and Birch).

The *donkey*, Equus asinus, probably already domesticated at the time of the invention of writing. Its Egyptian name is given as "ĕŏ" or "ĕĕu," signifying also beast of burden, as though the earliest beast of burden known to the Egyptians: — apart from the hieroglyphic writing, the donkey is figured under the Third dynasty (Leps. d. ii. pl. 5); was observed by myself, kept in droves on monuments of the Fourth dynasty at Gizeh, caparisoned as a beast of burden under the Fifth in the beautiful tomb at Sakara; and to the present day in Egypt, the usual mode of journeying is on donkeys. The current name there of the donkey is however "hemar;" from the Hebrew "hmwr." In Palestine, the donkey is mentioned in the history of Abraham (Gen. xxii. 3); and under the name of "hmwr," in Gen. xlix. 14, and Ex. xiii. 13. In Greece, the "ōnŏs" is mentioned by Aristophanes nub. 1273 and pac. 4, and others: while in Italy the transported name "onus" signifies burden, a new name "asinus" being given to the animal, mentioned by Cato, Varro, and Pliny. In regard to the Western origin of Hindu institutions, bramins riding donkeys are mentioned in the Institutes of Menu (Braminical and Deslongchamps versions); donkeys continued in Hindustan to be used for riding in the days of Arrian; but throughout that country, I was unable to discover figures of the donkey in the cave-temples, and cannot recollect meeting with the living animal. From Europe, the donkey was carried to America by Columbus (F. Columb. 45 and 53).

(two hippopotamus hoofs facing downwards, signifying unjust, ungrateful, unfilial, Horap. i. 53); "iĕv" or "iēv" or "ĕiv" hoof; "ĕuŏ" debtor; "ĕuma" or "ĕusōp" together; "ĕiŏiŏ" to be morose; "iŏōu" a swelling, to swell; "iŏrĕm" to be amazed. — The character occurs as early as the Fourth dynasty (Leps. d. ii. pl. 2, and k. pl. 5). A second form  occurs also under the Fourth dynasty (Leps. d. pl. 26).

(water and fire signifying purity, because all purification is accomplished through these elements, Horap. i. 41); "ĕiōōuĕ" water, "mōuĕ" fire, "iōm" the sea; "iamĕn" lake, pool; "ĕia" or "niau" linen garments; "ia" or "iŏi" or "ĕiŏ" or "ĕiĕ" or "ĕiaa" or "ĕia" washing, to wash; "ĕia-tōōt" to wash hands, abdicate; — in Hebrew "ym" sea, river. The character occurs from the Third dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 3, and k. pl. 5 to 66). In the process of washing at Mocha, I remarked the clothes universally twisted in the above form.

"ĕial" ointment-vase; "ĕia" or "ia" or "iaau" valley; "ĕia" torrent, bed of torrent; "ĕiōōr" or "ĕiĕrō" or "iĕrō" or "iarō" river; "iōr" to pass over; — in English "to pass over Jordan." The character occurs on the Gliddon mummy-case, and from the Third dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 3, and k. pl. 7 to 66).

(ape followed by a smaller ape, signifying, a hated child will inherit, Horap. ii. 62); "ĕiĕ" therefore, truly, — in English "yea." The character occurs under the . . . . dynasty (Champ. gram. 42, 68, Salvolin., and Leps. ausw. 2).

"ial" or "ĕial" mirror; "ĕiōrm" or "ĕiŏrm" or "iōrĕm" or "iŏrĕm" to fix the eyes, gaze intently; "ĕiĕrh" or "ĕiōrh" or "ĕiŏrh" to see, contemplate. — The character occurs from the Third dynasty to the Twentieth (Leps. d. ii. pl. 3, 98, iii. pl. 53 and 207, and k. pl.). A second form occurs as early as the . . . . dynasty (Champ. gramm. 77, and dict. 237).

ē long or ee, its pervading meaning we.

(two men wearing the insignia of magistrates, signifying of the same mind, Horap. ii. 10); "mēēōui" or "mĕĕŏuĕi" or "mēōŭi" to think; or "mēōui" to be of opinion, way of thinking; "ōuĕllĕ" or "ōuēllĕ" tuning, musical chord; "nsĕ" or "sĕ" yes. — The character occurs as early as the . . . . dynasty (Champ. text. 379); and as an emblem, is placed over royal ovals and on the head of gods from the Seventeenth dynasty until the end of hieroglyphic writing (Leps. k. pl. 5, 23, and 28 to 67).

(two lines signifying unity, Horap. i. 11); "ēp" or "dĕp" companion, partner; "tshvēēli" or "tshvĕĕrĕ" or "tshvēr" or "tshphēr" companion, friend; "ēp" to number; "ēpĕ" or "ēpi"

number; "ēi" two, a pair; "sēnd" two; "sēt" double; "hēn" near; — in Greek "ĕmĕĕs" we; in Latin "ii" and "eae." The character occurs from the Ninth dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 138, 149, and k. pl. 7 to 67). Two upright lines, possibly forming a hieroglyphic character, occur as early as the Fifth dynasty (Leps. d. ii. pl. 58); and two ibis-feathers (corresponding to two fives even in Greek) occur often in hieroglyphic writing.

"ēri" quail; "ōui" mine, together; "dōui" to draw near, come; "dōui dōui" each; "ĕrēu" or "ĕrĕōu" one another, each other; "ōuēr" how many; "thē" she; "tē" or "pē" he; "tēu" or "nē" they; "nēĕt" or "nēĕtĕ" these; "sĕĕpĕ" or "sēēpĕ" or "sēēpi" or "sēpi" the rest, remainder. — The character occurs on the Gliddon mummy-case, and from the Third dynasty to the end of hieroglyphic writing (Leps. k. pl. 5 to 67).

From the highly finished painting on the Gliddon mummy-case, the chick is found to be that of the *red-legged partridge,* Perdix Graeca: known to be indigenous in Egypt: but I did not meet with it, neither can I speak of the voice of the young.

(one straight line bent over upon another, signifying ten even lines, Horap. ii. 28); "mēētĕ" or "mētĕ" or "mĕd" midst; "mēt" or "mētĕ" or "mĕd" ten; — in Hebrew the tenth letter "ywth" representing the number ten; as does the derived "iŏta" of the Greeks, though only the ninth letter; in English "meet, meeting." The above character occurs under the Third dynasty, and continues in use as a numeral until the end of hieroglyphic writing (Leps. d. ii. pl. 3).

(ostrich-feather, signifying administering impartial justice, the wing-feathers of the bird being all equal, Horap. ii. 110); "tshētsh" equal; "mēi" just, true; "mētsh" or "mētshĕ"; or "mēētshĕ" or "mēētshē" or "mēētshi" multitude, many. — The character occurs in combination as early as the Third dynasty (Leps. d. ii. pl. 3, 44, 56); and separately, from the Twelfth dynasty to the Ptolemies (Leps. k. pl. 12, and 25 to 57).

The *ostrich*, Struthio camelus, having extended itself into the Syrian Desert, must have come by way of the Isthmus, and have once ranged the Sahara to the shore of the Mediterranean. — Under the Twelfth dynasty at Benihassan, is figured with clusters of the eggs and feathers, at this time clearly articles of traffic. Under the Eighteenth dynasty, similar clusters in the Tribute-processions show distant if not foreign traffic. But our Nubian boat-captain informed me, that the ostrich breeds to the present day about two hundred miles South and East of the First cataract.

(harp signifying attracting and retaining, Horap. ii. 108); "ōuŏini" harp; "ini" or "hētĕn" or "hēts" thumb; "mĕ" or "mēi" or "mēi" or "mĕrĕ" or "mĕnrĕ" to love; "mēni" or "mēnĕ" or "mēēnĕ" day by day; "mēr" tied or bound; "ôuēi" because; — in English "win." The character occurs as early as the . . . . dynasty (Champ. gram. 345). Apart from the hieroglyphic writing, harpers are figured under the Fourth dynasty (Leps. d. ii. pl. 36), and as observed by myself, under the Twelfth dynasty at Benihassan, and under the Twentieth at Bab-el-meluk.

"ēlp" or "ērp" wine; "hlēli" flower, bloom; "hlēji" or "hlēshĕ" sweetness. — The character occurs under the Third dynasty, and continues in use, more or less modified. . . . . (Leps. d. ii. pl. 7).

The only woody creeping plant familiarly known in Egypt is the grape-vine, and hence the following linguistic result; from "ērp" — we have in Greek "ĕrpŏ" to creep, "ĕrpĕtōn" reptile; in Latin "repo" and "repto" and "serpo" to creep, "serpens" serpent; and in English "serpent, reptile, creep."

Vitis vinifera of the Tauro-Caspian countries. Called in Britain *vine* and the fruit *grape*, in France "vigne" (Prior), in Germany "weinstock" (Grieb), in Italy "vite" and the fruit "grappolo" or "grappo d'uva" (Lenz), in Greece "klēma" or "agriampĕlōs" (Sibth.), in Egypt and Yemen "enab," and cultivated at the time of the invention of writing: — vineyards and full details of wine-making are figured under the Fourth, Seventeenth, and Eighteenth dynasties; vineyards and wine "yyn" are mentioned in the history of Noah (Gen. ix. 20 to 24); but at the present day in Egypt, the fruit only is eaten. Farther North, "ōinōn" and the "ampĕlōĕis" are mentioned by Hesiod op., Homer il. iii. 184, Herodotus, and the "ampĕlōu agrias" by Theophrastus ix. 20; "vinum" and the "vitis," by Plautus, Varro, and Columella: V. vinifera is known to be cultivated in Italy, Spain, and as far as middle Europe; was observed by Forskal, Hawkins, Chaubard, and Fraas, under cultivation and seemingly wild along river-banks from the Peloponnesus to Constantinople; appears to be really indigenous towards and along the Caspian (Ledeb., and A. Dec.). Eastward from the Caspian, has long been cultivated in Cashmere and Northern Hindustan (Royle); was observed by Bunge under cultivation in Northern China; by Kaempfer, and Thunberg, in Japan and called "foto," or usually "budo" or "iebi." Southward and Eastward from Egypt, was observed by Forskal under cultivation on the mountains of Yemen, and grapes of excellent quality were found by myself in market at Aden and Muscat; is called in Sanscrit "draksha" (A. Dec.), in Bengalee "drakhya," in Hindustanee "angur" or "tak" or "inab" (D'roz.), and according to Graham is "successfully cultivated" on the Deccan; is known in Burmah and called "sa-byeet" (Mason); but in general within

the Tropics I have found the fruit inferior in quality, and did not meet with an instance of successful wine-making. By Columbus, was carried to America (F. Columb.), where in Chili and California its cultivation seems successful: by European colonists also was carried to Austral Africa and Australia.

"jiiri" or "mah" pod; "nēji" or "nēshĕ" belly; "mah" or "mĕh" or "mĕh" or "sēōu" or "sēu" full, to be full; "mōh" or "tsiĕ" or "tsiō" or "sĕi" or "si" fulness, satiety; "sim" herb, esculent herb (Gen. ix. 3); "nēshĕ" or "nēji" green. — The character occurs from the Fifth dynasty to the Thirtieth (Leps. d. ii. pl. 74, and k. pl. 30 to 50).

Trigonella foenum-græcum of the Mediterranean countries. A small annual called in Britain *fenugreek* (Ainsw.), in France "fenugrec" (Nugent), in Germany "bockshorn-klee" (Lenz), in Greece "tēli" (Sibth.), in Egypt and Yemen "hælbe" or "helbeh" (Forsk. and Del.), in Egyptian "itasin" (syn. Diosc.), and the above long-beaked pod — seems to correspond: (the "ishb" herb of the field of Gen. iii. 18 may also be compared): T. foenum-græcum was observed by Forskal, Delile, and Clot-Bey ii. 34, extensively cultivated in Egypt, and the whole herb eaten either crude or cooked. Farther North, the "tēlis" or "vōukĕras" is mentioned by Diocles, Theodorus, Damon, and Theophrastus; is identified in Syn. Diosc. with the "aigōkĕrŏs" or "karphōs" or "lŏtōn" (see Lotophagi): T. foenum-græcum was observed by Sibthorp, Chaubard, and Fraas, from the Peloponnesus to Asia Minor and Cyprus, in the wild state only and no longer cultivated; was observed by myself to be a favourite article of diet among the Parsees, and may therefore prove the "triphullŏn" of their forefathers mentioned by Herodotus i. 132. Westward, the "tēlis" is identified in Syn. Diosc. with the "phainōum graikōum" of the Romans; and "foenum graecum" or "siliqua" or "silicia" is mentioned by Columella ii. 10, 33, Pliny xviii. 39 and xxiv. 120, and Palladius; T. foenum-græcum is termed "f. sylvestre et sativum" by Tournefort inst. 409; and is known to grow wild or seemingly wild in Italy and Southern France (Hall. helv. 379, Pers., and Lenz). Southward and Eastward from Egypt, was observed by Forskal under cultivation in the plains and on the mountains of Yemen: by Graham, in Hindustan, "commonly cultivated during the cold season and used as greens by the natives" under the name "maitee" or "meetee-bajee"; was observed by myself abundantly cultivated on the Deccan, and by the Parsees called simply "bajee."

(lapwing "ĕpōpa" and "athiantōn" herb, signifying curing one's self of a surfeit of grapes, Horap. ii. 89); "arēōu" "mēr" over, beyond;

or "ĕvēl" or "imēd" unless; "trimi," adiantum; "ĕmēr" or "arēj" or "arēēj" end. — The character occurs under the Third dynasty; and its upper portion continues under the Twenty-second (Leps. d. ii. pl. 3 to 102, and k. pl. 45).

Adiantum capillus-veneris of Europe and the adjoining portion of Asia. A fern called in Britain *maidenhair* or *Venus' hair* (Prior), in Germany "frauenhaar" (Grieb), in France "capillaire" (Nugent), in Italy "capelvenere" or "adianto" (Lenz), in Greece "pōlutrihi" (Sibth.), in Egypt "kuzbaret el-byr" coriander of cisterns (Del.); known in Egypt at the time of the invention of writing, and besides "trimi" called in Egyptian "ĕpiĕr" — (Syn. Diosc.) or "askŏlōnōvtiŏn" (Kirch.): A capillus-veneris was observed by Forskal, and Delile, in artificial localities in Lower Egypt. Farther North, the term "athiantōs" unwetted is used by Simonides, and the "athiantŏn" plant that cannot be wetted is mentioned in the Hippocratic treatise fistul., Theophrastus vii. 13, Nicander ther. 846, and is identified in Syn. Diosc. with the "kŏriŏn ĕnugrŏn" water coriander or "kallitrihōn" or "pōlutrihōn": A. capillus-veneris was observed by Sibthorp, Chaubard, and Fraas, on wet walls and rocks and in moist shady places frequent from the Peloponnesus throughout Greece. Westward, the "adianto" or "polytrichon" is mentioned by Pliny xxii. 30: A. capillus-veneris is termed "a. foliis coriandri" by Tournefort inst. 543, and is known to grow in Italy and throughout middle Europe as far as Britain (Engl. bot. pl. 1564, and Lenz). The rhizoma according to Lindley "is considered pectoral; but the decoction if very strong is reported to be emetic: mixed with syrup it forms *capillaire*."

k terminal or ck, its pervading meaning echo, racket.

"aik" or "ĕk" dedication, dedicatory festival; "mōki" vase, bowl; "lōk" a measure of liquids; "lakōn" pitcher, bottle; "nōuk" or "nak" or "lak" you, to you; "pŏk" or "phŏk" yours; "anōk phŏk" I am yours; "rĕkrikĕ" or "rĕkriki" nodding the head, winking; — in Hebrew "lg" a measure of liquids; in Greek "lakkŏs" or "lakŏs," in Latin "lacus," in English "lake." The first character occurs from the Fourth dynasty to the Ptolemies (Leps. d. ii. pl. 20, and k. pl. 28 to 60). The second character occurs from the Fourth dynasty to the Twelfth (Leps. d. ii. pl. 98, 147).

(salamander signifying a man burning in the fire, Horap. ii. 58); "aik" or "ōĕik" or "ŏik" bread, provisions; "lakh" cake; "ĕmk" or "ōmk" or "ŏmk" to devour, swallow down; "sŏmk" to suck, give suck; "mōnk" or "mōunk" to consume, be consumed, eclipse; "thik" or "dk" spark; "rakhĕ" or "rakhi" or "rōkhĕ" or "rōkhē" coals, a firebrand quenched; "rŏkh" or

"rōkh" consumption, burning; "lakh" or "lŏkh" or "rakh" or "rĕkh" or "rŏkh" or "kŏk" or "thŏk" to burn, conflagration. — The character occurs as early as the Fourth dynasty (Leps. d. ii. pl. 22).

(tadpole signifying "aplastōn" mal-formed, candid, Horap. i. 25); "svōk" or "svŏk" diminished, lacking; "mikĕ" weak; "takr" pure, limpid; "pŏk" soft; "lēk" or "lĕklŏk" or "lōklĕk" soft, softness, to soften. — The character occurs from the Fourth dynasty to the Ptolemies (Leps. d. ii. pl. 22, iii. pl. 5, 39, 238, iv. pl. 28).

(tadpole signifying reluctant to move, Horap. ii. 97); "ĕt-tēk" or "ak-tōkt" coagulated; "tōlk" to pull off; "ankōki" ring-finger; "ŏnk" to arise, get up. — The character occurs under the Nineteenth dynasty (Leps. k. pl. 35).

"hōlk" or "hŏlk" a braid; "tshōlk" or "tshŏlk" to plait, twist; "jōlk" or "jŏlk" or "shōlk" or shŏlk" to continue, extend; "hŏk" talk; "sŏk" sterility; "sŏksĕk" yawning; "makmĕk" or "mōkmĕk" thoughts, reasoning; "sŏk" to protract, provoke; "ōnk" to increase in height, assume a lofty style; — in English "talk," the phrase "spinning a yarn" used among sailors. The character occurs from the Twelfth dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 122, and k. pl. 47 to 65).

end of bench; "shask" or "shak" or "jak" to applaud, clap hands; "atshkak" or "tshkak" or "jitshkak" or "hitshkak" clamour, to exclaim, cry out; — in Hebrew "zik" or "tsik" clamour, to cry out. The character occurs from the Third to the Twelfth dynasty (Leps. d. ii. pl. 4, 39, and 147); and in second form from the Twelfth dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 147, and k. pl. 23 to 67). Seems besides the origin of the form ⟩ of the eleventh Hebrew letter "cph," and K of the Greek letter "kappa." As according to Quintillian K does not properly belong to the Latin language, its presence in Etruscan, Oscan, Celtiberian (Gesen. mon. Phœn.), and in the languages of Northern Europe, affords confirmation of Cæsar's statement, That the Druids of Gaul used the Greek alphabet. The Latin C hard, is however derived apparently from the Etruscan and Umbrian ⟩|.

(frog signifying shameless and sharp of vision, for it has blood only in the eyes, Horap. ii. 96); "kak" hairless eyebrows, suffusion; "kak-val" bloodshot eyes; "hak" ready; "jōkr" or "jōkĕr" ready, sharp; "jĕkjōkt" stubborn, "jōkjk" contumacy, "jakjĕk" contention; "jŏksi" crepitus. — The character occurs from the Fourth dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 27, 142, iv. pl. 77, and k. pl. 27 to 32).

(one hand holding a shield and the other a bow, signifying the front of battle, Horap. ii. 5); "hŏk" belt; "gēk" or "gŏk" or "hŏk" or "hōk" armour, to make war; "hak" fellow-combatant; "hŏk" or "phŏrk" corslet. — The character occurs from the Fourth dynasty and the Book of the Dead to the Nineteenth (Leps. d. ii. pl. 97, 75, and k. pl. 32).

mallet; "mĕtsh" anvil, "mĕtsh" or "matsh" to strike; "mĕtshak" whether, perhaps; "mētshak" again. — The character occurs from the Eighteenth dynasty to the Ptolemies (Leps. d. iii. pl. 119, and k. pl. 52 to 57).

"sōtf" tool; "sōtfĕf" chisel for quarrying; "ōnk" or "phōnk" sculptured work, to sculpture; "mōnk" a thing formed. — The character occurs from the Third dynasty to the Ptolemies (Leps. d. ii. pl. 2, 44, and k. pl. 5 to 59); and is often represented in the vertical position from the Eighteenth to Twenty-sixth dynasty (Leps. k. pl. 28 to 48).

"hakklf" or "hakĕlf" or "hamklf" or "hanklf" land-crocodile; "hamklĕ" coppersmith, blacksmith; "mankhat" silversmith; "tshĕk" or "tshēk" or "tshōk" or "tshŏk" or "tshōkh" or "tshŏk" depth, deep, to dig; "jōlk" or "jŏlk" or "shŏlk" to precipitate, be immersed; "jĕkh" or "jōkh" to fasten upon, bite; "sak" or "dsak" to molest, be molested. — The character occurs from the Twelfth dynasty to the Nineteenth (Leps. d. ii. pl. 138, iii. pl. 171).

The *land-crocodile*, Varanus, is a large kind of lizard occurring along the Nile; — described by Clot-Bey ii. 92 as very timid, uttering a shrill hiss on the approach of a supposed enemy, and called "ouaran el bahr." The medicinal use of the imported flesh of the "skigkōs," is mentioned by Apelles, and Sextius; the "skigkōs" is identified by Dioscorides ii. 71 with the land-crocodile; and according to Pliny viii. 38 and xxviii. 30 belongs to the Nile and is not so large as the ichneumon. The "largest kind of scincus" is mentioned by Pliny as imported from India, and is a different species.

"alak" or "halak" ring, collar, ox-yoke; "nak" for thyself; "hŏk" or "hŏkm" to bind, tie fast, tie together; "makh" neck; "hŏki" to choke, to scourge; — in English the interjection "alack!". The first character occurs from the Fourth dynasty to the Eighteenth (Leps. d. ii. pl. 9, and k. pl. 27). The second character occurs from the Eighth dynasty to the Nineteenth (tabl. Abyd., and Leps. d. iii. pl. 138).

"thōk" or "thŏk" ship's mast; "sĕkskĕk" to collect, number; "sĕk" or "sĕk" or "sŏk" to walk, go before, to draw; "ōuk" to draw, drag; "sōksĕk" exaction, to exact; "mĕkh" or "mōkh" or "mōkhs" ill treated, to be tormented; "sŏk" sackcloth; "jōk" or "jŏk" end. — The character occurs in the Book of the Dead xxxvi. 99. 11 (Buns. and Birch).

sk, its pervading meaning task.

"skuli" to hasten; "sk" or "ōsk" or "ŏsk" delay, to delay, loiter, waste time; — in Greek "shōlazŏ" to loiter, "shōlē" leisure, idleness, in Latin "schola," in English "school." The character occurs from the Fourth dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 31, and k. pl. 29 to 63).

"skĕn" or "iskĕn" shore, "skĕn" along, close along; "skitali" river-brink. — The character occurs under the Eleventh dynasty (Leps. d. ii. pl. 150). A possible modification occurs as early as the . . . . dynasty (Champ. mon. i. pl. 22).

"skĕphalis" door-post; "shinōn" order. — The character occurs from the Seventeenth dynasty to the Ptolemies (Leps. d. iii. pl. 9 to 255, and Rosetta stone).

(two human feet in the water signifying a writer, Horap. i. 62); "shi" writing-case; "sgē" to write; "shai" or "sgai" or "sgēt" or "sgi" writing, letters; "sgōui" scribe. — The character occurs in the Book of the Dead, also under the Twelfth dynasty (Leps. d. ii. pl. 143, k. pl., and Buns. and Birch).

shuffling-pan (compare "kōskinōn" of Horapollo i. 36); "skōrkr" wallowing-place; "skĕrkĕr" or "skĕrkŏr" or "skarkir" or "skrkŏr" to roll to, roll back, consider. — The character occurs from the Third dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 3, and k. pl. 5 to 67). I found the shuffling-pan in use at Mocha, for separating by rotary motion impurities from coffee, gum arabic, and all articles of commerce having the form of granules.

"skē" to reserve, lay aside; "sklē" purse, little coffer; "sknōuh" cord; — "skitĕ" or "kitĕ" drachma (piece of money); in Greek "shōinis" or "shōinŏs" small rope, rope made of rushes. The character occurs from the Fourth dynasty to the Tenth (Leps. d. ii. pl. 96, 49, 145).

"skah" or "skai" or "skĕi" or "shai" or "shĕts" to plough; "skuthis" practise, study; "shēm" or "shim" or "shimŏn" gray hairs. — The character occurs under the Fifth dynasty (Leps. d. ii. pl. 70).

(dead crow signifying a full lifetime, for the bird lives four hundred years, Horap. ii. 85); "sklē" or "slē" coffin, bier; "skunŏma" carcasses; "lŏsk" to become putrid; "skap" old, of yesterday; "shōur" or "shōuŏr" or "shōuĕr" to execrate, curse; — in English "skip." The character occurs from the Nineteenth dynasty to the Ptolemies (Leps. d. iii. pl. 146, and k. pl. 58).

"shara" coat of mail; "shrōm" stupor. — The character occurs under the . . . . dynasty (Champ. gram. 53, and rect. sarc. Brit. mus.).

"skara" vine-shoot bowed; "skara-kirntshŏ" sandy; "ship" softness of skin, tender, lenity. — The character occurs from the Fourth dynasty to the Persian conquest (Leps. d. ii. pl. 18, and k. pl. 11 to 48).

(fish signifying unlawful, Horap. i. 42); "kasks" or "kōskĕs" or "haskĕk" whispering, to whisper. — The character occurs in the Book of the Dead, also under the Sixth dynasty (Leps. d. ii. pl. 67).

l, its pervading meaning to learn through flagellation.

"maklivi" a whip, scourge; "ĕl" or "ĕll" to be, to do, receive as pupil, suffer punishment; — in Hebrew "ralmth" ox-goad, the twelfth letter "lmth" meaning to chastise, learn; in Greek the letter "lamvtha," also "lamvanŏ" to suffer punishment, receive, seize; in vulgar English "lam" to flog. The character occurs from the Third dynasty to the end of hieroglyphic writing (Leps. k. pl. 5 to 59 and 62). The character of an arm holding a whip was observed by myself at Benihassan in the name of a king preceding the Twelfth dynasty, and continues in use until the end of hieroglyphic writing (Leps. d. ii. pl. 151, and k. pl. 14 to 66). The detached whip occurs as early as the . . . . dynasty, and continues in use under the Roman emperors (Leps. k. pl. 63, 64); is clearly the origin of the form of the Phœnician letter "lmth" and Greek "lamytha," of the Roman and Western L, and has proved perhaps the most permanent of alphabetic forms, being traceable even in Arabic.

(worms signifying a coming multitude of mosquitos "kŏnŏpas," Horap. ii. 44); "shōlmĕs" or "tshōlmĕs" mosquito; "lĕkĕm" or "lĕhĕm" a mosquito-like insect; "lĕh" solicitude, care; "la" doors, windows; "laĕsi" bites; "lōlĕhĕmi" or "lĕlĕ-hĕmi" or "lalĕ-hĕmi" black spots, scars; "laji" or "mntlash" importunity. — The character occurs from the Fourteenth dynasty to the Twenty-sixth (Leps. k. pl. 15 to 34, 37, and 48). A second form, occurs from the Eighteenth dynasty to the end of hieroglyphic writing (Leps. k. pl. 30 and 32 to 67).

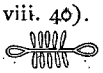
One or more species of *mosquito*, Culex, if not indigenous in Egypt, known there at the time of the invention of writing. — Mosquito-curtains are called "kŏnŏpĕiōn" in the Septuagint. The "kŏnŏps" is also mentioned by . . . . and other Greek writers; and the "culex," by Horace, and Pliny.

"alōli" or "ĕlōōlĕ" or "ĕlĕōōlĕ" grapes; "latshiĕ" aspiring to, looking wistfully upon; "ĕlĕl-hmj" or "ĕlĕl-hēmj" unripe grapes, sour grapes; "lōuk" wry mouth;

"lktsha" or "ĕlktsha" or "elk-tshai" to contract the nose, deride; "lavĕ" disorderly; — in English "laugh, look." The first character occurs from the Third dynasty to the Seventeenth (Leps. d. ii. pl. 3, iii. pl. 5). The second character occurs also under the Third dynasty (Leps. d. ii. pl. 3). A modification occurs under the . . . . dynasty (Champ. gram. 79, and text 373).

(hippopotamus signifying "ŏran" opportunity, the hour, Horap. ii. 19); "laishi" or "lŏishĕ" or "lŏiji" pretext, occasion; "lĕtshĕ" or "lĕmĕtshĕ" or "lĕmēētshĕ" champion, powerful; "lĕtshj" to shake, make to tremble. — The character occurs under the Twelfth dynasty (Leps. d. ii. pl. 143).

The *hippopotamus* is known to inhabit the lakes and rivers of Equatorial Africa; abounding in the Upper Nile, but seldom — at the present day, descending into Egypt proper. Menes the first king of Egypt, was killed by a hippopotamus (Maneth.). The animal is figured apart from the hieroglyphic writing under the Sixth dynasty (Leps. d. ii. pl. 77): and through Egypt became known to the Greeks and Romans. A living hippopotamus was first brought to Rome by M. Scaurus (Plin. viii. 40).



"lŏigi" noose; "lĕlōu" or "lilou-tshēm" or "alŏu" child; "lajlĕj" or "lĕjlŏj" or "lŏjlĕj" weakness, binding with thongs; "latvĕs" junction, uniting, seam; — in Hebrew "lwly" loops; in colloquial English "lily" as applied to a child called for punishment. The character occurs on the Gliddon mummy-case, and from the Fourth dynasty to the Fourteenth (Leps. d. ii. pl. 2, 64, and k. pl. 15). A second form occurs under the . . . . dynasty (Burton excerpt. 34, Buns. and Birch).

"alŏj" or "alŏj" thigh; "ĕllēt" promise, vow; "ŏlk" to make oath, swear; — see Gen. xxiv. 2 and xxxii. 25; in English "allege." The character occurs from the Third dynasty to the Persian emperors (Leps. d. ii. pl. 3, and k. pl. 24 to 49).

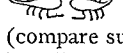
"lēl" bracelet; "lalĕ" or "lalō" or "lalŏ" or "lōōlĕ" to besmear, gild; "lalēōut" ointment, unction; "lam" or "laam" splendid, shining; "laam" soiled, dirty; "lōjt" to agglutinate, adhere, stick; "lōihĕ" or "lŏihi" mire; — in English, the colloquial phrase "to put one's foot in it." The character occurs as early as the Fourth dynasty (Leps. d. ii. pl. 23). A second form occurs under the Fourth dynasty (Leps. d. ii. pl. 15, and Champ. dict. 362).

(tongue signifying perpetual moisture of the productive Nile, Horap. i. 21); "las" or "lĕs" tongue; "lŏk" or "lĕklŏk" or "lōklĕk" soft, softness; "lĕk" moist, green; "lēk" moist, tender; "lŏk" to grow green, begin to flourish; "lejh" or "lŏjh" or "lŏjt" or "lŏshh" to lap or lick; "lĕmhē" free; "lapt" half a thing; "laau" something, nothing; — in English, the phrase "green as a leek." The character occurs as early as the Fourth dynasty, also in the Book of the Dead (Leps. d. ii. pl. 98). A second and more simple form occurs from the Eighteenth dynasty to the Ptolemies (Leps. k. pl. 28 to 60).

(tongue and "uphaimōn" bruised or blood-shot eye, signifying to relate, tell, Horap. i. 27); "lunōs" red portion of the eye, white of the eye; "saji" a speech, to narrate, "lasaji" tonguey, loquacious; "laōuai" such a one; "mlah" or "mlag" or "lag" dispute, wrangling; "llēv" or "llēf" scurrility; "lai" or "dlai" or "lōulai" to utter the war-shout; "lōl" war-shout, cry of victory; "tlēl" exultation; — in Greek "lalia" talk, "alalagma" war-shout. The character occurs in the Book of the Dead, also under the . . . . dynasty (Rosellin. mon. stor. ii. pl. 1). A second form occurs from the Seventeenth dynasty to the end of hieroglyphic writing (Leps. d. iii. pl. 203, and k. pl. 23 to 66).

"tshŏl" a bundle; "lahm" or "lahmĕ" kneading-trough, to subject, break; "lĕlkĕmĕ" a blow, wound; "lŏht" to beat; "lōf" to break; "las" or "lĕs" or "lŏs" to bruise; "slōshlĕs" or "slĕshlŏsh" or "slĕjlĕj" to polish, levigate; "alĭki" or "liki" culpable, blamed; "lŏili" buttocks, severe reprover, uncle; "lŏili" to bear, endure; "lōuj" or "lōj" or "lō" or "la" to cease, leave off; — in vulgar English "lick" to flog. The character occurs under the . . . . dynasty (Champ.).

"vini" crucible: "tlil" portable oven; "lavēs" or "liji" cooking pot or pan; "lĕvēs" a caldron; "halikin" or "lakĕnt" frying-pan; "sĕlhō" or "slhō" warm; "laplĕp" ebullition; "lōvtsh" or "lōptsh" or "lŏvtsh" or "lŏj" to burn; "la" injustice. — The character occurs on the Gliddon mummy-case, and from the Fourth dynasty to the Twenty-sixth (Leps. d. ii. pl. 23, iii. pl. 266). A second form occurs under the Fourth dynasty (Leps. d. pl. 21). A third form occurs from the Nineteenth dynasty to the Persian conquest (Leps. k. pl. 35 to 49).



(crocodile and scorpion signifying matched by your enemy; the scorpion further signifying destroyed slowly, Horap. ii. 33); "shlē" (or "slē, Edw.) scorpion; "sla" summer (compare sun in constellation Scorpio); "shlĕmlŏm" or shlōmlĕm" or "shlmlŏm" to grapple, come in collision; "shl" armed warrior, to be destroyed; "shilk" pierced by an arrow; "shlak" punishment, torture; — in Arabic . . . . scorpion; in English "sulk" (stinging yourself), "slay." — The character occurs under the Twelfth dynasty (Leps. d. ii. pl. 121, and Champ. dict. 108 and 170).

("pĕlekăna" signifying "anōē" and "aphrōna" imbecile, silly, Horap. i. 51); "ĕlshŏv" or "ĕljŏv" or "ĕljōv" heron, ("laupō" white bird, ms. Par.); "lŏf" to become insipid; "lŏtĕs" idiot; "hĕlōli" silly; "shōl" lie, false; "la" slander, slanderous; "lŏsh" or "kŏlp" or "kōlp" or "shĕl" or "shŏl" steal; — in Hebrew "ĕwllĕ" foolishness; in English "folly." The character occurs as early as the . . . . dynasty (Champ. dict. 162). A suffering sea-bird was pointed out to me by a Mocha Arab as having "swallowed too large a fish."

The *small white heron*, Ardea . . . . , frequent in Egypt, was observed by myself to differ from the usual habits of its tribe in walking about picking up substances at a distance from the river-brink.

"laōu" or "lavō" ship's sail; "lēs" extremity. — The character occurs from the Fourth dynasty to the Twenty-sixth (Leps. d. ii. pl. 22 and iii. pl. 260). A second form occurs in the Book of the Dead, also under the Twelfth dynasty (Leps. d. ii. pl. 126).

m, its pervading meaning reform.

"makrō" or "mēran" bath-tub, bathing place, fish-pool; "mōumĕ" or "mŏumi" fountain or well; "mau" or "mŏŏu" or "mōu" or "mōōu" water; "mtōn" or "ĕmtōn" or "ĕmtan" quiet; "ĕmai" innocent; — in Hebrew "my" water, the thirteenth letter "mym" waters; in Abyssinian the letter "mai" water; in Greek the letter "mu." The character occurs from the Third dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 3, and k. pl. 23 to 66).

"lēmēn" or "lumēn" likeness, image; "mthō" face; "mĕ" or "mĕĕi" or "thmēi" truth; "mnē" or "mau" or "ĕmau" there; — in Hebrew "amd" truth; in English, the phrase "truth in the bottom of a well." The character occurs under the . . . . dynasty, and continues in use until the end of hieroglyphic writing (Champ. mon. iii. pl. 270, and Leps. k. pl. 66). A second form occurs under the Twenty-second dynasty (Leps. k. pl. 44, 45, and Champ. dict. 269).

"mĕttshai" sunrise: "mŏŏui" or "mōuĕ" splendour, effulgence; "mēn" or "mōnt" to continue; "ĕfmēn" always; "mēn-ĕvōl" or "mōun-ĕvōl" eternal. — The character occurs from the Eighteenth dynasty to the end of hieroglyphic writing (Leps. d. iii. pl. 73, and k. pl. 53 to 60). A second form occurs under the . . . . dynasty, and continues in use under the Ptolemies (Champ. gram. 377, and Leps. k. pl. 53 to 62).

(mole "aspalaka" signifying a blind man, the animal having no eyes, Horap. ii. 59); "amiliŏn" mole; "mpa" or "ĕmpa" or "mpatĕ" before. — The character occurs from the Third dynasty to the Ptolemies (Leps. d. ii. pl. 3, 25, and k. pl. 23 to 57). A reverse or receding form occurs under the Fifth dynasty (Leps. d. ii. pl. 58).

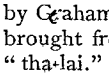
hand-plough or hoe; "ĕmĕ" plough; "mĕtsh" or "matsh" to touch, strike; "ĕmi" or "ĕimi" or "ĕimĕ" or "imi" intellect, to understand, perceive; "rēm" perceiving. — The character occurs from the Third dynasty and the Book of the Dead to the end of hieroglyphic writing (Leps. d. ii. pl. 3, and k. pl. 7 to 66).

"ĕrman" pomegranate; "ĕrmĕ" or "ĕrmĕiĕ" or "ĕrmŏŏui" or "rmĕiĕ" or "rmĕiŏuĕ" tears; "rimĕ" or "rimi" or "limi" mourning; "rŏmĕ" or "rŏmi" or "lŏmi" a man. — The character occurs as early at least as the . . . . dynasty (Champ. dict. 216). A second form occurs under the Eighteenth dynasty (Champ. gram. 389 and dict. 71, Leps. d. iii. pl. 79). A third form occurs under the Nineteenth dynasty (Leps. d. iii. pl. 136).

Punica granatum of the Southern border of the Caspian. Called in Britain *pomegranate*, in France "grenade" (Nugent), in Germany "granat" (Grieb), in Italy "granato" (Lenz), in Greece "rōa" or "rōthia" (Sibth.), in Egypt and Yemen "rumman" (Forsk.) and cultivated at the time of the invention of writing: — the fruit is figured under the Fourth or Fifth dynasty (pointed out to me at Gizeh by Mr. Bonomi); the tree with fruit and foliage, under the Seventeenth (Rosellin. ii. pl. 68): the "rmwn" was longed for by the Israelites in the Desert (Numb. xx. 5), is mentioned also in Canticles iv. 3; and P. granatum was observed in the gardens of Egypt by Forskal, and Delile. Farther North, the "rōa" or "rōia" is mentioned by Homer od. vii. 115, Theophrastus, and Dioscorides; the "granatum" or "malum punicum," the best growing around Carthage, by Columella, and Pliny xiv. 19; P. granatum is termed "p. sylvestris" by Tournefort inst. 636; was observed by Sibthorp, Chaubard, and Fraas, frequent both cultivated and seemingly wild from the Peloponnesus throughout the Greek islands; is known to occur also under cultivation and seemingly wild in Italy, Algeria, and throughout Southern Europe (Munby, A. Dec., and Lenz). Eastward from Greece, is mentioned in the Zendâvesta (Reynier econ. arab. p 474), is called in Turkish "nar" (Forsk.), in Persian and Hindustanee "anar" (Ainsl., and D'roz.), and according to Burnes trav. ii. 126 grows in whole woods in Mazenderan; was observed by Bunge p. 28 under cultivation in Northern China; by Kaempfer, and Thunberg, in Japan also, and called "dsjakurgo" or usually "sakuro." Southward and Eastward from Egypt, is known in Abyssinia (A. Rich.); was observed by myself under cultivation on Zanzibar, in Yemen by Forskal, but the best or only good pomegranates I have met with

were at Muscat: is called in Sanscrit and Bengalee "darimba" (Roxb., and D'roz.), was observed by Graham "common in gardens" around Bombay, but the fruit "of very inferior quality to that brought from Muscat and Persia": is enumerated by Mason as "exotic" in Burmah and called "tha-lai." By European colonists, was carried to Northeast America, where it continues in our greenhouses cultivated for its ornamental flowers. The root in the East is employed against tape-worm, and medicinal uses of other parts of the plant are enumerated by Lindley.

"mōu" mortal; "mŏōut" or "maōu" to die; "maōut" dead; "mhau" or "mhaau" or "mhaauĕ" or "ĕmhau" tomb; "miōlŏn" or "mēōlŏn" body inclosed; "mĕui" or "mĕĕuĕ" memory; — in Greek "mnēia" or "mnēmē" memory, "mnēma" memorial, tomb. The character occurs from the Fourth dynasty to the Ptolemies (Leps. d. ii. pl. 96, and Rosetta stone). For the hieroglyphic character of the pyramid or great tomb, see Ouĕnĕphēs.


(bull signifying sobriety with manliness, Horap. i. 44); "masi" or "mĕsi" bull; "amahi" or "ĕmahi" might; "nōmd" or "nōmtĕ" strength; "mŏd" or "mad" or "mŏd" or "mŏut" neck, sinew; "mĕtattshili" fortitude, manliness; — in English "mad." The character occurs from the Third dynasty and the Book of the Dead to the end of hieroglyphic writing (Leps. d. ii. pl. 3, and k. pl. 24 to 65).

"mĕtrĕftshi" measurement; "mahi" or "mpai" flax; "mōjh" or "mōujh" or "mōujg" belt; "mōur" or "mrrĕ" or "mĕrrĕ" band, chain; "mŏui" or "tshimĕ" series; — in Hebrew "mthĕ" extension, length, measurement; in Sanscrit "ma" or "mad" to measure; in Zend "meete" or "mate"; in Greek "mĕtrŏn" and "mĕthimnŏs"; in Latin "metior" and "meta"; in Gothic "mitan"; in Anglo-Saxon "metan"; in German "messen." The character occurs under the .... dynasty (Rosellin. mon. cul. 62).

"mahĕ" or "mahi" or "mah" a cubit measure; "mēri" or "mĕri" or "mĕĕrĕ" or "amĕri" noon, a day; — in Greek "ēmĕra" day. The character occurs from prior to the Tenth dynasty to the Ptolemies (Leps. d. ii. pl. 127, iv. pl. 27, and k. pl. 7).

"mĕnt" bushel, a measure; "mōuki" repository, vase; "mōuh" or "mĕh" or "mah" full, to fill. — The character occurs under the .... dynasty (Leps. d. ii. pl. 103).

"mamrana" great tortoises, leaves of a book; "mamad" mystery; "mē" or "mĕtsh" or "mĕtshĕ" or "mĕtsht" to go around, seek, explore; "ma" where; "sŏtshm" or "sŏtshĕm" to be ardent; "mōtshi" or "mŏit" the way; "mŏh" or "mōuh" to burn, light up with flame. — The character occurs under the Nineteenth dynasty (Leps. d. iii. pl. 171).

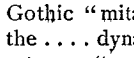
The soft-shelled tortoise of the Nile, *Trionyx* ...., is described as of large size, attacking and devouring the young of the crocodile, — and is called "tyrseh" (Clot-Bey ii. 92).

"ōuamtĕ" or "ōuōōntĕ" or "mĕshtōi" or "shŏm" turret, fortress; "ma" or "mai" or "mĕ" the place; "amōnē" habitation; "amōuni" hidden things (compare Plut. is. & osir. 9); "amōni" to contain, inclose, prohibit; "mēr" or "ĕmnai" or "mnai" here. — The character occurs as early as the Fourth dynasty (Leps. d. ii. pl. 30). A second form occurs from the Fourth dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 30, and k. pl. 5 to 66).

"mōus" or "mōusĕr" or "mōusĕr" thongs; "mōni" or "mōōnĕ" or "amōni" or "amōōnĕ" to reign, act as shepherd; "mjihō" having no respect of persons; "mas" young one; "mōōnĕ" pupil, nursling; "mŏni" arrived; "amĕ" or amōu" or "amĕitn" or "amōitĕn" or "amŏini" come; "amŏi" come to me; "mōud" or "tahm" or "thahĕm" to call, be called; "mōurk" to vanish, bring to an end; — in Latin "moneo" admonish, "monitor." The character occurs on the Gliddon mummy-case, and from the Third dynasty to the Ptolemies (Leps. d. ii. pl. 3, and k. pl. 7 to 59).

n, its pervading meaning religion.

"mankanŏn" potter's wheel; "dsĕnd" to found; "sēnd" or "sĕnd" or "sĕntĕ" basis, foundation; "snt" or "sĕnt" or "sōnt" or "sŏnt" to create; "sēnd" or "sĕntĕ" or "snau" two. — The character occurs as early as the .... dynasty (Champ. dict. 34). A second form occurs under the .... dynasty (Champ. mon. 20).


(bundle of paper-reed, the primitive aliment, signifying ancient origin; words and leaves, or a sealed book, signifying the highest antiquity, Horap. i. 30 and ii. 25); "nas" or "nĕs" ancient; "nashnĕhi" or "nĕvahi" length of days, long continuing; "ĕhi" or "ĕnĕh" an age, eternity, "nĕnĕh" or "ĕinēh" eternal; "ōun" or "ōuōn" to be. — The first character occurs under the .... dynasty (Champ. gram. 77, and Rosell. m. civ. 35). The second character occurs from the Third dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 3, and k. pl. 11 to 63. See Papyrus antiquorum).

(snake with a house in the middle, signifying "vasilĕa kōsmōkratōra" ruler of the world, Horap. i. 58); "nshi" the; "nitshd" elder, greater; "nōulĕ" leader; "naa" or "naaa" or "nash" or "nōsh" or "nōj" great; "nĕv" lord; "nĕv-ē" lord of the house; "nou" to intend. — The character occurs from the Seventeenth dynasty to the end of hieroglyphic writing (Leps. k. pl. 25 to 67). The united crowns of Upper and Lower Egypt are worn by a hawk under

the Third dynasty, and continue as a separate hieroglyphic character d. ii. pl. 2, and Champ. dict. 281). The crown of Upper Egypt character from the Tenth dynasty to the end of hieroglyphic writing on the Rosetta stone (Leps. occurs as a hieroglyphic (Leps. k. pl. 10 to 67).

("nōun" inundation of the Nile, Horap. i. 21); "nōun" abyss, depths of the sea; "nôun" or "nōn" the deep; "nōn" cessation, rest; "nōni" to be cast out; "nĕj" or "nēj" or "nōj" or "nōuj" or "nōujĕ" to be cast out, recumbent. — The character occurs on the Gliddon mummy-case, and from the Third dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 2, and k. pl. 5 to 67). The form of the Phœnician letter "nwn" appears to be an abbreviation of this character; as also the forms and of the Greek letter "nu"; the last, and latest form becoming the of the Romans and the West.

("narkēn" torpedo or electric fish signifying saving many in the ocean; for seeing a multitude of fishes unable to swim, it succours and saves them, Horap. ii. 99); "mōnmĕn" concussion, earthquake, tempest; "nĕh" or "nōuhĕ" or "nōĕin" to shake, cause to vibrate; "nŏini" stupefaction, tetanus; "nōtshs" striker; "nōutshs" benumbed; "nĕvi" or "nĕĕvĕ" or "nēvĕ" or "nēvi" or "nēēvĕ" to swim; "nēvi" ship, sailor; "nĕf" or "nĕĕf" or "nĕĕv" or "nēēv" sailor; "na" or "nai" or "nĕĕi" compassion, to pity; "naēt" compassionate; "natshtĕ" or "natshd" helper, deliverer; "ĕnatshĕ" or "natshĕ" many; "nĕh" or "nahĕm" or "nōhĕm" or "nōuhm" or "tanhĕ" or "tanhō" or "tangō" saving, to save, rescue; — in Hebrew the fourteenth letter "nwn" meaning fish; in Greek "naus" and "nauphi" ship, "nautēs" sailor; in Latin "nauta" and "navita" sailor, "navis" ship; in English "navy." The character occurs under the Third dynasty (Leps. d. ii. pl. 3); and seems to agree best with *Silurus electricus* of the Nile.

"nōh" or "nōuh" or "nŏōud" rope; "nōhi" rope-maker; "nahrn" or "nĕm" to; "nai" or "nēi" to me; "niats" attention, expectation, hope; "nahtĕ" to hope; "nôh" eyelids; "nahtĕ" or "nahd" or "tanhĕt" or "tanhit" or "tanhōut" to believe, trust; "nahd" faith; — in English the phrase "To hang on by the eyelids." The character occurs from the Third dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 5, and k. pl. 7 and 44 to 64).

"hŏn" or "hōnhĕn" decree, command; "hŏn" or "hĕnhŏn" or "hĕnhĕn" to command, bid; "hōn" or "hŏn" or "hŏnt" to draw near. — The character occurs under the . . . . dynasty (Champ. dict. 112). A second form occurs under the Twenty-sixth dynasty ("coffin of queen of Amasis," Buns. and Birch).

"n" or "na" or "ĕn" to conduct, bring, lead; "ini" or "ĕinĕ" or "ĕini" to bring, lay hands upon; "ĕinĕ" manicles; "nōui" or "nēu" or "nēōu" to come; "na" to go, "na" belonging to; "ntēi" or "nōui" mine; "ntak" or "nōuk" thine; "nĕ" or "nēk" to thee. — The character occurs from the Third dynasty to the Nineteenth (Leps. d. ii. pl. 3, and k. pl. 10 to 32).

"nau" a thing seen in a dream, a vision, a form or figure; "nkōt" sleep; "nĕu" to see; "ĕnuĕ" form; "nōrj" or "nĕhtshlf" or "nĕhtshlhf" or "nĕh-tshlh" horror, shuddering, to dread; "nōtshp" or "nôutshp" to be threatened, terrified; "nŏd" perspiration; "nĕhsĕ" or "nĕhsi" to awaken. — The character occurs from the Twentieth dynasty to the end of hieroglyphic writing (Leps. d. iii. pl. 232 to iv. pl. 58).

"ōuōtn" or "ōuŏtn ĕvōl" or "ōuŏtĕn ĕvōl" spondist or libation-pitcher, libation; "nĕh" oil; "nau" the hour; "tĕnōu" or "nōu" now; — in Greek "spĕndhŏ" to pour out a libation, "spōnthē" libation, "spōnthulōs" vertebra or joint of back-bone, "nun," in Latin "nunc," in English "now." The character occurs on the Gliddon mummy-case, and from the Eleventh dynasty in successive modifications to the Ptolemies (Leps. k. pl. 10 to 59). A second form occurs under the . . . . dynasty ("mummy at Leeds," Buns. and Birch). Libations were made by Jacob (Gen. xxviii. 18 and xxxv. 14); and were enjoined by Moses (Ex. xxix. 40).

"navi" or "naui" a spear; "navi" or "navĕ" or "nōvi" or "nōvĕ" sin; "nĕh" or "laĕin" sharp edge or point; "nōuj" or "nnōuj" or "nōji" falsehood, thieving. — The character occurs from the Third dynasty to the Seventeenth (Leps. d. ii. pl. 3 and 30, and iii. pl. 8).

"nēvĕ" loins; "natshtĕ" energy; "natsht" or "ntshōt" vehement; "ĕhnĕ" or "nhĕ" will; "nōmd" or "nōmtĕ" strength; "nôĕitsh" or "nŏitsh" spleen; "n" or "an" or "ĕn" or "nnĕ" or "ĕnnĕ" or mmōn" or "ĕmmōn" or "ĕmmĕn" no; "nĕh" to renounce; — in Hebrew "nwa" to refuse; in Greek "nĕ" or "nē," in Latin "ne" or "non," in English "nay" or "no" The character occurs under the . . . . dynasty, and continues in use until the end of hieroglyphic writing (Champ. mon. iv. pl. 314, and Leps. k. pl. 66).

"nĕiaau" or "niau" or "niaau" flax, linen, tow; "nōulix" veil, covering; "nōriōn" or "nariōn" garter; "tshĕntŏ" linen, fine linen; "tshtlhēn" or "tshtēn" tunic; "anatsh" or "anētsh" vow, oath; — in English "knowledge." The character occurs from the Third dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 2, and k. pl. 63). In the hieroglyphic writing and

elsewhere on the monuments, white garments are exclusively worn by the Egyptians, and distinguish them from foreigners. The Gliddon mummy-case is composed of layers of linen; the whole process of spinning and weaving is figured under the Twelfth dynasty at Benihassan; and mummies (with the possible exception of some of the most recent) are found inwrapped in white linen. "Atwn" or fine linen, is mentioned in Proverbs vii. 16; has been identified with the "ōthṓnē" of Homer il. iii. 141, Aristophanes acharn. 1176, Luke xxiv. 12, and Acts x. 11; and already in the days of Pliny, the linen manufacture had extended down the Rhine to the Batavi or Hollanders. Eastward in Hindustan, where flax is cultivated for its capsules and seeds only, linen cloth is nevertheless mentioned in the Institutes of Menu (Deslongchamps translation): and farther East in Burmah, where the plant is unknown, "linen garments" are enumerated as "among those which priests are permitted to wear" (Mason v. p. 517).

Linum usitatissimum of the Uralian plains. Called in France "lin" and the prepared fibre "filasse" (Nugent), in Holland "vlas," in Britain *flax* or *line* or *linseed* (Prior), in Germany "flachs" or "lein" (Grieb), in Slavonian "flachs" (A. Dec.), in Bohemian "len" (Bauhin), in Celtic "llin" signifying a thread (Theïs), in Italy "lino" (Lenz), in Greece "linari" (Sibth.), in Egypt "kittan," but the oil from its seeds "zeyt har" (Del.): cultivated in Egypt at the time of the invention of writing, — and fragments found by Unger in a brick of the pyramid at Dashur belonging to the Twelfth dynasty (acad. Viem., and journ. sc. Lond.); the "hwr" is mentioned in Isaiah xix. 9, and Esther i. 6 and viii. 15; and L. usitatissimum was observed by Forskal, Delile, Clot-Bey, and myself, extensively cultivated for cloth-making in Egypt. Farther North, the "linōn" is mentioned by Homer il. ii. 529 and xviii. 570, Aeschylus suppl. 127, Herodotus, Theophrastus, and Dioscorides; the "linum" by Plautus, Cicero, Virgil, Columella, and Pliny: L. usitatissimum is termed "l. sativum" by Tournefort inst. 339; was observed by Sibthorp, Chaubard, and Fraas, under cultivation from the Sperchius throughout Greece; by Lenz, in Italy; is known to be cultivated throughout middle Europe as far as Britain (Curt. lond. v. pl. 22); and according to Ledebour, grows as if wild on the plains North of the Black Sea and Caspian. Southward and Eastward from Egypt, is called in Abyssinia "telba" or "entatich," and is cultivated exclusively for the seeds which are roasted and eaten (A. Rich. fl. abyss. i. p. 52): is called in Sanscrit "ouma" or "matousi" or "atasi" (Pidd.), in Bengalee "shan" or "koshta," in Hindustanee "san" or "atasi" or "tisi" (D'roz.), in the environs of Bombay "ulsee" or "jowas-ulsee," the "unripe capsules" used as food by the natives (Grah., and Gibs.), was observed by myself under cultivation on the Deccan, but in general throughout Hindustan is cultivated solely for the oil yielded by the seeds (Roxb., and Royle ill. p. 82). By European colonists, was carried to Northeast America, where it continues under cultivation and is sometimes found springing up spontaneously; was also carried to the Mauritius Islands (Boj.). Is enumerated by Lindley among medicinal plants, on account of the emollient properties of the infusion, the meal of the seeds used for cataplasms, and the oil with lime-water applied to burns.

rosary; "kunari" necklace; "vnŏni" or "kĕvnŏni" gem. — The character occurs under the Third dynasty (Leps. d. ii. pl. 4, and k. pl. 6). A second form occurs under the Fourth dynasty (Leps. d. ii. pl. 96, and Champ. dict. 235). Strings of beads, possibly for rosaries, are brought by foreign delegates in the Tribute-procession to Tetmes III.

The *rosary* or string of prayer-beads as early perhaps as the invention of writing, — and I have seen rosaries worn not by Catholics only, but by Muslims and Oriental Jews.

(stork signifying father-loving, the bird never separating from its fathers unto extreme old age, Horap. ii. 55); "nōuri" stork; "nsa" after, "nsǒōu" henceforth; "ĕnhōt" or "nhōt" or "nhōtĕ" or "nhōōtĕ" faithful; "nōunĕ" or "nōuni" root, to take root. — The character occurs as early as the Fourth dynasty (Leps. d. ii. pl. 19).

The *stork*, Ciconia, inhabits Egypt at least during the winter season; — when the bird was seen there by myself. Among the Greeks, the "pĕlargōs" is mentioned by Plato alc. i. 135, and others. Pliny x. 31 states, that the "ciconiae" leave Italy annually, but whither they go or whence they come is unknown; that they return to the same nests and cherish the old age of their parents, "nidos eosdem repetunt genetricum senectam invicem educant."

(cicada signifying initiated and devoted to sacred things, for it yields music from its back, Horap. ii. 52); "nahvi" or "nahv" or "nĕhvĕ" yoke, neck; "nahv" part of the back; "nōtĕm" sweet sounding; "nōtm" conversion; "nōtm" musician attracting others to the dance; "sĕnsĕn" to sound, resound; — in Greek "nŏtōs" back; in English "note" (in music). The character occurs from the Fourth dynasty to the Seventeenth (Leps. d. ii. pl. 34 to iii. pl. 12). A second form occurs under the Eighteenth dynasty (Leps. d. iii. pl. 38).

(heart pendent from the fauces "pharuggōs," signifying mouth of a good man, Horap. ii. 4); "anai" beauty; "nĕsŏ" or "ĕnasŏ" or "ĕnĕsĕ" or "ĕnĕshŏ" beautiful, pleasing; "nanĕ" or "nanŏu" or "ĕnanōu" good; "nōf" joy, "nōufi" good, useful; "nōērōs" prudent, wise; "naĕiat"

or "naiat" or "naiĕt" blessed, happy; "nŏ" model; — in Hebrew "nawĕ" decorous, beautiful; in English, the phrase "carries his heart in his mouth." The character occurs as early as the Sixth dynasty (Leps. d. ii. pl. 112). A second form occurs as early as the Tenth dynasty (Leps. d. ii. pl. 146). A third form occurs from the Tenth dynasty to the Persian emperors (Leps. d. iii. pl. 35 to 246, and k. pl. 11 and 14 to 49).

guitar: "nafli" or "nōfrĕ" or "nōvrĕ" or "nōufrĕ" or "nōfri" profit, utility, useful; "tntn" or "tntŏn" or "tĕntŏn" to resemble, imitate; "ĕinĕ" or "ōni" or "inĕ" like, similar; "ĕini" imitator, mimic; "ini" likeness, image; "ĕn" ape; "nōuōshĕ" or "nĕat" limit, extremity. — The character occurs from the Third dynasty to the end of hieroglyphic writing (Leps. k. pl. 5 to 61). A second form occurs from the Sixth dynasty to the Twentieth (Leps. k. pl. 5 and 6 to 41).

x or ks, its pervading meaning example.

(lion eating an ape to recover health, Horap. ii. 72); "thēkōs" male ape; "xōpina" suddenly, unexpectedly; "mōkhs" troubles, pain, foes; "tkas" grief. — The character occurs from the Fourth dynasty and the Book of the Dead to the end of hieroglyphic writing (coffin of king Menkera, Leps. d. ii. pl. 2, and k. pl. 10 to 63). That the cross-mark of rejection is the origin of the twenty-second Greek letter "hi" or further appears from the Greek word "hiazŏ," to mark with a cross spurious coins and writings. At the Western extreme of the Mediterranean, the Greek pronunciation of the letter continues in the Spanish alphabet: while in Italy in the Latin alphabet, though corresponding in position retains its normal sound "ks," as also in Northern Europe.

(pregnant bear signifying rude and not yet shaped; for the animal brings forth a mass like a clot of blood, and holding this between her thighs, licks it with her tongue into shape, Horap. ii. 79); "arx" a bear; — in English, the phrase "unlicked cub." The character occurs under the Third dynasty (Leps. d. ii. pl. 3, bronze situlus Brit. mus., Buns. and Birch).

The *Syrian bear*, Ursus Syriacus, known therefore to the Egyptians at the time of the invention of writing; although the animal does not appear to have ever inhabited Egypt, — and in fact, Pliny viii. 83 states, that bears do not occur in Africa. Apart from the hieroglyphic writing, a bear led by Northern delegates is figured in a tribute-procession under the Eighteenth dynasty. In neighbouring Palestine, the "thwb" killed by David (1 Sam. xvii. 34 to 37) is admitted to be a bear; and the "thwb" is also mentioned in 2 Sam. xvii. 8, Prov. xvii. 12, 2 K. ii. 24, and Hosea xiii. 8. The above account of the parturition of the bear transferred to Northern species, is repeated by Pliny respecting the "arktōs" of the Greeks and "ursus" of the Romans (U. arctos).

"akĕs" axe; "xala" vine-plantation; "kĕks" bark; "kēks" scales or plates; — in Greek "axinē," in Latin "ascia," in English "axe." The character occurs as early as the Fifth dynasty (Leps. d. ii. pl. 63). That the implement represented is really an axe, appears from its use in the hands of a carpenter under the Seventh dynasty at Sauiet el Meitin (Leps. d. ii. pl. 108).

"laxĕ" segment, angle; "ĕlks" angle, corner. — The character occurs under the Third dynasty (Leps. k. 5). A second form occurs from the Eighteenth dynasty to the Twenty-sixth (Leps. d. iii. pl. 69, 167, and 232 to 276). A third form occurs under the Twenty-sixth dynasty (Leps. d. iii. pl 276).

"kĕrax" pick-axe; "lōux" or "lōx" or "lōks" or "lŏks" to bite (as a serpent), prick, fix. The character has been already noticed as presenting evidence of the *Stone period* having existed in Egypt, — and occurs on the Gliddon mummy-case. The metallic adze occurs under the Fourth and Fifth dynasties; and apart from hieroglyphic writing, is used by a carpenter under the Seventh dynasty at Sauiet el Meitin (Leps. d. ii. pl. 3, 34, 49, and 108). A fourth form occurs under the Twelfth dynasty (Leps. d. ii. pl. 131). A fifth form occurs from the Fifth dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 44, and k. pl. 23 to 62): an intermediate form is found in the large adze held with both hands by a carpenter under the Seventh dynasty at Sauiet el Meitin.

"smŏt" or "smōd" similitude, example; "sōōtĕ" or "sōtĕ" or "sad" arrow; "x" or "sĕ" sixty? — The character occurs on the Gliddon mummy-case, and from the Third dynasty to the Ptolemies (Leps. d. ii. pl. 3, 24, iii. pl. 139, 251, and iv. pl. 4). The bundle of arrows may have given rise to the form of the Greek letter "ksi"; and the correspondence with one form of the Phoenician "smk," seems to indicate that the Phoenician letter once had the sound of ks: the letters agree in position, numerical value of sixty, and confirmation is found in the above Egyptian name. The facility with which ks is converted into S, is illustrated in English by the word "example" changed into "sample."

"shiks" handful of wool or tow on distaff. — The character occurs as early as the Fourth dynasty (Leps. d. ii. pl. 97).

"sad" to spin or twist thread; "sōtĕ" thread. — The first character occurs under the Fourth dynasty; the second, under the Fourth or Fifth (Leps. d. ii. pl. 10 and 83).

"jaks" to border or fringe; "jĕkas" or "jĕkĕĕs" so that; "xĕlsōl" or "sĕlsŏl" to ornament, adorn; "sĕlsŏl" or "sĕlsōl" or "sĕlsĕl" to be comforted; "ōuxas" consolation. — The first character occurs in the Book of the Dead xxxvi. 99. 11. The second character occurs under the . . . . dynasty (Champ. dict. 18).

"xōur" ring; "kōrks" ring, chain; "askis" fetter; "xalŏs" timid; "thax" or "thōks" or "thōux" to pierce, fix firmly in. — The character occurs as early as the Fifth dynasty (Leps. d. ii. pl. 66 and 79).

"xōmē" or "xōnē" dish, platter; "xiraks" barley-gruel; "tĕks" to cook, add into; "tshlŏx" a spit or pole; "lix" secret place. — The character occurs from the Third dynasty to the Ptolemies (Leps. d. ii. pl. 3, and k. pl. 7 to 56). A second form occurs under the Twelfth dynasty (pyramid at Dashour, Vyse iii.).

o, its pervading meaning open; the exclamation o! or oh!, uttered on enlightenment.

"sŏōuhĕ" or "sŏōuhi" egg, "sŏōuhĕ" probation; "ŏŏ" or "ŏŏs" to conceive; "ŏ" or "ō" or "ōi" to be, "dō" or "dōi" I am; "ŏnh" or "ŏnah" or "ōnh" or "ŏng" to live; "ōrj" inclosed; "ōuŏh" or "ōuŏŏh" to cover, dwell; "ōnh" habitation; "ōrf" or "ōrv" or "ōrĕv" or "ŏrĕv" to guard; "ŏsa" contempt; "ōvtsh" or "ōptsh" to neglect, contemn; "ōŏp" seclusion; — in Greek "ŏōn," in Latin "ovum," egg. The character occurs from the Seventeenth dynasty to the end of hieroglyphic writing (Leps. d. iii. pl. 25, and k. pl. 25 to 67).

"ōuŏtsh" interval of time or space; "hrō" or "krō" beach, shore; "ōuōstn" or "ōuŏtshs" breadth, to dilate; "phŏji" or "phŏg" or "pōōh" or "ōuŏtsh" fissure, to burst, be cloven; "ouŏtĕn" or "ōuōtvĕ" hole; "ōuŏt" or "ŏuŏtan" or "ōuōtĕn" to perforate, go through; "ōntsh" to make an end, finish; "ōuŏ" to evacuate. — The character occurs under the Eighteenth dynasty (sarcoph. of king Her, Champ. dict. 449, tomb Brit. mus., Buns. and Birch).

(hare "lagōōn" signifying "anŏixin" act of opening; for the animal has its eyes always open, Horap. i. 26); "ōuōn" or "ōuŏn" to open, "ōuŏn" act of opening. — The character occurs from the Third dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 3, and k. pl. 5 to 62).

The *hare*, Lepus timidus, is remarkable among small defenceless quadrupeds for avoiding concealment; passing its whole life on the open plain. Is enumerated by Clot-Bey as called "arneb" in Egypt, and differing "by the colour of its fur and length of its ears and hind feet" from the hare of Europe.

(eaglet signifying roundish "kuklōēthōn" and producing males, Horap. ii. 2); "sŏōuhi" crown of the head; "ōlk" gibbous or convex, "ŏlk" to be incurved, bowed down; "ōuōj" whole, safe; "ōuŏtsht" incurving, adoration, to adore; "ŏtsh" to vow, invoke, promise; "ōuŏtsh" or "ŏtsh" voluntary; "ōrf" religious; "jŏ" hymn or song, "jŏ" to pipe or sing. — The character occurs under the Fourth dynasty, also in the Book of the Dead, and continues in use under the Twenty-ninth (Leps. d. ii. pl. 28, and k. pl. 29 to 50).

(the sun called "ŏrōs" by the Egyptians, because it rules the hours, Horap. i. 17); "rĕ" or "rē" sun; "ōunōōuĕ" or "ōunŏōuĕ" hours; "tēōui" in the morning; "ōuōĕin" light; "hōōu" day; "hō" or "thō" aspect; "ŏ!" o! or oh!; — in Hebrew "awr" light, to illuminate, shine; in Greek "ŏ!", in Latin "oh!", in English o! or oh!. The character occurs from the Fourth dynasty to the end of hieroglyphic writing (Leps. k. pl. 5 to 66): is also an ancient if not the original form of the sixteenth Phoenician and Hebrew letter "iyn," the Greek "ō-mikrōn," and the Latin and Western O.

"ōnh" demonstration; "ōuōnh" to shine, "ōuŏnh" to be made manifest. — The character occurs under the Third dynasty (Leps. d. ii. pl. 5).

"ōuŏt" like as, the same, "ōuŏt" crude, uncooked; "ōōutsh" or "ŏōutsh" pottage; "ōrvĕ" cake of bread; "ōĕik" or "ōōĕik" or "ŏik" bread; "jŏj" unleavened bread; "jŏj" or "shōsh" or "jĕfjŏf" or "jōfjĕf" to cook; — in English, the phrase "the egg is full of dough." The character occurs as early as the . . . . dynasty, and continues in use until the end of hieroglyphic writing (Leps. d iv. pl. 54). A second form occurs from the Nineteenth dynasty to the end of hieroglyphic writing (Leps. k. pl. 35, and 56 to 64).

Ervum lens of the Uralian plains? Called in Britain *lentil*, in France "lentille" (Nugent), in Germany "linse," in Italy "lente" (Lenz), in Illyrian "socivika," in Russian "tschetschevitza" (A. Dec.), in Greece "phakē" (Sibth.), in Egypt "a'ds" apparently from the Egyptian "ŏōutsh" pottage, the plant being called in Egyptian "artshin" or "artshan" — (transl. Ezek. iv. 9, ms. Borg., and Zoeg. p. 651): E. lens continuing abundantly cultivated in Egypt, the general use of red lentil pottage, such as caused Esau to be called Edom (Gen. xxv. 30 to 34) is very striking: the "othsh" is also mentioned in 2 Sam. xvii. 28, xxiii. 11, and Ezekiel iv. 9. Farther North, the "phakōs" or "phakē" is mentioned by Aristophanes, vesp. 821, Theophrastus, Dioscorides, and Athenaeus iv. 47; is identified in Syn. Diosc. with the "lĕntĕm" or "lĕntikōulam" of the Romans; the "lentim" or "lens" is mentioned by Cato 34, Virgil, Columella, Pliny, and the "lenticula" by Palladius vii. 3: E.

lens is described by Rivinus tetr. irr. pl. 35; is termed "l. vulgaris" by Tournefort inst. 390; was observed by Georgi in Southern Russia (Ledeb.); by Sibthorp, and Fraas, under cultivation in Greece and springing up spontaneously in cultivated ground; by Lenz, under the same circumstances in Italy; as throughout middle Europe (Pers., and Koch), where it is regarded by A. Decandolle as not indigenous. Eastward, was unknown in Hindustan at the time of Alexander's visit (Theophr. iv. 4), has no Sanscrit name (Roxb., and Pidd.); but is cultivated at present even in Bengal (A. Dec.), is called in Hindustanee "moth" or "adas" or "masur" (D'roz.), in the environs of Bombay "mussoor" (as though brought from Egypt) but continuing "commonly cultivated" (Graham). Imported lentils are occasionally sold in Northeast America, but I am not aware of any attempts at cultivation. "E. nigricans" was observed by Fraas indigenous in Greece.

(pregnant hawk signifying dismissing children on account of poverty; for the bird lays three eggs and breaks two of them, being unable from losing its nails to rear three young, Horap. ii. 94); "tshŏnĕ" or "tshŏni" or "mĕtjŏv" or "mĕthŏv" infirmity; "mĕthŏ ĕvōl" dismission; "ōuŏd" separation; "ŏlĕm" to be affected with sorrow, compunction; "ōkĕm" or "ōkm" or "ŏkĕm" or "ŏkm" sadness, having a sad countenance; "ōl" or "ŏl" or "ŏli" or "ŏlp" to take away, lead, embark; "hŏl" to depart; "ōuŏtĕv" to pass over, migrate. — The character occurs under the Fourth or Fifth dynasty (Leps. d. ii. pl. 99).

(horn of the male bullock signifying work; of the female, penalty, Horap. ii. 16 and 17); "tap" or "tōp" extremity, horn; "hŏp" horn; "hŏf" or "hŏv" work, business; "ōsĕ" or "ōsi" penalty, loss; "ŏpt" or "ōpt" to bear; — in English, "the two horns of a dilemma." The character occurs as early as the Fourth dynasty (Leps. k. pl. 7). A second form occurs under the Eighteenth and Nineteenth dynasties (Leps. d. iii. pl. 55, 144). A third form occurs under the Twenty-second dynasty (Leps. k. pl. 44).

(seven marks inclosed by two fingers signifying inexperienced, also destiny, also music, Horap. ii. 27); "ŏvia" near; "ŏp" lot, allotment, accounts, vote; "hi-ŏp" to cast lots; "han-ŏp" betrothed; — in English, "the two horns of a dilemma." The character occurs as early as the Fourth dynasty (Leps. k. pl. 7). A second form occurs under the Eighteenth dynasty; together with a third form occurs from the Nineteenth dynasty to the Ptolemies (Leps. d. iii. pl. 55). A fourth occurs from the Nineteenth dynasty to the Ptolemies (Leps. d. iii. pl. 148, and iv. pl. 13).

"ōsr" or "ōuōsr" or "vōsĕr" oar; "ōn" again; "ōuŏhm" again, to do again; "ōuōhĕ" or "ōuŏōhĕ" or "ōuōhĕ" or "ōuōhi" or "ōhi" fisher; "ŏjĕr" to hold on, persevere; "ōōrj" or "ŏrj" diligent, diligence; "ŏjĕn" unremitting; "ōms" or "ŏms" to drown; "ŏsht" or "ŏjh" suffocate; "ŏjĕv" or "ŏshv" or "ŏrtsh" or "ōrtsh" cold, to grow cold; "ŏjn" to perish; "ŏjp" or "ōuŏjp" or "ōuŏjp" destruction. — The character occurs from the Fifth dynasty to the Greek conquest (Leps. k. pl. 5 to 60): the Latin word for oar "remus," has been derived from "ramus" branch; and branches of trees similar to the above figure, were observed by myself used for rowing *rafts of earthen jars* on the Nile.

"ŏssh" plain, Desert; "kōi" plain, field; "hōi" or "hŏid" farm; "ōhi" or "ōhĕ" or "ōōhĕ" or "iōhi" or "ōuiōhi" field, flocks, cattle-fold; "sdōhĕ" or "sdŏhĕ" cultivated field; "ōuōi" or "ŏuŏi" or "ōuōiĕ" or "ōuōĕiĕ" cultivator, tiller of the soil. — The character occurs from the Fourth dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 10, and k. pl. 5 to 66).

(baboon "kunōkĕphalōn" standing with hands raised and the emblem of royalty on the head, signifying the moon rising; for both sun and moon have a share in light, Horap. i. 15); "iōh" or "ōōh" or "ōōu" moon; "ōnk" to rise, increase. — The character occurs as early as the . . . . dynasty (fig. Brit. mus., Buns. and Birch).

"ōgiōn" or "pōgiōn" œsophagus; "tshōuŏvĕ" or "tshvŏvi" throat; "ōmk" or "ŏmk" to swallow; "ōji" limit, end. — The two characters occur as early as the . . . . dynasty, also in the Book of the Dead and on a sarcophagus now in the British museum (Buns. and Birch).

p, its pervading meaning practical. The interjection poh!

"pashĕ" segment, table; "pinaz" or "vinaj" dish, board; "pĕri" victuals, food; "pahs" wild game; "patsh" a hunt; "pisĕ" or "pĕs" to cook; — in Greek "pēra" wallet or provision-pouch, "pinax" a table or board; in Latin "paro" to provide. The character occurs from the Fourth dynasty to the Eighteenth (Leps. d. ii. pl. 28, iii. pl. 67). A second form occurs under the . . . . dynasty (Champ. dict. 255).

"pĕnnĕ" door; "pĕnnĕ" or "pēi" or "phĕi" flea; — in Greek "pulōs" door, in Latin "pulex" flea. The character occurs under the Third dynasty (Leps. d. ii. pl. 3). A second form occurs from the Fourth dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 25, and k. pl. 5 to 67).

The *flea*, Pulex irritans, already in Egypt at the time of the invention of writing, — continues well known there. In Palestine, the "phrish" or flea is mentioned in the history of Saul (1 Sam. xxiv.

14); in Greece, the "psullōs" is mentioned by Aristophanes nub. 145 and 831, Dioscorides, and Lucian; and in Italy, the "pulex" by Columella, Pliny, and Martial. Eastward from Asia, the flea was found by myself aboriginally introduced throughout the inhabited islands of the Pacific; was also aboriginally introduced throughout America to the shores of the Atlantic in New England (R. Williams key, 6), having in the last two instances evidently accompanied the dog.

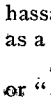
"paganōs" head-quarters, or palace; "tshtōp" inn; "prĕtsh" or "pōrs" mat; "pōrtsh" or "pŏrtsh" or "prtsh" to spread out, strew; — in English "preach," and "porch." The character occurs on the Gliddon mummy-case. A second form occurs under the Third and Fourth dynasties (Leps. d. ii. pl. 3 and 27, Champ. mon iv. 325, 326).

"pat" knee; "pŏht" or "paht" to fall down before, prostrate one's self; "pĕht" to bow down; "aspĕ" or "aspi" or "sapi" tongue, speech; "saps" or "sĕps" or "sōps" or "sĕpsŏp" or "sōpsp" or "sōpsŏp" to beseech, supplicate. — The character occurs under the . . . . dynasty (Champ. gram. 343, and Rosellin. mon. cul. 38).

"pōōnĕ" or "pŏŏnĕ" or "pŏŏni" or "pĕĕnĕ" migration, to remove; "pĕt" or "pŏt" or "phŏt" or "phĕt" to run, flee; "sĕpē" swiftness; "pōlsh" or "pŏlsh" to be delivered from, liberated. — The character occurs under the Seventeenth dynasty (Leps. d. iii. pl. 5), is perhaps the origin of the form ⅂ of the seventeenth Phœnician letter "pha," and of the earliest form ꟼ of the Greek letter "pi." The *Nubian throwing-club* is besides figured under the Twelfth dynasty at Benihassan (Champ. mon. pl. 395); was found by Bonomi ninev. iv. 1 and pl. 41 employed by the Bishareen as a missile principally for capturing game; the pattern, as observed by myself, continuing unchanged.

Acacia Nilotica of the Southern border of the Sahara as far as Arabia. Called in Yemen "soul" or "sælam," in Egypt "sant" (Forsk.) or as heard by myself "sŏnt"; in which we recognize its original Egyptian name "sōnd" or "tshōnd": the Nubian throwing-clubs according to my Dongola attendant are made of "selem" wood, and were ascertained by Bonomi to be of "sunt": the river-barges in use at the time of the invention of writing may also have been of this timber, — as in the time of Herodotus ii. 96, and to the present day (Clot-Bey ii. 2. 29): the tree with its marked foliage is figured at Benihassan under the Twelfth dynasty (Champ. d. ii. pl. 18); the "akakia" of Egypt is described by Dioscorides as yielding a black "stuptikēn" astringent gum, mentioned also by Pliny xxiv. 65, Rhazes, and the mode of procuring it described by Abdallatif i. 2: A. Nilotica, whose pods are besides used for tanning (Clot-Bey), was observed by myself planted and naturalized around villages throughout Egypt to the end of my journey at Assouan; beyond, according to Lepsius eg. and sin. p. 129 to 170, is distinguished by the Nubians as "the tree," and was observed by him indigenous in Upper Nubia. Eastward, was observed by Forskal indigenous along the base of the mountains of Yemen, the bark used for tanning; by myself, under cultivation only at Muscat; is called in Sanscrit "burbura," in Bengalee "babula" or "babool," in Telinga "nella-tooma" (Lindl.), and the "babool" tree, planted through the suggestion of Gibson, has become "common in the Deccan" (Graham), principally as observed by myself for its shade along roadsides.

A hieroglyphic character *Mesopotamian throwing-club.* (possibly representing the rib) agrees at least in shape with the — The character is painted red on the Gliddon mummy-case, occurs also under the Third, and down to the Seventeenth dynasty (Leps. d. ii. pl. 3, and iii. pl. 5). A throwing-club of similar shape is held by an Egyptian under the Seventeenth dynasty, by the Asiatic strangers at Benihassan under the Twelfth dynasty (Leps. d. iii. pl. 9, and ii. pl. 131), and by individuals on the Assyrian monuments.


"pŏms" scurrility; "pashsĕ" or "patsĕ" spittle. — The character occurs in the Book of the Dead, also under the . . . . dynasty (Champ. gram. 99, 42, 154, and Buns. and Birch).

(ichneumon signifying weakness, succoured by others; for the animal calls others to its assistance before resisting a serpent, Horap. ii. 31); "pakĕn-hēt" pusillanimous; "pĕnhēt" poor, destitute; — in Greek "pĕnēs" poor; in Latin "penuria," penury, "pauper." The character occurs in the Ritual, also under the . . . . dynasty (Buns. and Birch).

The *ichneumon*, although belonging to a Tropical genus is known to inhabit Egypt along the Nile; — was in ancient times protected by law, is at present called "nems," and although very destructive to all smaller animals is sometimes domesticated (Clot-Bey ii. 66). As inhabiting Egypt is mentioned by Aelian, Pliny, Lucan, and other Greek and Roman writers.

mantis or praying-insect; "pĕtd" (one of the insects enumerated in transl. Levit. xi. 22); "pĕtd" corslet; "pĕtd-tot ĕvōl" fishmonger. — The character occurs under the . . . . dynasty (Champ. dict. 168).

stand of balance-scales: "pēsh" to be at variance; "pŏlj" or "pŏrj" dissension; "patshĕ" half; "shijapi" to be in suspense, waver; — in English "to halt between two opinions." The character occurs as early as the Fourth dynasty (Leps. d. ii. pl. 2). A second form occurs from the Seventh dynasty to the Eighteenth (Leps. k. pl. 6 to 27). And a third from the Eighteenth dynasty to the Twentieth (Leps. k. pl. 28 to 41).

(hyæna signifying unstable; hyæna turned to the right, signifying conquering, Horap. ii. 65 and 67); "pĕrĕthia" vicissitude, occasion; "pōh" or "pŏh" to come, go; "pŏtsĥs" or "pŏhs" to wander; "pahs" prey; "pōuni" tribute or income, variegated; — in Greek "pōikilōs" checkered or variegated; in English "living from hand to mouth." The character occurs as early as the Fourth dynasty (Leps. d. ii. pl. 21).

The *hyæna* is well known in Egypt where it is called "dabeh," extending besides throughout North Africa and into Syria (Clot-Bey ii. 58). — Apart from hieroglyphic writing, is figured under the Fourth dynasty at Gizeh in a seemingly reclaimed or semidomestic state (Leps. d. ii. pl. 10). Its flesh, I was informed by Mr. Birch, is sometimes represented on the monuments as served up at feasts: and to the present day, Bayard Taylor centr. Afr. 35 found the flesh of the hyæna eaten by the people along the Upper Nile

(pewit or lapwing "ĕpōpa" prognosticating abundant vintage, Horap. ii. 88); "karapipi" or "pĕtĕpĕt" lapwing; "pĕtĕp" profit, interests; "ēpĕ" or "ēpi" number; "ŏp" or "ōp" or "ēp" to number, reckon, estimate; "platikōs" ease, relaxation of mind. — The character occurs under the Fourth dynasty; and the single lapwing, from the Fifth to the Seventeenth (Leps. d. ii. pl. 18, 48, and iii. pl. 16).

The *lapwing*, Vanellus, was observed by myself to be frequent in Egypt, at least during the winter season. — North of the Mediterranean, the "ĕpōps" is mentioned by Aeschylus (Plin. x. 44), Aristophanes av. 47, and Plato phaed. 85; but by many writers is referred to the *hoopoe*; in fact the description of the "upupa" by Pliny, belongs in part to the hoopoe.

"pŏshĕ" or "shōp" sole of the foot, basis; "shōp" or "shŏpĕ" or "shŏpi" to gain possession; — in Greek "pōus" foot; in English "position." The character occurs as early as the Fourth dynasty (Leps. d. ii. pl. 28). A second form occurs in the Book of the Dead, and from the Twelfth dynasty to the Ptolemies (Leps. d. ii. pl. 138, iii. pl. 5, and k. pl. 27 to 57). A possible combination occurs under the . . . . dynasty (sepulchr. tablet Brit. mus., Buns. and Birch).

"pē" or "pĕ" or "phĕ" celestial, the heavens, firmament; "pitĕ" or "phēttĕ" or "phid" bow, rainbow; — in Greek, the name "pi" of the sixteenth letter; in English "pity." The character occurs as early as the Fourth dynasty, also in the Book of the Dead, and continues in use until the end of hieroglyphic writing (Leps. d. ii. pl. 36, 98, and k. pl. 14 to 63): is besides the possible origin of the flat-topped form ⊓ of the Hebrew letter "pha," and Greek Π "pi" (compare also the round-topped form).

"spĕr" or "spir" or "sphir" the side; "pira" soul, life; "pŏk" or "pĕ" or "pĕk" or "pĕtĕn" your; "pai" this; "pa" or "pŏi" mine; "panikirōs" quiet, placid, mild; "pĕraōuŏ" arrival, meeting; "pattshĕlĕt" or "pattshĕlĕĕt" bridegroom; — in Latin "spiritus" air or life or soul, "spirans" living or breathing; in English "aspire, inspire, respire, expire." The character occurs under the . . . . dynasty (Champ. dict. 50). A second form occurs from the Twenty-first dynasty to the Ptolemies (Leps. d. iii. pl. 246 to iv. pl. 41).

(tongue on teeth signifying taste not perfected, Horap. i. 31); "pōk" soft; "pōkinōs" desire, love; "pōuēi" fervour; "paitshĕ" remedy. — The character occurs in the Book of the Dead, also under the . . . . dynasty (papyri, tablet Brit. mus., Buns. and Birch).

(beginning of the mouth signifying taste "gĕusin," Horap. i. 31); "dpĕ" or "tĕipĕ" taste; "tōp" or "tŏp" to taste; "tōp" beginnings or extremities; "spōtōu" or "sphōtōu" lip; "pĕi" or "pi" or "phi" a kiss; "dpĕi" or "dpi" or "dphi" to kiss; "pōlh" to be wounded; "spsĕp" to propitiate, be appeased; "ĕhnĕ" or "pĕtĕhnĕ" or "pĕtĕh" will. — The character occurs under the . . . . dynasty (Champ. dict. 71).

ts or tz or ds or dz, its pervading meaning courtship.

fish-spear; "tshats" perforation; "kōts" entanglement, craftiness; "dsō" or "dsa" to spare; — in Hebrew, the eighteenth letter "dz," "dzwth" or "dzyth" hunting, fishing; in Greek, the name "zēta" of the sixth letter. The character occurs from the Fourth dynasty to the Twenty-sixth (Leps. d. ii. pl. 10, iii. pl. 26). A second form occurs in the Book of the Dead, also under the Eighteenth and Nineteenth dynasties (Leps. d. iii. pl. 153, and k. pl. 28 and 68). A third form occurs under the Twenty-second dynasty (Leps. d. iii. pl. 257). The fish-spear is said to be the origin of the eighteenth Phœnician and Hebrew letter tsadi, some of whose forms present decided confirmation.

"dsaĕit" or "dsōĕit" or "dsōōu" or "dsŏit" to praise, celebrate, glorify; "rahts" prostrator. — The character occurs in the Book of the Dead, also under the Twentieth dynasty (Champ. gram. 387, and Leps. d. iii. pl. 237).

"dsa" or "tsanō" or "sanō" beauty, to render beautiful, adorn; "tsana" or "tsanēu" becomingly, gracefully; "tsamiēu" ornamented. — The character occurs under the Third dynasty (Leps. d. ii. pl. 3, and Champ. dict. 285). A second form occurs under the . . . . dynasty (Champ. dict. 285).

the heavens falling; "dsak" to be molested, plagued; "shaĕiō" or "tshaĕiō" or "tshaiĕ" condemnation; "tsvkĕ" or "tsvkō" to make lower, dismiss; "tstō" to reject, treat with scorn; "tstō" to come back, return. — The character occurs as early as the . . . . dynasty, also in the Book of the Dead (Buns. and Birch).

"tsahōul" to muzzle, curb. — The character occurs under the Fourth dynasty (Leps. d. ii. pl. 15). A second form occurs under the Twenty-first dynasty (Leps. d. iii. pl. 246). A third, under the Persian con quest (Champ. gram. 142, 38, 48, and Buns. and Birch).

"sŏ" or "tsĕ" or "tsĕi" or "tsō" or "tsŏ" to pour out water, to drink. — The character occurs under the . . . . dynasty (Champ. dict. 427).

"tsiĕ" or "tsiō" to be satisfied; "tōōts" a double seat. — The character occurs in the Book of the Dead xxii. 53. 4. 21, also under the Seventeenth dynasty (Leps. d. iii. pl. 5).

hand hanging down; "hēts" extremity of foot or hand; "niatstĕ" tender, weak; "niats" attention, expectation, hope. — The character occurs as early as the . . . . dynasty (Champ. dict. 459).

q or kw, its pervading meaning question.

"kōihi" nerve; "kŏd" questions, to interrogate; "kŏrtsh" or "kŏrĕtsh" to supplicate, ask; "kōlj" or "kŏlj" to bend, incurve; — in Hebrew "kwsh" to be incurved, "ky" whether? when; in Sanscrit "kas? ka? kim?;" in Greek "kōiē" in what manner?; in Latin "quaestio, quaero, qua, qualis, quam, quamdiu, quamdudum, quamobrem, quampridem, quando, quantus, quapropter, quare, quatenus, queiscum, quemadmodum, qui, quianam, quicum, quid, quidnam, quidni, quidum, quin, quis, quisnam, quo, quoad, quomodo, quonam, quorsum, quot, quoteni, quoties, quotumus, quovis, quousque, quum"; in English "inquire, quietus." The character occurs in the Book of the Dead, and continues in use under the Twenty-sixth dynasty (sarcoph. queen of Amasis, Buns. and Birch).

"kōĕih" or "kŏih" or "kŏhi" scabbard; — in Greek "kōlĕōs" or "kōuĕōs" scabbard. The character occurs from the Nineteenth dynasty to the Twenty-second (Leps. k. pl. 31 to 45).

"kōrvi" knife; "kŏrj" or "kōrj" or "kōōr" to cut off, be cut off; "kōōns" or "kōns" or "kŏns" slaughter, to slay; "kŏvh" or "kōvh" cord, sinew, "kōvh" to cut the sinews; "kōlp" or "kŏlp" thieving, to steal; — in Hebrew "kwdz" to cut, "kwi" to incise or dig, "kwr" to dig, "kwdz" or "kwt" to disdain; in Greek "kōura" a young woman, "kōura" a shearing. The character occurs from the Third dynasty to the Twenty-second (Leps. d. ii. pl. 5 to iii. pl. 255).

"kara" head or skull; "kahi" head of book or chapter; "pĕrkŏti" male ape; — in Hebrew, the nineteenth letter "kwph" back of the head, occiput; "kwph" monkey, in Sanscrit "kapi," in Greek "kēpōs" or "kēvōs"; in old English "cop" top or head. The character occurs from the Fourth dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 25, and k pl. 7 to 63): is besides the origin of the form ϙ of the obsolete Greek letter "kōppa"; which transported to Italy became the Roman Q, and the later and Western Q. The form P of the Phœnician and Hebrew letter "kwph" is not unlike a side view of the occiput; and is continued in the Etruscan, later Roman, and our Western Q.

(headless man walking, signifying "athunatōn" impossibility, Horap. i. 55); "at-jōm" or "at-shōm" impossible; "kŏmtsh" or "kōmtsh" to laugh at, deride. — The character occurs from the Third dynasty to the Nineteenth (Leps. d. ii. pl. 7, and k. pl. 35).

(leopard-skin joined to a hyæna-skin, signifying vanquished by an inferior, Horap. ii. 67); "kōōvĕf" feeble, weak; "kōōvĕ" or "kŏŏvĕ" compelling; "kŏŏfĕ" or "kŏŏvĕ" prohibiting; "kŏōu" or "kōōuĕ" or "kŏōu" strangers, others. — The character occurs from the Fourth dynasty to the Ptolemies (Leps. d. ii. pl. 19, 144, and k. pl. 50 to 56). The following modification occurs under the Eighteenth dynasty, and continues in use under the Thirtieth (Leps. d. iii. pl. 52, and k. pl. 50).

(star and sun with its disk cut in twain signifying a betrothed woman; star sometimes signifying soul of a male human being, also destiny, Horap. i. 13, ii. 1 and 13). "kŏrtsh" to sweeten. — The character occurs under the Third dynasty (Leps. d. ii. pl. 5).

"kōh" or "kōŏh" corner, summit, precipitous or abrupt; "kōuklĕ" apex; "kōōns" or "kōōs" or "kŏs" or "kŏŏs" corpse, to prepare for burial; "kŏlĕm" or "hŏlĕm" quickly or to hasten. — The character occurs from the Fifth dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 58, 98, and k. pl. 15 to 61. For "hōirōn" pig, signifying lost or ruined, Horap. ii. 35, see pig).

r, its pervading meaning "rushing on" (Plato).

"rō" or "rŏ" mouth; "rō" door; "ĕiĕrō" or "ĕiōōr" or "iarō" or "iĕrō" river; "rōthĕiōn" torrent; "ra" river-mouth; "rōōutsh" loquacity, conversation; — in Hebrew "yor" the Nile (Buns. and Birch v. p. 749); in Greek the seventeenth letter "rŏ," also "rĕō" to flow, "rōē" stream, "rumē" rushing on, current, "hĕimarrōs" winter torrent; in Latin "rivus" river, "rivulus" rill, "ruo" to rush, "curro" to run, "cursus" course, "rapidus" rapid. The character

occurs on the Gliddon mummy-case, and from the Third dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 3, and k. pl. 5 to 67).

"rĕpōtia" winnowing-fan, "ripid" sacred fan; "rak" or "raki" or "rĕk" or "rĕkt" or "rikĕ" or "riki" to bow down, incline; "riki" or "rĕkrikĕ" or "rĕkriki" nodding, inclining the head; "tsharŏ" or "rŏf" or "rrēt" or "ĕrēt" promise, vow; "ĕrĕu" or "ĕrēōu" mutual; "mōur" bond, to bind — The character occurs as early as the . . . . dynasty (Champ. mon. iii. 219).

the cottage; "ĕrvi" or "ĕrshŏ" or "ĕrsō" habitation. — The character occurs on the Gliddon mummy-case, and from the Third dynasty to the Seventeenth (Leps. d. ii. pl. 3, 110, and k. pl. 24). And seems a figure of the cottage in fashion at the time of the invention of writing. The flat roof indicates a rainless climate; the material of the walls being probably mud suffered to dry in the sun. The window has at least the form of the *arch;* and it may be, that *dobi* or mud-bricks were already in use. — "Tombs with vaulted roofs made of mud-bricks as far back as the time of the pyramids," are mentioned by Lepsius Eg. and Sin. p. 74.

"raōuē" or "rauē" bedroom, bed; "rŏm" or "ĕrōm" couch; "rŏtĕv" to recline; "tshĕĕl" or "tshar" or "tshaar" hide or skin; "tshairi" or "tshairĕ" nuptial couch; — in English "room, chair." The character occurs from the Eleventh dynasty to the Ptolemies (Leps. d. ii. pl. 149, 118, and k. pl. 57). A second form occurs from the Nineteenth dynasty to the end of hieroglyphic writing (Leps. k. pl. 32 to 63).

"tshairĕ" or "rŏt" or "ĕrōuōt" or "ōurŏt" or "ratshi" hilarity, festivity, joy; "ratshi" or "ratshĕ" or "ōurōt" to rejoice; "raitĕ" guests; "rōuhĕ" or "rōuhi" evening; — in Greek "hairĕ" rejoice, greeting; in English "rout" festive assembly or crowd. The character occurs as early as the . . . . dynasty (Champ. dict. 30). A possible modification occurs from the Seventeenth dynasty to the end of hieroglyphic writing (Leps. k. pl. 23 to 67). A wedding among the rural population of Upper Egypt witnessed by myself, was attended by men standing in a row and clapping hands.

"sistra" sistrum; "rōōunĕ" virginity; "rana" to be admired; "ran" or "ĕran" agreeable, pleasing, to accept; "ratsh" or "rĕtsh" or "rŏtshĕ" or "rŏtshi" sufficient, to be content; — in English "sister." The character occurs from the Tenth dynasty to the Twenty-second (Leps. k. pl. 10 to 45). A second form occurs under the Ptolemies (Leps. k. pl. 52). A third form occurs under the Twenty-eighth dynasty (Leps. k. pl. 49). The *sistrum* was known to the Romans as an Egyptian musical instrument (Propert., Ovid amor. el. 8); the Egyptians being further characterized as "sistrata turba" by Martial xii.

(half of snake signifying king over only part of the world, Horap. i. 60); "ratsh" or "rĕnphah" to divide; "rĕ" or "rē" part; "rŗa" or "rrŏ" or "ĕrra" or "ĕrrō" or "ōurō" king; "rrŏ" queen, "rrŏōu" kings; "ōurit" or "rit" keeper, governor; "ōurad" keepers; — in Hebrew the twentieth letter "rash" or "rysh" head; in Arabic "rāis" captain. The character occurs under the Third and Fourth dynasties (Leps. d. ii. pl. 3 to 31): and seems the origin of the form ꟼ of the Phœnician and Hebrew letter "rash," P of the Greek letter "rŏ," continued even in Celtiberian, and ◘ of the Umbrian and Oscan r.

"rĕ" or "rē" sun; "rasd" or "rastĕ" morrow; "tshŏrp" in the morning; "phŏr" or "rasōu" or "rasōui" dream; "rŏht" trance; "rŏan" or "ĕrtshan" when; — in Hebrew "bkr" morning, "mhr" morrow, in Greek "auriōn," in Latin "cras." The character occurs from the Eighteenth dynasty to the Ptolemies (Leps. d. iii. pl. 152, and k. pl. 29 to 58).

"rŏōuĕ" or "rŏōui" or "arŏōuĕ" harvest-remains or stubble; "sĕsrit" gleanings, ears of grain that escape the sickle; "srit" to collect the remains; — in Hebrew "hrb" laid waste, "hrgl" or "arbĕ" locust; in Greek "akris" grasshopper; in Latin "calamitas" calamity, from the Greek "kalamē" straw or stubble. The character occurs as early as the "Twentieth" dynasty (Buns. and Birch, Champ. gram. 41, 105, and dict. 178). A second form occurs under the Twenty-sixth dynasty (Leps. d. iii. pl 262).

The *locust*, Gryllus migratorius, is a large Tropical species of grasshopper belonging properly to the Desert; from the mouth of the Red Sea (where it was observed by myself) Northward to Syria and the shores of the Mediterranean, and in migratory bands sometimes crossing from Africa into Italy — (Plin. xi. 35). The "arbĕ" or "arvĕ" was one of the plagues of Egypt in the Jewish Exodus x. 4; and with occasional years of devastation continues to abound there (Clot-Bey ii. 90).

(lion and torches signifying passion chastised or restrained by fire, Horap. ii. 71); "ragt" or "rĕgt" or "rŏgt" excoriate, destroy; "raht" or "rĕht" or "rŏht to chastise, strike; "rautsh" or "rĕmrautsh" or "rmratsh" tame; — in English "a burned child dreads the fire." The character occurs under the Fourth and Fifth dynasties (Leps. d. ii. pl. 21, 29, 78). The combination occurs under the Fifth dynasty (Leps. d. ii. pl. 64).

(sting-ray "trugŏna" hooked signifying expiation and penitence, for the fish when captured casts its sting, Horap. ii. 105); "rami" skate or ray; "ĕr-thmaiŏ" to expiate; "pahrĕ" or

"phagri" to cure; "phagri" remedy, drugs. — The character occurs from the Fourth dynasty to the Twenty-second (Leps. d. ii. pl. 23, and k. pl. 38 to 44). A second form occurs under the Twelfth dynasty (Leps. d. ii. pl. 127).

(boat signifying a farm, Horap.), the sight suggesting to the boatman, that he had rather work on a farm; "vari" or "rivē" barge; "ĕrvi" pool or marsh; "rvĕ" estate, farm; "r" or "ra" or "rĕ" action, to do; "rĕi" to give attention to; "rēisi" dust; — in Hebrew "ibrĕ" ferry boat or raft, "ibr" region beyond a river or sea; in Arabic "bahr" river or sea; in Latin "arvum" ploughed land. The character occurs in the Book of the Dead xxxv. 99. 1 (Champ. gram. 75, and Buns. and Birch). Various modifications occur on the monuments (Champ. dict. 272, Rosellin. mon. cul. cvii. 1, cviii.).

capsule or seed-vessel: "mahrō" ploughing, sowing seed; "rēt" or "rŏt" to plant, sow; "rinōn" hay or herbs. — The character occurs as early as the Twelfth dynasty (Leps. d. ii. pl. 126). A second form occurs from the "Twentieth" dynasty to the end of hieroglyphic writing (Buns. and Birch, Champ. gram. 538, and Leps. k. pl. 57 to 67).

"rōd" or "rŏd" sown seed or crop, germ of a plant; "rŏt" or "rēt" herb or plant, to germinate; "phiri" or "pirĕ" to germinate; "pirĕ" germination; "hrēri" tender shoot; "rōōutsh" or "rŏōutsh" solicitude, care, to take care; "rhmmĕ" prudence; "nōērōs" prudent, wise; — in English "rot, root." The character occurs as early as the Seventh dynasty (Leps. d. ii. pl. 107).

(crane signifying to keep watch, Horap. ii. 90); "nōtshĕr" or "nōtshr" crane; "rēs" or "rōĕis" or "rŏis" to watch, keep watch; "rŏis" doorkeeper, vigilance. — The character occurs from the Sixth dynasty to the Seventeenth (Leps. k. pl. 6 to 23, and d. ii. pl. 3).

A large species of *crane*, Grus, domesticated by the Egyptians as early perhaps as the invention of writing, — is figured kept in flocks, under the Third, Fourth, and down to the Twelfth dynasty at Benihassan: afterwards, the custom appears to have been discontinued, but I remarked the bird figured single as late as the Eighteenth dynasty.

ch soft or tsh, its pervading meaning children.

"tshnē" or "tshnĕ" or "tshŏm" or "shŏm" garden; "tshēnŏuōd" vegetable garden; "shĕshŏm" to cultivate a garden; "atĕtshnē" or "patĕtshnĕ" or "pattshnĕ" or "pattshnē" or "shŏm-rēt" gardener; "shō" plantation, seed; "shŏ" to plant; "tsha" to arise, spring up. — The character occurs from the Third dynasty to the Persian emperors (Leps. d. ii. pl. 6, and k. pl. 44 to 49).

"tshmōu" parlock; "tshĕmma" or "tshĕmmō" or "tshmmō" a stranger; "tshamisi" first-born; "tshēli" or "tshēēli" or "tshēri" or "tshĕrĕ" or "tshēērĕ" or "tshĕri" or "tshĕĕrĕ" or "tshĕĕrĕtshĕm" or "tshĕrĕtshĕm" or "tshĕrĕtshm" child, son, daughter; — in English "child, cherish." The character occurs in the Book of the Dead, also under the . . . . dynasty (Buns. and Birch).

"tshēvi" or "tshēuĕ" or "tshēōuĕ" or "tshēōui" altar; "tshŏt" or "tshōutshŏōutshi" offering, sacrifice; "tshĕmtshĕ" or "tshĕmtshi" religious worship; "tshĕt" or "tshĕĕt" to sacrifice; "tshamtshĕ" worshipper; "tshōutshōutshi" to adore. — The character occurs under the . . . . dynasty (Champ. dict. 254).

"tsha" or "tshai" or "tshaant" or "tshōmj" nose, nostrils; "tshŏlĕm" or "tshŏlĕm" or "tshōlm" scented, fragrant. — The character occurs under the . . . . dynasty (Champ. dict. 286).

(bat "trigōna" signifying a nursing woman; for among fowls the bat alone has teats and teeth, Horap. ii. 50); "jaljou" or "shinshlŏ" or "shinshlō" or "shnshĕlō" bat; "saantsh" or "tshanōutsh" or "tshanĕtsh" or "tshantsh" to nurse; "tshantsh" or "tsĕnkō" or "tsēnkō" or "shintōt" or "dshi" to give suck; "shihraf" or "tshahtshah" solicitude; "tshanĕutsh" fatted. — The character occurs under the . . . . dynasty (tablet Brit. mus. 440, Buns. and Birch). A second form occurs under the . . . . dynasty (Champ. gram. 368, 77).

(weasel "galēn" signifying a woman managing, doing man's work, Horap. ii. 34); "tshathōul" marten weasel; "tshōuatshf" beloved; "tshĕlĕt" or "tshĕlĕĕt" or "tshĕlēt" new-married bride; "tshōu" nephew; "tshōua" relation, cousin; "tshōm" or "tshŏm" father-in-law, brother-in-law, relation by marriage; "tshŏmi" or "tshŏmĕ" mother-in-law. — The character occurs in the Ritual, also under the . . . . dynasty (Buns. and Birch).

The *marten* or ferret, Mustela martes, is described by Clot-Bey ii. 65 as the only kind of weasel inhabiting Egypt; frequent there, — penetrating even into houses, mercilessly destroying poultry, and feeding also on the eggs. In Italy, hunting the "marte" is mentioned by Martial.

"tshōr" or "tshŏr" or "tshōnh" to take away, bereave; "tshaf" or "tshŏf" desolation; "tshafĕ" or "tshavē" the Desert; "tshŏf" or "tshōf" or "tshēf" to make desert or desolate; "tshari" a blow; "tshĕnĕ" suddenly; "tsharĕ" or "tshĕri" to strike. — The character occurs in the Book of the Dead, also under the . . . . dynasty (Champ. gram. 250, 372, sepulchr. vases Brit. mus., Buns. and Birch).

(crow-nestlings signifying uneasy, restless, Horap. ii. 92 and 24); "jŏtjĕt" or "mah" or "mōh" nest; "shinŏ" pregnancy; "tshŏtĕ" or "tshĕmēr" leaven; "ji-thav" or "shi-tshĕmēr" to ferment; "tshpit" or "tshphit" or "tshipĕ" or "tshipi" confusion or shame; "tshĕmt" or "tshōmt" or "tshōmnt" three; — in colloquial English "to feel cheap." The character occurs in the Book of the Dead and from the Sixth dynasty to the Ptolemies (Leps. d. ii. pl. 80, "coffin of Soter" in Brit. mus., Buns. and Birch).

"tshlit" knife, "tshlish" knife, sword; "phētsh" or "phŏtsh" division; "phatshi" or "patshi" half; "phatsh" or "phĕtsh" or "phētsh" or "phōtsh" or "phŏtsh" or "pĕtsh" or "pētsh" or "pŏtsh" or "ratsh" to divide into portions; "thatsh" separation; "tshatsh" or "tshŏtsh" equal, to make equal. — The character occurs as early as the Fifth dynasty (Leps. d. ii. pl. 64). A second form occurs also under the Fifth dynasty (Leps. d. ii. pl. 44, Rosell. m. civ. li. 4, Buns. and Birch).

"tshlij" butcher's knife; "tshat" or "tshĕt" or "tshŏt" or "tshĕnt" to cut; "tshŏŏt" to cut off; "tshŏp" or "tshōp" or "tshŏf" or "tshōv" to shear or shave; "tshatsh" or "tshĕtsh" to cut or break into pieces; — in English "chop, chip." The character occurs in the Book of the Dead (Buns. and Birch).

"tshiŏ" cooking-pot or pan; — in English "to keep the pot boiling." The character occurs under the Third dynasty (Leps. d. pl. 5): a modification under the Sixth (Leps. d. ii. pl. 108): and a second modification from the . . . . dy nasty (tabl. Brit. mus. 199, Buns. and Birch).

"tshmōu" or "tshmōuē" spoon; "tshōuŏvĕ" or "tshvŏvĕ" throat; tshōtshpi" or "tshŏtshpi" stomach, "tshōptsh" or "kmiji" bird's crop; "tshastĕ" aliment, food; "tsha" or "tshai" or "tshaiō" or "tshĕĕi" or "tshōps" feast, festival. — The character occurs from the Fourth dynasty to the Ptolemies, usually either inverted or in the horizontal position (Leps. d. ii. pl. 85, and k. pl. 7 to 53).

"phaji" or "phatshi" or "shivshiv" or "tshautshau" crumbs, fragments, morsels; "tshma" or "tshēm" or "tshēmtshēm" or "tshōm" or "tshōmĕ" comminuted, minute. — The character occurs as early as the . . . . dynasty ("tablet 148," Buns. and Birch).

"tshnĕ" or "tshnē" net; "hĕntshēm" fishing-net; "patsh" to capture by hunting; "tshap" or "tshĕp" or "tshōp" or "tshŏp" to take; "tshalh" or "tshŏlh" mark, private mark. — The character occurs as early as the . . . . dynasty (Champ. dict. 359).

"tshnĕnhiōui" dredge; "tsharkĕ" penury; "tshaat" needy, poor. — The character occurs from the Third to the Fifth dynasty (Leps. d. pl. 3 and 74).

"tshĕ" a hundred; "tshĕĕsōtĕ" a hundredfold. — The character occurs as a numerical sign from the Third dynasty and the Book of the Dead to the end of hieroglyphic writing (Leps. k. pl. 25 to 67). Among the Greeks, "samphōras" signified a horse branded with the Doric "san," anciently written C: Herodotus ii. 131 to 140 states, that the proper names of Persians invariably end in the Doric "san"; which as pronounced by the Parsees of Hindustan I found to be dsh or j. The same character C transferred to Italy, became the third letter of the Latin alphabet, retaining however the numerical value of a hundred in accordance with the Egyptian word, and therefore in like manner pronounced tshe: or rather, the third Latin letter represented two distinct sounds, tsh and k; as in English, although a superfluous letter, it represents k and s. The sound tsh has long disappeared from Egypt, is unknown also in Syria and Arabia; but is said to occur among the more Eastern Arabs, beyond the Euphrates.

"tshĕvtshĕ" or "tshvtshĕ" or "tshĕvtshi" shield; "tshōvtsh" or "tshŏvtsh" or "tshōptsh" arm (the strong arm); "tshaĕij" or "tshōĕij" or "tshŏij" or "shŏij" wrestler, warrior, strenuous. — The character occurs under the . . . . dynasty (Champ. dict. 342).

chest; "tshĕnd" pack-saddle; "tshŏt" bundles; "tshōt" or "tshŏt" merchandise; "tshaar" to be valued; "tshatd" or "tshŏd" merchants; "tshĕvĕ" or "tshĕvĭŏ" or "tshvvĭŏ" remuneration; "tshŏm" tribute. — The character occurs from the . . . . dynasty (Ritual, Brit. mus., and Buns. and Birch).

(bust "prōtōmē" with a sword, signifying impiety, Horap. ii. 18); "tshŏft" fist; "tshŏft" or "tshōft" or "tshōfth" to trespass, error; "tshōp" audacity; "tshaft" or "tshafth" adulterer; "tshavtĕ" or "tshaitĕ" or "tshaft" impious, impiety; "tshĕl" or "tshŏl" or "tshŏl" to plunder, spoils. — The character occurs from the Fourth dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 15, and k. pl. 7 to 64).

"tshō" a thousand; "tsha" thousands; "tshō" or "tshŏ" sand; "ōtsh" or "ŏtsh" many; "tshaĕ" or "tshai" or "tshŏ" or "tatsha" or "tatshĕ" or "tartshŏ" numerous, many, to be multiplied; "atshai" or "atshĕ" or "atshē" multitude; "tshitsh" or "tshaitsh" or "tshŏitsh" or "tshōĕitsh" dust. — The character, clearly but not exclusively a numerical sign, occurs under the

Fourth dynasty (Leps. d. ii. pl. 38). Another and perhaps the original form occurs under the Third dynasty (Leps. d. ii. pl. 3). A third form occurs from the Twenty-sixth dynasty to the Thirtieth (Champ. mon. i. 331, iii. 219 and 331, Leps. k. pl. 47 to 59).

Nymphæa coerulea of the Nile. A *blue water-lily* in aspect Tropical and probably derived from seeds floating down the river to Egypt, where it is called "bachenyn, a'raby," and its root "byarou" (Del.); the root is said to have been pointed out as esculent by Isis — or by Menes (Diodor. i. 2. p. 41): throughout the Egyptian monuments, even in highly-finished representations, I found the margin of the leaves invariably entire; flowers are figured among offerings under the Fourth dynasty (Leps. d. ii. pl. 10), and in an instance under the Twentieth I found them distinctly painted blue: garlands of the "kuanĕan" water-lily were seen by Callixenus at Alexandria (Athen. iii. 1. p. 72); the "bisnin el-Arabi" is distinguished by Ebn Baitar (Alpin. iii. 10. p. 163); N. coerulea was observed in Egypt by Savigny, Delile, and Clot-Bey, its root cooked and eaten and regarded as preferable in quality.

"tshŏtsht" or "tshŏtsht" key, bolt; "tshŏtsht" to hinder, prohibition; "tshik" or "tshŏtĕ" well, pit; "tshats" pit, window; "tshōutsht" window, passage; "tshĕuni" granary; "tshtam" or "tshtham" or "tshōtĕm" or "tshōtm" or "tshŏtĕm" or "tshŏtm" or "jōth" to lock, close, shut up; "tshōnt" or "tshōt" hard, "ĕr-tshōt" to harden; "tshŏp" or "tshōp" to buy, possess; "tshivĕ" or "tshivi" or "tshivt" or "tshivd" or "tshĕvt" or "tshŏv" or "tshōvt" to change, changing; — in English "shop." The character occurs from the Fourth dynasty to the end of hieroglyphic writing (Leps. d. pl. 10 and k. pl. 24 to 66).

vine-prop; "tshtshĕr" or "tshŏnd" prop or support; "tshĕlh" or "tshlh" vine-branch; "tshimi" basis, foundation. — The character occurs from the Third to the Fifth dynasty, also in the Book of the Dead (Leps. d. ii. pl. 7 to 72).

"tshĕvi" or "tshĕuĕ" column; "tshĕm" or "tshŏi" altitude, lofty; "shōsĕ" tall; "shisi" exaltation; "shas" or "shĕs" to exalt, extol, magnify; "tshōm" eminent. — The character occurs from the Fourth dynasty to the Ptolemies (Leps. d. ii. pl. 22, and k. pl. 31 to 52).

hand without thumb; "tshōp" palm of the hand, a palm or handbreadth; "tshit" to measure; "tshi" a measure, to measure; "tshēōui" or "tshiaĕi" or "tshiai" extension, length; "tshiē" length, a cubit; "tshōi" long; — compare Judg. i. 7. The character occurs as early as the . . . . dynasty (Champ. dict. 98).

"jŏ" face, head, altitude; "jŏj" head, chief; "tsha" or "tshantĕ" until; "shōsi" or "jōsĕ" highest; "tsharp" or "tsharpi" or "tsharĕp" or "tshōrp" first; "tshĕv" baldness; "jŏ" end; — in Greek "kĕphalē," in Latin "caput," in English "chapter, chief." The character occurs on the Gliddon mummy-case and from the Fourth dynasty to the Ptolemies (coffin of Menkera, and at Esneh, Buns. and Birch).

"tshvŏt" or "tshvōd" sceptre. — The "papyrus sceptre signifying Lower Egypt" occurs from the Third dynasty to the Roman conquest (Leps. d. ii. pl. 3, k. pl. 53, and Champ. dict. 329). The "lotus sceptre signifying Upper Egypt" occurs from the Fourth dynasty to the Roman conquest (Leps. d. ii. pl. 22, k. pl. 14 to 61, and Champ. dict. 329).

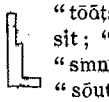
s, its pervading meaning support.

"tōōts" or "tōts" or "tŏts" seat, throne; "hĕmsi" or "hmsō" or "thmsō" or "t-hĕmsi" to sit; "sŏi" winking or sign with the eyes; "t-hĕmsō" or "smĕnts" or "smnts" or "smnt" or "smn" to appoint, establish, ordain by law; "sōōutn" or "sōutĕn" or "sōutŏn" to direct; "sōutĕn" or "sŏōutĕn" equity, uprightness; — in Latin "sedes, sedile, sella, situs, solium"; in English "site, seat, sit," and (through the Arabic) "sultan." The character occurs from the Gliddon mummy-case and the Third dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 3, and k. pl. 5 to 67).

"sapt" or "sŏpt" or "sŏtp" superior, elect, chosen; "sĕtp" to elect. — The character occurs from the Fifth dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 44, and k. pl. 23 to 62).

(keeper of the house signifying "pastōphōrōn" carried about in a shrine, Horap. i. 39); "smōt" or "smōd" model; "smōtĕ" similar; "smaat" blessed; "hōs" timbrel or drum; "hŏs" song, to sing, celebrate; "smōu" praise, to praise; "statĕ" to applaud; "sōvsĕv" or "sōpsĕp" adulation; "sai" or "si" or "sĕi" satiety; — in vulgar English "soap" flattery. The character occurs under the Seventeenth dynasty (Leps. d. iii. pl. 25, and Champ. gram. 494 and dict. 306). A second form occurs under the . . . . dynasty (Champ. dict. 252).

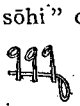
flyflap; "satō" or "satŏ" fan for raising a breeze; "satōthĕ" dirt, rabble; "satōunōs" to send forth; "satōt" at once, forthwith. — The character occurs under the . . . . dynasty (Champ. dict. 318).

 "shahsĕ" or "shahsi" or "shōhsĕ" or "shhōs" gazelle; "sōunrōuhĕ" the evening star, (the star Capella or Little goat, ms. Par.); "sa" or "saĭ" or "saiĕ" beauty, grace; "saiĕ" or "saiŏōu" beautiful, graceful; "saĭt" or "sōit" renown; "saĕit" or "sŏit" or

"sōčit" or "dsōčit" illustrious; "sětsŏt" or "sdělli" to shine forth; "sětě-vrēj" lightning. — The character occurs under the . . . . dynasty (Champ. dict. 126, 261).

The *gazelle*, Antilopa, is known to be frequent in Egypt, along the initial portion of the Desert, sometimes at night venturing upon the river-flat; — is called at present "gazal," and according to Clot-Bey ii. 61 multiplies in the semi-domestic state; was observed in court-yards by myself.

"sōkmaji" a long table; "tōts" conclave; "sĕōuh" or "sĕuh" or "sōuk" or "sōōuh" or "sŏōuh" to assemble; "sōōuh" or "sōōuhs" assembly; "sŏki" to collect; "satĕm" or "sĕtĕm" or "sĕtm" or "sŏtĕm" or "shi-smē" to hear; "smē" or "smai" rumours, clamour; "smēt" obedient; "sŏtĕm" or "sŏtm" obedience, to obey; "sōshnī" consultation, counsellor; "sahŏ" or "sōhĕ" or "sōhi" or "sōōhĕ" or "sōōuhĕ" to argue, reprove; — in Latin "sessio," in English "session." The character occurs under the Third dynasty (Leps. d. ii. pl. 3). A possible modification occurs under the Fifth dynasty, also in the Book of the Dead (Leps. k. pl. 5, pap. Sams 15, Buns. and Birch).



string of beads; "hōs" or "hŏs" necklace; "sōn" or "sŏn" brother; "snēu" or "snēōu" brothers; "sōnī" or "sŏni" or "sŏnĕ" sister; "sōnn-tshōu-snau" relative, cousin; "snaf" or "snōf" or "snŏŏf" or "snav" or "snōv" blood; "sĕnh" or "sŏnh" or "sanah" or "sōnh" bound, tied together; "snauh" or "snĕuah" chain, bond. — The character occurs under the . . . . dynasty (tomb at Memphis, Bonomi).

"sai" or "sōi" rafter or beam; "sŏi" or "sōi" or "shisi" back; "sōuĕt" or "sōuthŏn" straight, upright; — in Hebrew the fifteenth letter "smk" signifying prop, to sustain; in Greek the eighteenth letter "sigma" sometimes signifying table, "sagma" load of a beast of burden. The character occurs on the Gliddon mummy-case and from the Third dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 2, and k. pl. 5 to 67). The implement represented is the back of a jar-stand; as appears from the following hieroglyphic character which occurs under the . . . . dynasty (Champ. dict. 285). The form of the Phoenician letter "smk" may also be compared.

"sŏr" collections or contributions; "sŏr ĕvōl" or "sōr ĕvōl" or "sōōr ĕvōl" or "sĕr ĕvōl" to distribute; "sasa nim" or "sasĕ nim" on all sides, all around; "sŏŏuvĕn" or "sim" or "smĕh" herbs, fodder; "sma" or "smah" clusters, grapes; "sahni" supply; "sŏmk" to suck; "sat" or "sĕt" or "sitĕ" or "sid" to sow; "sid" seed; — in Greek "spĕirŏ," in Latin "sero" and "semino," in English "to sow"; in Greek "spĕrma" and "spōrōs," in Latin "semen," in English "seed." The character occurs from the Fourth dynasty to the Roman conquest (Leps. d. ii. pl. 98, and k. pl. 5 to 59).

"sili" hole in the shuttle from which the thread is drawn out; "sĕōuk" or "sŏk" traction, to draw, draw out or protract; "sad" to spin; "sankap" or "sŏgi" weaver; "sŏhi" or "saht" woven work. — The character occurs under the . . . . dynasty, and continues in use (Rosellin. mon. cul. li. 4. 12, and lxxvii. 10).

"sah" or "sahf" an auger; "sōuōtĕn" to perforate; — in English, the figurative expression "to bore." The character occurs in the Book of the Dead and from the . . . . dynasty to the Twenty-sixth (sarcoph. queen of Amasis, Buns. and Birch).

(eel "ĕghĕlun" signifying hostile to everybody, Horap. ii. 98); "salouki" eel; "fōukasi" eel or muræna; "hĕlfōs" enemy; "at-sĕmni" enemy of peace; "sankots" perverse; "sŏhi" or "sŏhi" crimination, censure, refutation; "sĕuhi" or "sahōu" or "sahōui" imprecation; "s-hōur" or "s-hōuĕr" or "s-hōuŏr" to curse; "s-hŏuōrt" or "s-hōuŏrt" cursed; "sŏtsh" or "sōtsh" or "sōtshn" to revile, treat contemptuously. — The character occurs under the . . . . dynasty (Leemans xiv. 55. 9).

"tshōōs" or "tshŏs" or "tshŏtsh" or ("sŏs" of Manetho in Jos. c. A. i. 14) shepherd; "sart" or "sŏrt" wool; "sa" region, part; "sa" towards, to, from; "sap" or "sĕp" or "sōp" or "sōōp" by turns; "sŏp" rebellious; — in vulgar English "into your wool." The Asiatic foreigner, dwelling in or beyond the Sinai peninsula, is figured under the Third dynasty (Leps. d. ii. pl. 2), and as a hieroglyphic character as early at least as the Twelfth (Leps. d. ii. pl. 131).

"sad" or "sōtĕ" or "sōōtĕ" arrow; "sĕt" or "sōt" to redeem, ransom; "sŏd" or "sŏtĕ" redemption, price of redemption; "sōtt" appalled, fear. — The character occurs under the . . . . dynasty (Champ. gram. 76).

(crocodile signifying pillager, or furious, or having numerous offspring, Horap. i. 64); "msah" or "ĕmsah" or "ĕmsōōh" or "sōhi" or "sōuhi" crocodile; "sŏŏuhi" egg; "sa-ani" or "sōni" or "sŏnĕ" robber; "sŏni" or "sinŏŏui" robbers; "sura" or "sēra" to drag away, to take by violence; "sihi" insanity; "sihĕ" to be insane, furious; "svētĕ" or "sphid" foam, to foam; "salĕs" or "sōj" or "sōsh" insane, foolish; — in Greek "surŏ" to drag along. The character occurs in the Book of the Dead and from the Twelfth dynasty to the end of hieroglyphic writing (Leps. k. pl. 13 to 65). To the present day the *crocodile* is called "temsah" in Egypt (Clot-Bey ii. 92), or as pronounced by my Nubian attendant "tŭmsah."

"sarh" or "sĕrh" or "sĕhr" to brush, sweep; "sat" or "sēt" tail; "sĕpē" celerity; "aas" slap; "aas" dishonour; — in Greek "sairŏ" or "sarŏŏ" to sweep, "sarōs" broom; in Latin "sario" to weed, hoe, harrow. The character occurs under the Third dynasty (Leps. d. ii. pl. 5). A second form occurs under the Fourth dynasty (Leps. d. ii. pl. 22 and 97). A third form occurs also under the Fourth dynasty (Leps. d. ii. pl. 23, and k. pl. 7).

th hard, the Greek theta, its pervading meaning through.

bird-trap closed; "ĕgthai" or "gthai" or "gath" or "gathai" or "hath" or "hthai" thick, thickness, fat; — in Hebrew the ninth letter "thyd," by some regarded as meaning rolled together, "thwĕ" to roll together or envelope; in Greek the eighth letter "thēta" denoting nine; in English "thick." The character occurs from the Fourth dynasty to the Ptolemies (Leps. d. ii. pl. 19, 98, and k. pl. 6 to 56): and seems the origin of the later form Θ of the Greek letter "thēta."

bird-trap taken from the ground and carried away (compare Amos iii. 5): "athah" or "hiathah" burden, carrying a burden; — in English "thin." The character occurs in the Book of the Dead xviii. 21.

(eagle with crooked beak signifying old and perishing of hunger; the beak becoming crooked in old age until the bird dies of hunger, Horap. ii. 91); "ĕthvĕ" on account of; "at" or "ath" without; "ath-ōuŏm" fasting; "thŏhthĕh" necessity; — in Hebrew "thwd" fasting, "thwsh" to dart upon prey. The character occurs as early as the "Sixth" dynasty (Leps. k. pl. 6 to 35).

"thŏt" to think, be of opinion; "thŏt-hĕt" to be confident, consoled; "thnŏ" or "thnnō" to pound, "thnēu" or "thnnēu" triturated, trite; "athĕr" hammer, "athĕr" hammer for breaking stone; "tharmi" mallet or club; — in English "To cudgel one's brains." The character occurs from the Fourth dynasty to the Twentieth (Leps. d. ii. pl. 2, iii. pl. 61, 204, 239, and Champ. gram. 103).

"theōu" wind; "thōu-rēs" South wind; "nthē" oration, discourse; — in Greek "thĕŏria," in English "theory." The character occurs as early as the . . . . dynasty (tablet Brit. mus. 574, Buns. and Birch).

"thrans" or "thraps" awl, shoemaker's awl; "tshthēōut" pricking or puncture, hindered; — "thĕkthŏk" marking with points or tattooing; in English "thorn." The character occurs as early as the Fourth dynasty (Leps. d. ii. pl. 29). The modification occurs also under the Fourth dynasty (Leps. d. ii. pl. 27, 22).

"mntōp" or "man-thŏrp" needle; "thĕrp" or "thŏrp" to sew, sew together; "tshthŏd" "tshthŏt" thread; "thŏd" little cords, fringe. — The character occurs as early as the Fourth dynasty (Leps. d. ii. pl. 8). A second form occurs under the . . . . dynasty (Rosellin. mon lxiv. 4).

"thmē" or "thŏm" mat; "thōm" wicker carpet or covering; "thōm" or "thŏm" inclosure or wall; "thviŏ" garment, covering; "tshthēn" tunic; "thōuraji" sacred cloak. — The character occurs under the Third dynasty (Leps. d. ii. pl. 3). A possible modification occurs under the Twelfth dynasty (Burton excerpt. hierogl. 26, Champ. dict. 25 and 274, and Leps. d. ii. pl. 131).

(mouse "mun" signifying disappearance and destruction; for the animal corrodes, pollutes, and renders everything useless, Horap. i. 47); "thōōlĕ" or "thōlē" or "hŏŏlĕ" or "hōlĕ" or "hōli" cloth-moth; "thōlĕv" stain, pollution, to be defiled; "sŏs" to subvert, "sōs" to destroy; — in Hebrew "ss," in Greek "sēs" cloth-moth. The character occurs as early as the . . . . dynasty (Champ. dict. 185 and 186, Rosell. m, civ. 77, and sarc. Brit. mus.).

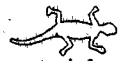
One or more species of *cloth-moth* therefore known in Egypt at the time of the invention of writing. — In Palestine, the "ish" is mentioned in Psalm xxxix. 11, Hosea v. 12; and garments eaten by the "ish," in Job xiii. 28, and Isaiah li. 8; the "ss" is distinguished and separately mentioned in Isaiah li. 8; and the name is continued in the Greek "sēs," mentioned in Matthew vi. 19, Luke xii. 33, and as eating garments, in James v. 2. In Greece, the "sēs that eats garments" is mentioned by Aristotle, Theophrastus, and Menander; and in Italy, the "tinea" is mentioned by Plautus cistell. i. 73, and Pliny xi. 41 and xxvii. 28. Three species of cloth-moth are distinguished by naturalists, Tinea tapetzella, T. pelionella, and T. sarcitella (J. F. D. in Kitt. cycl. bibl.). By European colonists, one of these was carried to Northeast America, where it has extensively multiplied.

"thŏk" or "thŏk" razor; "thĕ" like unto, "thu" as; "thĕt-hĕt" or "thēthēt" to argue, persuade; "thĕrtshŏ" to argue, blame; "thŏm" to be sharpened, hardened, blinded; "thnĕ" or "thnō" to hire, "thnō" wages. — The character occurs as early as the Fourth dynasty (Leps. d. ii. pl. 15).

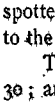
(shark or dogfish or Silurus "ĕnuthrōn galĕōn" signifying insatiable, disgorging and swallowing again, Horap. ii. 104); "thagi" or "thigi" drunkenness; — in English "to drink like a fish." The character occurs from the Twenty-third to the Twenty-sixth dynasty (Leps. d. iii.

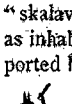
pl. 259). A possible modification occurs from the Nineteenth dynasty to the Twenty-second (Leps. d. iii. pl. 123, 254, and Rosellin. mon. stor. iii. p. 263).

In regard to Horapollo's statement, that the "ĕnuthrōn galĕōn" produces young from its mouth, some of the Siluridæ are known to carry their ova within the cavity of the mouth.

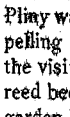
 "anthōus" house lizard or gecko; "thōi thōi" variegated, spotted; "thōi" black mark on the face; "thōi" or "thŏi" freckle or natural blemish; "thōuthōu" to be warty, infested with warts; "tshthōuit" calumny, false accusation; "thav" leaven; "thōh" to mix, "thŏt" mixed; "thēt" or "thōt" mixture; "thŏōu" heap; — in Hebrew "thvĕ" calumny, "thlwa" spotted, "lthaĕ" house lizard; in English "thatch." The character occurs from the Third dynasty to the Ptolemies (Leps. d. ii. pl. 3, and k. pl. 27 to 57).

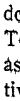
The *house lizard* or gecko is well known in Egypt. — The "lthaĕ" is mentioned in Leviticus xi. 30; and the "shmmyd" that "taketh hold with her hands and is in kings' palaces" (Prov. xxx. 28), translated "kalavōtēs" in the Septuagint, is admitted to be the house lizard. Farther North, the "skalavōtēs" or "askalavōtēs" is mentioned by Aristophanes nub. 170, and Aristotle animal. ix. 29 as inhabiting Greece: the "stellio" by Pliny viii. 49 and xxx. 27 as inhabiting Italy and Sicily, imported besides in the prepared state for medicinal use.

 "tshthĕh" street; "thō" throng, multitude, all the world; "tshtham" obstruction; "thōuĕt" or "thōuēt" or "thōuŏt" or "thŏōud" to congregate; "thōh" or "thŏh" or "thŏg" or "thōg" or "thĕgthŏg" or "thĕgthōg" to disturb, make disturbance; "thōōu" or "thō" an evil, great evil; "thōtĕ" fear; "sthĕrtĕr" tremor, to tremble; "sthĕrtĕr" or "thrtshō" to terrify; "ĕthautsh" Ethiopia, "ĕthŏtsh" or "ĕthōtsh" Ethiopian, — in Greek "aithiōps," in Latin "aethiops," in English *Ethiopian*. The character occurs in the Book of the Dead vii. 15. The "ōnōkĕntaurōs" of the Greeks, may also be compared.

 (armed man shooting arrows signifying a tumult, Horap. ii. 11); "sōthnĕf" a bowshot; "tshthōrtĕr" or "tshthĕrthŏr" tumult, sedition, to trouble, disturb; "thĕd" to rebel; "thatēu" or "hatēu" or "sara-thēōu" tempest, storm; "thi" or "thiō" or "thiēu" to overthrow, cause to fall. — The character occurs from the Fourth dynasty to the Ptolemies (Leps. d. ii. pl. 19, and k. pl. 6 to 58).

Arundo donax of Arabia. Called in English *reed* or *cane*, in French "roseau" or "canne" (Nugent), in German "pfeilrohr" (Fraas) or "pfahlrohr," in Italy "canna montana" or "canna domestica (Lenz), in Greece "kalamōs" (Sibth.), in Egypt and Yemen "kasab" (Forsk., and Del.), and probably furnishing the arrows in use at the time of the invention of writing: — Nubian archers with arrows are figured at Gizeh under the Fourth dynasty (Leps. d. ii. pl. 19); somewhat later, arrows of both Nubians and Egyptians are marked at intervals like joints (Rosellin. ii. pl. 117 and 118), and there is no evidence of subsequent change in the material; the arrows too of the Asiatic strangers at Benihassan under the Twelfth dynasty seem also from the reed: the Eastern world to the days of Pliny was governed by the arrow, rain and windy weather interfering with battles and sometimes compelling peace, the plant being extensively cultivated in Egypt; arrows continued in use as late as the visit of Baumgarten i. 6, but change in the mode of warfare leading to neglect of cultivation the reed became rare, was seen however by Forskal p. 24 in ditches at Rosetta; by Delile, planted for garden hedges. Farther North, the "thōnax" or reed-arrow is mentioned by Homer il. xi. 583; the "kalamōs" producing arrows, by Theophrastus, and Dioscorides; the "arundinetum," by Cato vi. 3, and Columella, and the superior quality of the "calamus" arrows grown in Italy, by Pliny xvi. 65: A. donax is described by C. Bauhin theatr. pl. 271, is termed "a. sativa quae donax Dioscoridis" by Tournefort inst. 526; was observed by Forskal, Sibthorp, Chaubard, and Fraas, under cultivation, as well as seemingly wild in wet situations from the Peloponnesus to the Dardanelles; by Lenz, cultivated and seemingly wild in Italy; by Forskal, near Marseilles; is known to occur also in Carniolia and Barbary (Pers.); and judging from importations, is largely cultivated at present for fishing-rods. Southward from Egypt, was observed by Forskal in inundated places and along streams in Yemen, its probable place of origin.

 "thŏōui" or "tōōuĕ" slippers; "thivs" heel; "thŏls" to trample; "t-hĕmkō" or "t-hmkō" or "thmkō" or "hĕmkō" to oppress, tyrannize; "sthĕtŏn" oppressor; "thaēu" or "thaiēu" or "taĕiēu" or "taiĕiēu" or "taiē" or "taiēu" or "taiēout" illustrious, honourable, most honourable; "taiĕiĕ" or "taauĕ" or "taia" or "taiĕ" or "taiō" honour, praise, to honour; "thlōm" or "thlŏm" furrow, trench. — The character occurs from the Fourth dynasty to the Tenth, sometimes only one slipper represented (Leps. d. ii. pl. 98, 150, 148, and Champ. dict. 288).

 "thĕvi" sharp stake or grave-stone; "thulōs" column; "thōuōd" pillar or stela; "thax" or "thōux" or "thōks" or "tŏks" to drive in or infix; "thŏums" or "thōms" or "thŏms" to bury; "thal" or "thĕl" hill, mound; "thva" mound or tomb. — The character occurs from the Third dynasty and the Book of the Dead to the end of hieroglyphic writing, usually in the horizontal position (Leps. d. ii. pl. 2, and k. pl. 10 to 66).

"thmai" or "thmaiŏ" or "thmēi" justification, to justify, just and true; "thahs" or "thŏhs" unction, to anoint; "thlē" or "thlēli" or "thōftĕf" to distil by drops. — The character occurs from the Third dynasty to the Ptolemies (Leps. d. ii. pl. 5, iv. pl. 36, and k. pl. 5 and 7).

"tshthōm" or "thaĕit" or "haĕit" porch, gate, door; "thōuai" or "thvai" threshold, cell; "hthēs" or "thōus" top; "thaē" end; — in Hebrew the fourth letter "thld" meaning gate or door. The character occurs under the . . . . dynasty (sepulchr. tablet Brit. mus., Buns. and Birch).

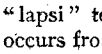
ps, its pervading meaning to lapse.

"shaps" shoulder-blade or shoulders; "haps" of necessity, it must needs be; "shatps" failing, maim. — The character occurs in the Book of the Dead, also under the . . . . dynasty (Buns. and Birch). The substitution of the ram occurs in the Book of the Dead, and from the Seventeenth dynasty to the Ptolemies (Leps. k. pl. 25 to 36 and 57).

The *dorcas anteïope* is besides figured entire as a hieroglyphic character — (Champ. dict. 126); and the living animal may probably inhabit Egypt on its borders.

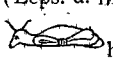
(*Octopus* "pōlupōtha" signifying having consumed the sustenance of others and his own; for in the absence of other food the animal eats its own arms, Horap. ii. 106); "ships" wrinkles of the brow, extremity of the skin of the eyes and ears; "laps" any one; "shilapsi" or "lapsi" to bite; "lapsi" or "lĕpsĕ" morsels; — in colloquial English "crow-feet." The character occurs from the Third dynasty to the Ptolemies (Leps. d. ii. pl. 18, and k. pl. 5 to 58).

sledge: "aps" number, "daps" to number; "psit" or "psis" nine; "jp-psitĕ" the ninth hour. — The character occurs from the Fourth dynasty and the Book of the Dead to the Twenty-fifth dynasty (Leps. d. ii. pl. 98, and k. pl. 24 to 47).


(crocodile incurved signifying going down, Horap. i. 66); "psanĕ" waves; "saps" or "sĕps" or "sōps" supplication, prayer. — The character occurs in the Book of the Dead, and from the . . . . dynasty to the end of hieroglyphic writing (Champ. gram. 74 and dict. 176, Roselin. mon. stor. ii. 25. 7, and titles of Vespasian, Buns. and Birch).

u long or ū, in Greek ōu, its pervading meaning a truce.

(moon with its horns turned upward in the beginning and first half of the month, Horap. i. 4); "ōutĕ" between; "ōuŏtsh" interval; "aōuŏ" covenant. — The character occurs under the . . . . dynasty (Sharpe pl. 16, Buns. and Birch). A second form occurs under the Twentieth dynasty (Leps. d. iii. pl. 227).

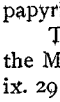

(bull tied with wild fig signifying made wise by misfortune, Horap. ii. 73); "ōuĕm-hĕt" or "ōuŏm-hĕt" to chew one's heart, repent; "sat-ōuĕm" or "sathmi" rumination, "sathmi" to ruminate. — The character occurs under the . . . . dynasty (tablet biblioth. Paris, Buns. and Birch).

(eagle carrying a stone signifying safely dwelling in town; for the bird carries a stone to its nest, rendering it more stable, Horap. ii. 46); "ōuĕhsōi" or "ōuahsōi" roof; "ōuahmi" or "ōuahmĕ" upper chamber, floor or story; "vōuka" city; "ouĕh" or "ouēh" or "ōuōh" or "ōuŏh" to sojourn, dwell; "phŏōui" or "ĕtphŏ" or "ōuĕtpŏ" burden, "aōuîn" ship's lading; "ōuaji" or "ōuōj" or "ōuŏj" safe; "ōujai" safety. — The character occurs as early as the . . . . dynasty (Champ. gram. 111). A second form occurs under the Eighteenth dynasty (Luxor obelisk, Champ. mon. iv. pl. 320).

(quail's bone "ōrtugŏs ōstĕōn" signifying permanence and security, the bone of this animal being insensible to pain, Horap. ii. 9); "mōun" to bear patiently, endure; "mōun-evōl" to continue, permanence; "mĕtōuvĕh" baldness. — The character occurs under the Third dynasty and perhaps the same under the Fourth (Leps. d. ii. pl. 3 and 17).

(scarus "skarōn" signifying gluttonous; being the only kind of fish that ruminates, devouring all small fishes that come in its way, Horap. ii. 103); "ōuisi" to swell; "ōualĕ" to increase; "ōuētshsi" breadth, "ōuŏtshs" breadth, big fish; "ōuōmt" fat; "ōuam" or "ōuĕm" or "ōuŏm" to eat; "ōōushōuēsh" to chew; "ōuĕm-mētsh" voracious, eating many; "rĕf-ōuŏm" glutton; "ōuŏōlĕ" or "ōusia" riches; "nōuf" or "nōuv" gold. — The character occurs from the Fourth dynasty and the Book of the Dead to the Eighteenth dynasty (Leps. d. ii. pl. 28, iii. 32, and papyri, Buns. and Birch).

The *scarus* of the ancients has been identified, and is known to inhabit the Eastern portion of the Mediterranean. — The account of the "skarōn" ruminating, is also given by Aristotle, and Pliny ix. 29; and the latter states, that the living fish was successfully introduced along the Italian coast by Optatus Elipertius in the reign of Tiberius Claudius.


"sōusōu" moment; "ōunōu" or "ĕunōu" hour; "ōunōōuĕ" or "ōunŏōui" hours; "rōuhĕ" or "rōuhi" evening; "ōutshē" or "ōuŏtshē" or "ĕutshē" night; "haōu" or "hōōu" or "ĕhōōu" day. — The character occurs in the Book of the Dead v. 15, 29, and lxv. 146.

(moon with its horns turned downward signifying month, Horap. i. 4 and 63); "ōōu" or "ōōh" or "iōh" moon; "sōua" or "sōuai" new moon or month. — The character occurs from the beginning of the Seventeenth dynasty to the Persian conquest (Leps. k. pl. 23 to 49).

(a woman or Isis signifying year; Isis being the dog-star, by the Egyptians called "sŏthis," Horap. i. 3); "sōu" or "siōu" star; "siŏd" or "shiŏd" or "sōun-hōōr" the dog-star or Sirius; "siŏth" or "sōthis" dog; "rōmpi" or "rōmpĕ" year, "rmpōōuĕ" years; — compare also the name of the city of "Siōut" or "Siōōut" or "Siōōuth" or "Siŏōut," to the present day called Siût, but by the Greeks (Strab. xvii. 1. 40) translated "Lukōpōlis." The character occurs as early as the Fifth dynasty (Leps. d. ii. pl. 44 to 64). A second form occurs from the Seventh dynasty to the Ptolemies (Leps. k. pl. 6 to 54).

("kōukōupha" hoopoe, and hoopoe-headed sceptre, signifying gratitude, the bird alone among animals taking care of its parents in their old age, Horap. i. 52); "kōukōuphat" hoopoe; "hmat" or "hmōt" or "tĕnhōut" grace, favour; "ōurōt" to give thanks. — The character occurs on the Gliddon mummy-case and from the Third dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 2, and k. pl. 25 to 61). A staff agreeing with the above figure, was found by myself on the pilgrim route near Suez; and on being shown at Mocha, was recognized as of the pattern in vogue in Western Arabia.

The *hoopoe*, Upupa epops, was observed by myself frequent in Egypt; at least during the winter season.

(stag's horn signifying long-lived; for the animal renews its horns yearly, Horap. ii. 20); "ĕiōul" or "ĕiĕōul" or "ĕōul" stag; "taiōu" fifty; "pĕstaiōu" or "pstaiōu" or "stau" ninety; "nōutf" to be reconciled. — The character occurs under the Third dynasty (Leps. d. ii. pl. 5).

The *stag*, Cervus elaphus, known therefore to the Egyptians at the time of the invention of writing: — apart from hieroglyphic writing, the stag is figured under the Twelfth dynasty at Benihassan in hunting scenes belonging perhaps to a more Northern climate, for according to Pliny viii. 51, Africa does not produce stags: this or an allied species is however known to inhabit Barbary; and Wilkinson anc. Eg. iii. p. 23 was informed, that stags are sometimes seen near the Natron Lakes in Egypt. In Palestine, the "ayl" is mentioned in Deut. xii. 15, xiv. 5, Psalm xlii. 1, Cant. ii. 9 and 17, Isai. xxxv. 6; and the "aylĕ" or female, in Gen. xlix. 21, 2 Sam. xxii. 34, and Cant. ii. 7. In Greece, the "ĕlaphōs" is mentioned by Homer il. i. 225, Sophocles aj. 178, Euripides iph. t. 1114, and Xenophon anab. i. 5. 2; and according to Pliny viii. 50, "cervi" sometimes swim in companies from Cilicia in Asia Minor to Cyprus. As inhabiting Italy, the "cervus" is besides mentioned by Ovid; the "cerva aeripes," by Virgil; and the "cerva silvicultrix," by Catullus. Farther North, the stag abounded in Switzerland during the Stone period; as appears from debris of the earliest villages (Heer, in Troyon p. 270).

(cobra with the tail covered by the remainder of the body, by the Greeks called "vasiliskōn," by the Egyptians "ōuaiōn," signifying an age or lifetime "aiŏna," Horap. i. 1); "ōviōn" serpent; "ōurō" or "rrō" king; "ōuaĕitsh" or "ōuaitsh" or "ōuōĕitsh" or "ĕuōĕitsh" or "sĕu" or "sĕōu" time, period of time; "mōuh" to fill, "si" or "sĕōu" or "sĕu" filled; "nōuōshĕ" bounds; "nōu" to expect; "nōu" now; — in Latin "aevum" an age or lifetime. The character occurs from the Third dynasty to the end of hieroglyphic writing (Leps. k pl. 5 to 62).

shgll (shibboleth of Judges xii. 6), its pervading meaning harvest.

"ŏsg" or "ōgs" or "ŏhs" or "ŏsg" sickle, harvesting; "shaiŏsg" reapers; "ĕhs-kam" to cut reeds; "sĕhshms" to collect spikes of grain; "ōuŏtsh" fissure or cleft. — The character occurs from the Third dynasty to the Greek conquest (Leps. d. ii. pl. 2, and k. pl. 5 to 50).

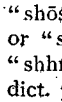
"gĕms" or "gēms" ear of corn; "hĕms" ripe standing wheat; "sōuō" wheat; "ŏsg" or "ŏsh" or "ōhs" or "ŏhs" harvest; — the sound shgh is preserved in Egypt, being the only sound that the camel will obey, and therefore learned by camel-drivers; traces may also be found in the Hebrew "shbld" spike of grain; and in English, in the manner in which some persons pronounce "shkat!". The character occurs as early at least as the Eighteenth dynasty, and continues in use (Leps. d. iii. pl. 97, and Champ. dict. 228 and gram. 370).

Triticum turgidum of the East Mediterranean countries. *Downy wheat* is distinguished in Egypt and called "qamh a'raby" or "qamh sebaqeh" the strongest (Del.), and may prove the kind cultivated at the time of the invention of writing: — standing crops of bearded wheat are figured under the Fourth dynasty at Gizeh (Leps. d. ii. pl. 9), but nowhere on these nor on subsequent monuments with the minute accuracy required for distinguishing species; the "qmh" is mentioned in the history of Abraham (Gen. xviii. 6), and in the legislation of Moses (Numb. v. 15): the "olura" in the days of Herodotus was the favourite food of the Egyptians, is mentioned besides by Homer il. v. 196, and Dioscorides as cultivated among the Greeks, by Pliny xviii. 19 as confined to Greece, Asia Minor, Syria, and Egypt: seeds unrolled in mummies were recognized by Decandolle phys. veg. 694 as those of T. turgidum; the living plant was observed by Forskal, and Delile, abundantly cultivated in Egypt; by Bory, under cultivation in the Peloponnesus; according to Koch, occurs at Constantinople, Trebizonde, and in the Tschoruk country; but appears to have continued unknown in and

beyond Hindustan. Westward from Egypt, according to Loiseleur-Deslongchamps cereal. p. 75, was cultivated in the days of Pliny at Rome (A. Dec.); is termed "t. spica villosa quadrata breviore et turgidiore" by Morison viii. pl. 1. f. 14, and seems well known in France and middle Europe (Linn., and Pers.). By European colonists, was carried to America, but to what extent it may be cultivated I am not aware; I remarked spikes intermixed with other kinds of wheat distributed in Oregon. (See T. vulgare).

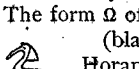
(crocodile's tail signifying "skōtōs" darkness, the shades of death; the animal having power chiefly in the tail, with which it kills its prey, Horap. i. 67); "stshnĕ" or "ōutshshnĕ" or "ǫutshshnĕ" suddenly; "stsh" or "tshsha" or "tshjap" stroke, "tshshōtf" to strike or crush in; "shshōr" smoke; "shŏrh" nocturnal, "shŏrah" night; "shōmshĕm" or "shōmshm" or "shōsm" darkness, the shades of death; "tshshĕ" to wipe away, abolish; "sshrĕht" or "sshraht" or "sjrĕht" rest, silence; — "ōshs" to cover with pitch; in Hebrew "shhwr" or "shhr" black, "shhr" dawn. The character occurs as early at least as the . . . . dynasty (Champ. gram. 120 and dict. 75).

o guttural or ŏr or aw, the Greek "oměga," its pervading meaning awe.


(lion's head signifying awe "phŏvĕrōn," Horap. i. 20); "au" were, mark of past time; "nōrj" or "hōur" terror, horror; "hōur" to be terrified. — The character occurs from the Eleventh dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 150, iii. pl. 132, and k. pl. 23 to 63). The form Ω of the Greek letter "oměga" may be compared with a front view of the lion's head.

(black pigeon "pĕristĕran" signifying widow; solitary crow "kŏrǫnĕ" presaging widowhood, Horap. ii. 30 and i. 8); "ŏrv" or "ōrĕv" or "ŏrĕv" to close, shut up; "ōrj" closed; "mauaat" or "mmauat" alone; "ahŏria" solitary bird; — in Hebrew "orv," in Sanscrit "karawa," in Greek "kŏrax" and "kŏrǫnē," in Latin "corvus" and "cornix," in French "corbeau" and "corneille," in English "crow." The character occurs from the Third dynasty to the Ptolemies (Leps. d. ii. pl. 3, and k. pl. 5 to 52).

The hieroglyphic character is clearly *Ibis cristata;* a Madagascar bird, so far as known, not inhabiting the countries on the Nile.


"auhĕ" to be conquered; "ǫms" falling headlong, to descend into the depths; — in English "fall." The character occurs from the Seventeenth dynasty to the Nineteenth (Leps. d. iii. pl. 5 to 165, k. pl. 32, papyri Brit. mus., Buns. and Birch).

"aulē" hall; "auĕt" dwelling; "au" or "auis" or "auĕis" to reach; "hau ĕvōl" to reveal; — in Hebrew "awlm," in Greek "aulē," in Latin "aula," in English "hall." The character occurs in the Book of the Dead 50 a 48. 35. c.

(serpent watching or keeper of the world, signifying watchful king, Horap. i. 57); "ōrf" to guard, keep; "aurēj" end. — The character occurs in the Book of the Dead, and from the Twentieth dynasty to the end of hieroglyphic writing (Buns. and Birch, and Leps. d. iii. pl. 226, and k. pl. 61 to 67).

ŭr or ŭm, humming, the sound uttered with closed lips or the musical element of the voice, its pervading meaning knowledge; the interjection "hem!" or "humph!" or "mum!"

(owl "nuktikōrax" signifying death; for the bird attacks nestlings unexpectedly in the night, as death comes unexpectedly, Horap. ii. 24); "vōm" or "vōn" or "mǫulaj" or "mǫulōuj" nycticorax or owl; "krmrm" or "krmrĕm" or "hrĕmrĕm" murmuring; "mǫuǫut" or "mǫǫut" or "mǫǫut" or "maǫu" to kill, to die; "maǫut" dead; "mǫu" death; "ĕmi" knowledge; — in Hebrew "ĕmĕ" murmuring or humming; further, in Hebrew "myd," in Sanscrit "mid" and "medh" and "meth" and "mith" and "math" and "muth" and "mri," in Zend "mrete," in Pehlevi "murdeh," in Malay "mita," in Spanish "mata," in Greek "mōrtōs," in Latin "mors," in German "mord," in French "mort," in English "mortal" and "murder;" also the owl regarded among the Greeks as the "bird of wisdom." The character occurs on the Gliddon mummy-case and from the Third dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 3, and k. pl. 5 to 62).

The species selected, as appears from coloured figures on the Gliddon mummy-case, and from the outline figure under the Third dynasty (Leps. d. ii. pl. 3) is the *barn owl*, Strix flammea; — a bird known to inhabit Egypt, as well as Europe, Asia, and North America.

(soul "psuhēn" long delaying in this life, represented by the phœnix bird, Horap. i. 32); "psuhē" life, soul; — in Hebrew "nshmĕ" soul. The character occurs as early as the Fourth dynasty (Leps. ii. pl. 96); is further traceable in the Phœnician alphabet; and the butterfly is well known to have been a symbol of the soul among the Greeks.

Various species of *butterfly* are known to inhabit Egypt — (Clot-Bey ii. 90): and apart from hieroglyphic writing, one or more apparently exotic species are figured under the Twelfth dynasty at Benihassan.

(phœnix signifying returning home after long journeying, Horap. i. 33: also renewal after a long interval, the dead phœnix being buried by the Egyptian priests, Horap. ii. 54); "thĕms" or "thōms" or "thǫms" or "tamĕs" or "tĕms" or "tōms" or "tǫms" to bury; "thĕmiō"

dust; "kĕrmi" or "kĕrmĕs" or "krmĕs" ashes; "ōmĕ" or "ōmi" mud or clay. — The character occurs as early as the Fifth dynasty (Leps. d. ii. pl. 43, Champ. gram. 76, and Sharpe pl. 12).

"mōuki" or "ōumōuki" granary. — The character occurs in the Book of the Dead xlvii. 125, also under the . . . . dynasty (papyr., and Buns. and Birch).

d, in Greek "nt," its pervading meaning end.

panegyry-festival; "dĕau" or "dĕōōu" or "dōōu" or "dlōulai" or "dsōōu" or "dsŏit" or "dtaiō" to praise, glorify; "ŏōud" to rebuke: — The character occurs under the Third dynasty, and in modified forms continues to the Ptolemies (Leps. d. ii. pl. 6, k. pl. 60, Leemans 22, Buns. and Birch).

(hyæna skin signifying intrepid until death, Horap. ii. 68); "hŏid" hyæna; "dōui" or "dōuōĕi." or "dōuōi" or "d-ōuōi" to advance, make a stand; "d-ĕjĕn" or "d-ĕhrĕi" or "d-ĕhrĕn" or "d-ĕgōun" or "dōuvĕ" (or "d-ouvĕ") to resist, carry on war; "d" contest. — The character occurs from the Fourth dynasty to the Eighteenth (Leps. d. ii. pl. 21, 61, and k. pl. 26). The combination occurs in the Book of the Dead, also under the . . . . dynasty (Champ. gram 379, 436, dict. 342, tab. Brit. mus., Buns. and Birch); and the modification under the Roman conquest (Leps. k. pl. 60).

"d" or "dd" or "taa" or "tĕi" or "tō" giving, to give; "ĕmhau" or "mhau" sepulchre or tomb; "d-mhau" interment; "thōuōd" pillar or stela; — in Hebrew "dnĕ," in Greek "thōma" and "thōsis" and "thithōō" and "thithōmi," in Latin "do" and "donum," in English "donation." The character occurs from the Third dynasty to the end of hieroglyphic writing (Leps. d. ii. pl. 5, and k. pl. 11 to 66). The gift above figured is clearly a piece of the money current in Egypt before or under the Third dynasty; in later modifications the gift is pointed and pyramidal in shape; and hence apparently the later pyramidal form Δ of the Greek letter "thĕlta."

"taktōn" inverted; — in Hebrew "dhd" underneath. The character occurs in the Book of the Dead, also under the . . . . dynasty (Champ. gram. 369).

"hōd" or "hŏid" or "hŏd" tribute; "d-hĕmi" to give passage-money; "hŏt" to navigate. — The character occurs as early as the Fourth dynasty (Leps. d. ii. pl. 104). A second form occurs under the Seventeenth dynasty (Leps. d. iii. pl. 12 and 83).

"ripid" sacred fan; "ĕmĕnt" or "ĕmnt" the West; "amntĕ" or "aměnd" Hades (the place of departed spirits); "d-hap" to judge. — The character occurs on the Gliddon mummy-case and from the Fifth dynasty to the end of hieroglyphic writing (Leps. k. pl. 5 to 63). The combination occurs under the Fourth dynasty (Leps. d. ii. pl. 98, Champ. dict. 255). The lower portion of this combination occurs separately under the Third dynasty; and is surmounted by a hawk under the Fourth or Fifth (Leps. d. ii. pl. 3 and 82).

Hyphæne cucifera of Abyssinia. A branching palm called in Egypt and Yemen "doum" or "dom" (Forsk.); and flag-shaped fans plaited from its fronds, together with matting, brought down the Nile as early as the invention of writing: — the palm occurs at regular intervals in a garden figured under the Seventeenth or Eighteenth dynasty (Champ. Figeac pl. 55); the "kŏukiōphōrōn" is mentioned by Theophrastus i. 10 to iv. 2 as resembling the date-palm, but the trunk branching, the timber superior in quality, the fruit large enough to fill the hand and in part edible; Egyptian "kōkkina" matting is enumerated by Strabo xvii. 2. 5; the "cuci," by Pliny xiii. 18 as resembling the date-palm, its fronds employed for plaited work; mats and bagging of fronds of H. cucifera according to Delile are made in Upper Egypt; and I witnessed the plaiting both of mats and flag-shaped fans at Mocha. In ascending the Nile, H. cucifera made its first appearance in Lat. 27° 25′, and continued scattered on the river-flat clearly exotic to the end of my journey at the First cataract; beyond (according to Delile, and Greville), it grows on the Desert margin in Nubia as far as the border of Abyssinia, sheltering the development of thickets in some instances to the extent of rendering the soil fit for cultivation; an encampment at Atbara, the tents made of mats from its fronds, was visited by Burckhardt. Farther East, H. cucifera was observed by Forskal under cultivation along the base of the mountains of Yemen; and by myself, near Mocha, evidently planted. By European colonists, was carried to Hindustan in 1828, and again in 1837 (Graham).

"nŏit" or "nōĕit" or "nŏut" meal; "nōut" mill, to grind; "nōutĕm" bountiful; "nōutĕ" or "nōud" God; — a word current in Egypt in the days of Joseph and written "nd" in Hebrew letters in Gen. xli. 45: compare also the Hebrew words "thhn" to grind, "thhnn" and "thhnĕ" hand mill, and the twenty-third and last letter "dw" meaning mark (Ezek. ix. 4 to 6). The character occurs on the Gliddon mummy-case and from the Third dynasty to the Roman conquest (Book of the Dead xlvii. 125, 29, Leps. d. ii. pl. 6, 10, and k. pl. 33 to 57); is the probable origin of an early form of the Phoenician letter "dw;" and is identical with the form of the same letter in later Phoenician, in Hebrew, Abyssinian, Etruscan, Umbrian, and Celtiberian. In fact, the form T of the Greek letter "tau," and of the same letter in Latin, Oscan, Celtiberian, and throughout Western Europe, seems only a modification (see the figures in Gesen. mon. Phoenic.).

Thŏt's invention may have been at first communicated to but few individuals, serving as a means of gaining a living, — like the profession of a writer in Eastern countries to the present day.

3811 B. C. (= 3649 + "162 years" of Gen. v. 18, Sept. vers., Jos., Theoph., and Afr.), Jared.

The writings called the "Books of Thŏt" were composed before the reign of Menes (Diodor., and Clem. Alex.). The inventor of writing may not have been himself an author, but the work named after him probably included some *præhistoric literature:* — for various nations unacquainted with the art of writing are found to possess annals, legends, and poetry, orally transmitted; in some instances by regularly appointed guardians.

Fifteenth generation. Jan. 1st, 3800, among living men:

The same year (= 3862 in calendar years = 3655 + "198 + 297 + 252" in the Euseb.-Maneth. table), a date possibly marking some event.

In Upper Egypt, the city of This already in existence, for Menes was born there. — Abydos, by some writers regarded identical, is mentioned as a distinct city on a coin of Hadrian, and by Stephanus Byzantinus; situated however in the same neighbourhood.

Potamogeton crispus of the Temperate portions of the Eastern continent. Called in Italy "potamogeto" (Targ., and Lenz), in which we recognize the "potamogeton" used in Egypt for protection in hunting crocodiles (Plin. xxvi. 33 and xxxii. 19) as early perhaps as this date: — P. crispus was observed by Delile in Lower Egypt, from Cairo to Rosetta. Farther North, was observed by Sibthorp, and Fraas, from Thessaly to Constantinople; is known to grow also along the Taurian mountains and as far in Siberia as the Angara (Bieb., and Gmel.). Westward, is termed "p. foliis crispis sive lactuca ranarum" by Tournefort inst. 233; is known to grow in Italy and throughout middle and Northern Europe as far as Sweden and Iceland (fl. Dan. pl. 927, Curt. Lond. v. pl. 15, and Hook.). Is known to grow also in the Southern Hemisphere, in Australia (Wats., and A. Dec.).

Potamogeton natans of Temperate climates. Called in Britain with other species *water-spike* (Prior), in Italy "verniera" (Lenz), in Greece "nĕrōphulli" (Fraas); and possibly the "potamogeton" in question and Egyptian "ĕthĕgis" — of Syn. Diosc.: P. natans has not been found in Egypt, but was received by Fresenius from Abyssinia, was observed by Forskal in watery places among the mountains of Yemen, and is known to grow in Hindustan (A. Dec.). Farther North, the "pōtamōgĕitōn" growing according to Dioscorides in pools and watery places, the leaf beet-like and incumbent or slightly eminent upon the water, is referred here by writers: P. natans is known to grow in Siberia (Wats.), and was observed by Sibthorp, Chaubard, and Fraas, in the rivers of Crete and the Peloponnesus. Westward, the "pōtamōgĕitōn" or "stahuitēn" is identified in Syn. Diosc. with the "phōntilis" or "phlōuminalis" of the Romans, and Pliny's description of the "potamogeton" seems chiefly taken from Dioscorides: P. natans is described by Fuchsius p. 651; is termed "p. rotundifolium" by Tournefort inst. 233; is known to grow in Italy, Barbary, Madeira, the Azores, and throughout Europe as far as Lapland and Iceland (fl. Dan. pl. 1025, Hook., Desf., Lemann, and Wats.). Farther West, is known to grow from the Atlantic coast of North America to Arkansas (A. Gray, and Nutt.), and to Norfolk Sound on the Pacific (Mert.). And in the Southern Hemisphere, in Chili, New Zealand, Tasmania, Australia, and Austral Africa (Gay, and A. Dec.).

Salix subserrata of the Upper Nile. A *willow* called in Egypt "safsaf bælledi" (Forsk.), in Egyptian "thŏr" or "thŏri" (transl. Sept., and Kirch.) and its timber "vŏ thŏri" or "vŏ ntŏrĕ" — (ms. Borg.): clustering young shoots to all appearance indigenous were observed by myself on the river-brink near Shekh Said, in about Lat. 26° 20′, and the species was recognized by my attendant as frequent in Dongola, his native country. Was observed by Forskal to be sensitive to cold "impatiens frigoris" no farther North than the gardens of Lower Egypt; where also it was seen by Delile.

III. THE KINGS OF THE EARTH, OR EARLY KINGS OF EGYPT.

3769 B. C. (= 3770 in calendar years = 2953 + 30 + "66 + 63 + 29 + 214 + 302 + 26 + 18 + 26 + 20 + 23" years in the Afr.-Maneth. table = 2498 + "203 + 448 + 198 + 297 + 252 — 60 — 27 — 39" years in the Euseb.-Maneth. table), the date assigned to the fourth king of Egypt, but probably marking the accession of the first king Mēnēs. — "Sixty-two" years are assigned to his reign in the Afr.-Maneth. table, and by Eratosthenes; "sixty" in the Euseb.-Maneth. table; and he is mentioned by Herodotus, Josephus, and other Greek writers. No contemporaneous monuments are known: but his name occurs in genealogical tablets of later times, at Sakkarah, Thebes, and in the Turin papyrus; also on amulets.

The canal Bahr Yusuf (according to Wilkinson Theb. and Eg. p. 341) is also called "El Menhi" or "Menhee," apparently from Mēnēs: an instance of permanence in a proper name altogether unexampled. (Compare Herodot. ii. 99).

Mēnēs led an army beyond the frontier of Egypt, and "acquired renown:" — confirmation is

found in the hieroglyphic oval of his successor; one of the characters being clearly a national emblem or standard. It does not seem probable, that the first military campaigns extended any great distance beyond the Sinai peninsula.

Sixteenth generation. May 1st, 3767, among living men:

The founding of the city of Memphis is also attributed to Menes — (Herodot. i. 105): and some confirmatory evidence will be remarked under the succeeding reign.

"3761, vernal equinox" (Nicolas, one mode of reckoning the birth of Jared corresponding very nearly, 3348 + "187 + 65 + 162 years" of Gen. v. 18 to 25 and Josephus = 3762), the *Mundane era* of the Jews: their *civil era* beginning in the following October. — The Mundane era (according to Steinschneider ii. 10) is first mentioned by Sabbatai Donolo. The current reckoning corresponds; the "Feast of the Passover" being celebrated in A. D. 1857 "on the evening of the 8th" of April, "which is the 15th day of the Jewish month Nisan, of their year 5617" (Boston newspaper), + 1 — 1857 = 3761 B. C. (See Hillel Hanassi).

3741 B. C. (= 3742 in calendar years = 3715 + "27" = 3055 + "198 + 297 + 252 — 60" of the Euseb.-Maneth. table), Menes succeeded by his son Athŏthis, second king of Egypt: — to whose reign "fifty-nine" years are assigned by Eratosthenes. No contemporaneous monuments are known: — but the hieroglyphic oval of king Athot occurs in the genealogical table in the Turin papyrus (Leps. k. pl. 5 and 9).

Seventeenth generation. Sept. 1st, 3734, among living men:

Athŏthis built a "royal mansion" at Memphis (Maneth.); whether of wood, broken stone, or of *dobi* (sun-dried brick), we are not informed; probably, of the last-named material. — The change in cottage-architecture to windowless dome-shaped mud huts, took place prior to the invention of the Phoenician alphabet (compare the letter "thld" or "dalēth"). A possible connexion may be found in the Hebrew name of Memphis "mph" (Hos. ix. 6), which seems the origin of "mapalia" (Lucan iv. 684, and Hieronym. prolog. at Amos.) the Roman name of these dome-shaped mud huts, built to the present day by the general population of Egypt.

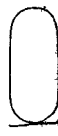
King Athothis was of the medical profession, and wrote on *anatomy* — (Maneth.). Of the "Sacred Books" of the Egyptians known to Clemens Alexandrinus, "six" treated of *medicine*. And the Egyptian physicians continued in high repute in the time of Herodotus.

The healing art being practised, *traffic* by land was in existence for procuring *drugs*: — the drugs or medicines of Egypt, are pointedly alluded to by Homer; and to the present day, Egypt continues in a good measure the centre of the drug trade.

The procuring of *perfumes* and valuable *gums*, would naturally fall into the hands of the same traders: — direct evidence of the importation of gums under the Tenth dynasty, is found in the lining of a mummy-case described by Birch (in Glidd. ot. Ægypt. Lond. 1849).

The procuring of *gems*, may also have been included; though these were derived in some instances from more distant countries: — different kinds of gems or precious stones are figured (according to Champollion-Figeac anc. Eg. 208) in Tribute-processions under the Eighteenth dynasty; are also mentioned in the Hebrew Scriptures.

3714 B. C. (= 3715 in calendar years = 3684 + "31" of the Afr.-Maneth. table = 3055 + "198 + 297 + 252 — 60 — 27" of the Euseb.-Maneth. table), Athŏthis succeeded by his son Kĕnkĕnēs, third king of Egypt. In Eratosthenes' List, he is called "Athŏthis II." with — "thirty-two" years assigned to his reign.



Eighteenth generation. Jan. 1st, 3700, among living men:

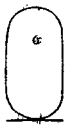
3683 B. C. (= 3684 in calendar years = 3661 + "23" of the Afr.-Maneth. table), Kĕnkĕnēs succeeded by his son Ouĕnĕphēs, fourth king of Egypt.

"In the reign of Ouĕnĕphēs" (Maneth.), a famine.

Ouĕnĕphēs built pyramids at Kŏhŏmĕn — (Maneth.): and these pyramids appear to have continued a chronological landmark in after times. (The village of Lahoum, not far from the Labyrinth, presents at least some similarity in name).

According however to Mariette 76, the terraced pyramid at Sakkarah was built by Ouĕnĕphēs. It is nearly 394 feet square at base, by 196 feet high, has seven steps (like the Babylonian towers), is "constructed of calcareous stone and granite" without "the minute care and finish of the pyramids of the later dynasties," and "a sarcophagus and some other remains were discovered in it when opened" (Birch).

The hieroglyphic sign of the pyramid it occurs under the Fourth dynasty, and probably not earlier than the reign of Ouĕnĕphēs: — continues in use under the Twelfth (Leps. d. ii. pl. 17, and k. pl. 5 to 12).



Nineteenth generation. May 1st, 3667, among living men:

3660 B. C. (= 3661 in calendar years = 3641 + "20" of both Maneth. tables), Ouĕnĕphēs succeeded by his son Ousaphaithōs or Ousaphaēs, fifth king of Egypt. The name of king Hesep has been found on subsequent monuments, and "some religious and medical works are referred to the period of his reign." (Birch).

3649 B. C. (= 3584 + "65 years" of Gen. v. 21, and Josephus a. J. i. 3. 4.), Enoch.

3640 B. C. (= 3641 in calendar years = 3615 + "26" of both Maneth. tables), Ousaphaithōs succeeded by his son Miĕvithōs or Niĕvaēs, sixth king of Egypt. In Eratosthenes' list he is called "Thiavaēs" — with only "nineteen" years assigned to his reign. The name of king "Imhotep" occurs at Hamamat, also the names of two of his sons (Leps. d. ii. pl. 115 and k. pl. 6).

Twentieth generation. Sept. 1st, 3634, among living men:

3614 B. C. (= 3615 in calendar years = 3597 + "18" of both Maneth. tables), Miĕvithōs succeeded by his son Sĕmĕmpsēs, seventh king of Egypt. In Eratosthenes' list, he is called "Pĕmphōs" — with "eighteen" years assigned to his reign.

"In the reign of Sĕmĕmpsēs" (Maneth.), many signs or prodigies, and a great pestilence.

Twenty-first generation. Jan. 1st, 3600, among living men:

3596 B. C. (= 3597 in calendar years = 3571 + "26" of both Maneth. tables), Sĕmĕmpsēs succeeded by his son Viēnĕphēs or Ouviēnthēs, eighth king of Egypt.

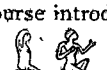
3584 B. C. (= 2615 + "969 years." of Gen. v. 27 = "187 + 182 + 600 years" of Gen. v. 25 to 28 and vii. 6), Methuselah.

3570 B. C. (= 3571 in calendar years = 3533 + "38" = 3955 + "214 + 302" of the Afr.-Maneth. table), Viēnĕphēs succeeded by Vōēthōs or Vŏphōs, head of a new dynasty; also a Thinite dynasty.

A tomb of the squared soft stone of Lower Egypt, discovered between Abusir and Saccara by Lepsius, is regarded as the oldest inscribed monument known: the archaic form of many of the hieroglyphic characters implies a date hardly later than that last-named. The locality — was pointed out to me in Egypt, and the removed tomb was examined by myself in the museum at Berlin.

Among the inscribed hieroglyphic characters are numerals (Leps. d. ii. pl. 3), implying knowledge more or less advanced of *arithmetic*.

Also *trees* (Leps. d. ii. pl. 7); of course introduced into Egypt and maintained by cultivation.

Figures also of a man and woman,  corresponding to Adam and Eve, (the Egyptians, as appears by the above-given coinci dence in date, believing in Adam).

Apart from the hieroglyphic inscription, tribute or presents are brought by men of the Barabra or *Ethiopian race;* already in contact with and a distinct nation from the Egyptians: — Nubians are unequivocally figured at Gizeh under the Fourth dynasty, and at Benihassan under the Twelfth (Leps. d. ii. pl. 4, 19, and Champ. mon. pl. 395).

That the strangers are really Nubians, appears from the head-rest or *neck-pillow* in the hand of one of them: — the Nubian neck-pillow makes its appearance as a hieroglyphic character under the Fourth dynasty (Leps. d. ii. pl. 98); was doubtless as among Nubians to the present day made of *wood*.

The practice among the Egyptians of *animal sacrifices* is also demonstrated; the offerings including the head of the *oryx*, and the head and neck of the above-mentioned large species of *crane*.

An ambiguous figure (Leps. d. ii. pl. 5), imperfectly preserved on the original tomb examined by myself, is possibly intended for the *pig*, — and a similar figure occurs under Ptolemy VII. (Leps. d. iv. pl. 26). I looked in vain for distinct figures of the pig at Gizeh and Benihassan, and was unable while in Egypt to discover any prior to those at El Kab under the Seventeenth dynasty.

Twenty-second generation. May 1st, 3567, among living men:

"In the reign of Vōēthōs" (Maneth.), a chasm opened at Bubastis and many persons perished. The city of Bubastis therefore in existence: situated in Lower Egypt, — and at the present day called "Tel-Bustak."

Twenty-third generation. Sept. 1st, 3534, among living men:

3532 B. C. (= 3533 in calendar years = 3494 + "39" of the Afr.-Maneth. table), Vōēthōs succeeded by Kaiĕhōs or Hōōs, second king of the Second dynasty. The name of king Kaka — occurs in tombs at Gizeh; and in the "Twenty-sixth" he is placed before Horakau (Leps. d. ii. pl. . .).

"In the reign of Kaiĕhōs" (Maneth.), deification of the *bulls*, Apis at Memphis and Mnevis at Heliopolis, and of the Mendesian *goat*. A polytheistic system of *mythology* therefore in existence; and if not already established, *animal-worship* inaugurated. — The Egyptians do not appear to have at any time become worshippers of images made with hands; yet the Idolatry of other nations, is

perhaps a result of hieroglyphic writing. On the Egyptian monuments, figures of gods apart from hieroglyphic writing, occur under the Fourth dynasty; but continue rare until the Sixth.

The city of Heliopolis, therefore in existence: — Heliopolis is mentioned under the name of "Awn" or On in Gen. xli. 45 to xlvi. 20, and Ezek. xxx. 17; "Byd-shmsh" or Beth-shemesh, in Jerem. xliii. 13; and to the present day, its well known site is called "Ain-shems."

The city of Mendes, also in existence; situated in Lower Egypt: — ruins, supposed to be those of Mendes, occur near the village of "Achman-tanah" (Champoll. Eg. ii. p. 122).

Twenty-fourth generation. Jan. 1st, 3500, among living men:

3493 B. C. (= 3494 in calendar years = 3447 + "47" of the Afr.-Maneth. table), Kaiĕhŏs succeeded by Vinŏthris or Viōphis, third king of the Second dynasty.

"Under Vinŏthris" (Maneth.), an enactment, permitting females to ascend the throne.

Twenty-fifth generation. May 1st, 3467, among living men:

3446 B. C. (= 3447 in calendar years = 3430 + "17" of the Afr.-Maneth. table), Vinŏthris succeeded by Tlas, fourth king of the Second dynasty. — The name of Th-th-kŏs has been found on the monuments by Lepsius k. pl. 7, with evidence that he preceded the Tenth dynasty.

"Atlas, son of Lybia" (according to Pliny ii. 6 and vii. 57), founded "astrologiam" astronomy; and ascertained "sphaeram ipsam," that the earth is spherical in shape. — Horapollo i. 10 speaks of the ball rolled by the scarabæus as having the form of the world. (See Prometheus.)

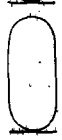
Twenty-sixth generation. Sept. 1st, 3434, among living men:

3429 B. C. (= 3430 in calendar years = 3389 + "41" of the Afr.-Maneth. table), Tlas succeeded by Sĕthĕnēs, fifth king of the Second dynasty. No contemporaneous monuments are known. — The name of king "Sent" has been found on later monuments by Lepsius k. pl. 7, with evidence that he preceded the Tenth dynasty.

Twenty-seventh generation. Jan. 1st, 3400, among living men:

3397 B. C. (= 3584 — "187 years" of Gen. v. 25), Lamech.

Part of the tomb of a prophet attached to the personal adoration of king Sent is now in the Ashmolean Library at Oxford; and "in style, character, and treatment," "does not differ in any essential particular" but "closely resembles similar sculptures of the period of the Fourth dynasty" (Birch).



3388 B. C. (= 3389 in calendar years = 3372 + "17" of the Afr.-Maneth. table), Sĕthĕnēs succeeded by Hairēs, sixth king of the Second dynasty.

3371 B. C. (= 3372 in calendar years = 3347 + "25" of the Afr.-Maneth. table), Hairēs succeeded by Nĕphĕrhĕrēs, seventh king of the Second dynasty.

Twenty-eighth generation. May 1st, 3367, among living men:

"In the reign of Nĕphĕrhĕrēs, as is fabled, the Nile flowed mixed with honey eleven days" (Maneth).

The pyramid of Meydoum is referred by Birch to about this period.

3346 B. C. (= 3347 in calendar years = 3299 + "48" of the Afr.-Maneth. table), Nĕphĕrhĕrēs succeeded by Sĕsŏhris, eighth king of the Second dynasty; described as in "height five cubits by three palms." — The name of Neferka-Sekar occurs in the Turin papyrus (Birch), that of Neferseka in the Tablet of Abydos, and that of Nefer-sekra in the chamber of kings at Karnak (Leps. k. pl. 10 and 11).

Twenty-ninth generation. Sept. 1st, 3334, among living men:

Thirtieth generation. Jan. 1st, 3300, among living men:

3298 B. C. (= 3299 in calendar years = 3269 + "30" of the Afr.-Maneth. table), Sĕsŏhris succeeded by Hĕnĕrēs, ninth king of the Second dynasty. — The name of king Ka-en-ra occurs in the Tablet of Abydos; and in a dynasty anterior at least to the Tenth (see also Leps. k. pl. 7). Two princes, a son and grandson bearing the name of "Raenkau," are given by Lepsius k. pl. 7 as having lived before the end of the Third dynasty.

3284 B. C. (= 3649 — "65 — 300 = 365 yrs" of Gen. v. 21 to 24), "and walked Enoch with God after he begat Methuselah three hundred years" . . . . "and he not, for took him God."

3268 B. C. (= 3269 in calendar years = 3241 + "28" = 3055 + "214" of the Afr.-Maneth. table, the Euseb.-Maneth. table giving 3902 — "252 — 297" = 3353 and 2498 + "203 + 448 + 198" = 3347), Hĕnĕrēs succeeded by Nĕhĕrŏphēs or Nĕhĕrŏhis, head of a new dynasty; a Memphite dynasty. The name of king Nebka, or possibly Nebka-ra (see Leps. k. pl. 7 and d. ii. pl. 39), occurs on a contemporaneous stone fragment at Abusir.

The hieroglyphic character occurs on the same stone fragment: and according to Horapollo i. 5, the quarter of an "arōura" or Egyptian acre signifies the instituted year; on account of the fourth year intercalation. The so-called "Julian year" used therefore at this early date in Egypt. The character occurs besides under the Fourth dynasty at Gizeh, — and continues in use until the end of hieroglyphic writing (Leps. d. ii. pl. 19 and 39, and k. pl. 12 to 67).

The "arōura" is further described by Horapollo as a measure of land containing a hundred cubits: *land-surveying* therefore practised at this early date in Egypt.

Thirty-first generation. May 1st, 3267, among living men:

"In the reign of Nĕhĕrŏphēs" (Maneth.), revolt of the Lybians (Westward of the Nile); but "alarmed at the moon increasing unexpectedly, they surrendered."

3240 B. C. (= 3241 in calendar years = 3212 + "29" of the Afr.-Maneth. table), Nĕhĕrŏphēs succeeded by Tōsōrthrōs or Sĕsōrthōs, second king of the Third dynasty; and by the Egyptians esteemed as or called "Aesculapius on account of his medical skill." The name of king Seser-en-ra occurs in tombs South of the Seventh, Eighth, and Ninth pyramids (Glidd. analect.).

Thirty-second generation. Sept. 1st, 3234, among living men:

Hewn or *squared stone* first employed in building by Tōsōrthrōs (Maneth.). For squaring the harder kinds of stone, metallic tools are indispensable; and the nearest source of supply is the *copper* at Wadi Maghara in the Sinai peninsula, already mentioned.

Tōsōrthrōs also bestowed care on or improved the *writing* (Maneth.). As in all subsequent improvements, the result was probably increased facility.

In painting hieroglyphic characters, the animals may at first have been distinguished by their natural colours, — as in a mummy-case found by Gliddon at Sakkarah; but as early as the Fourth dynasty, hieroglyphic characters have conventional colours (see Leps. d. ii. pl. 19 to 22).

3211 B. C. (= 3212 in calendar years = 3205 + "7" of the Afr.-Maneth. table), Tōsōrthrōs succeeded by Turis, third king of the Third dynasty. — The name of "Tures" occurs on monuments of the Seventeenth dynasty (Leps. k. pl. 24).

3204 B. C. (= 3205 in calendar years = 3188 + "17" of the Afr.-Maneth. table), Turis succeeded by Mĕsŏphris, fourth king of the Third dynasty.

Thirty-third generation. Jan. 1st, 3200, among living men:

3187 B. C. (= 3188 in calendar years = 3172 + "16" of the Afr.-Maneth. table), Mĕsŏphris succeeded by Sŏuphis, fifth king of the Third dynasty. — The accompanying oval is referred here in Poole's hor. Æg. p. 221; and was observed by myself under the Twelfth dynasty at Benihassan. A hieratic papyrus (in the possession of Lepsius Eg. and Sin. p. 395) containing the names "of Chufu and Snefru of the Third Manethonic dynasty, and three other kings probably belonging to the same dynasty, all cited as dead."

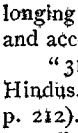
3171 B. C. (= 3172 in calendar years = 3153 + "19" of the Afr.-Maneth. table), Sŏuphis succeeded by Tōsĕrtasis, sixth king of the Third dynasty.

Thirty-fourth generation. May 1st, 3167, among living men:

3152 B. C. (= 3153 in calendar years = 3111 + "42" of the Afr.-Maneth. table), Tōsĕrtasis succeeded by Ahēs, seventh king of the Third dynasty.

Thirty-fifth generation. Sept. 1st, 3134, mostly beyond youth: "Hapenmat" mother of king Snofru (Leps. k. pl. 5).

3110 B. C. (= 3111 in calendar years = 3081 + "30" of the Afr.-Maneth. table), Ahēs succeeded by Sĕphōuris, eighth king of the Third dynasty. The name of king "Snofru" has been found on contemporaneous monuments. — He is the earliest king mentioned in the sculptures of the necropolis at Gizeh (Leps. d. ii. pl. 2, 16, and 17 . . . .); and precedes Sehura in the series of kings at Karnak.



King Snofru carried on war in or beyond the Sinai peninsula: as appears from his name and portrait at Wadi Maghara, representing him in the act of smiting a bearded foreigner belonging to the *White Race*, as already mentioned. Mines of *turquoise* occur at Wadi Maghara, — and according to Brugsch continue to be worked (bibl. Orient. ii. 177).

"3102, midnight Feb. 17th to 18th" (. . . . Burgess), beginning of the last kali-yug of the Hindus. — The "year 4900" of the kali-yug "ended on the 12th of April 1799" (Bentley as. res. viii. p. 212).

The above date is possibly to be regarded as the real commencement of *Hindu historical record*, for the "one hundred and fifty-three" kings anterior to Sandracottus (Megasth., and Arrian ind. 9) will give an average reign of more than eighteen years.

Thirty-sixth generation. Jan. 1st, 3100, mostly beyond youth:

Building by Snofru of one of the great pyramids at Dashur (Leps. k. synops. 4). Its construction may afford evidence of knowledge of *geometry*. In fact, the leading truths in *mathematical science* appear to have been nearly all found out. Further evidence of knowledge of geometry has been given under this dynasty in the hieroglyphic character of the quarter-acre: — and Herodotus ii. 109 (writing before the time of Euclid) expresses the opinion, That the Greeks obtained their knowledge of geometry from the Egyptians.

A *calendar* also in use, as appears from "signs of the seasons and their months" on stones

of this pyramid (Leps. chron.). The hieroglyphic character of the date-palm with four leaves (according to Horapollo i. 3), should represent a four-months period, and therefore an Egyptian season. It continues in use — until the end of hieroglyphic writing (Leps. d. ii. pl. 2, and k. pl. 5 to 67). The four-years period or "olumpias," may however be compared; especially as the word "ōlumpias" is said to be Egyptian.

The division of the day into "hours, minutes, seconds, and 60ths of a second," may also have been in use: according to Lepsius, this division was known to the Egyptians from an early period.

3080 B. C. (= 3081 in calendar years = 3055 + "26" of the Afr.-Maneth. table), Sēphōuris succeeded by Kĕrphĕrēs, ninth king of the Third dynasty. — The name of king Khuf-ra occurs in hieratic characters (Leps. k. pl. 7).

Thirty-seventh generation. May 1st, 3067, mostly beyond youth:

3054 B. C. (= 3055 in calendar years = 2498 + "203 — 100 + 6 + 448" in the Euseb.-Maneth. table), Kĕrphĕrēs succeeded by Sŏris, head of a new dynasty; another Memphite dynasty. The name of king "Sor" on the monuments is identified with Sŏris by Lepsius k. pl. 5.

Thirty-eighth generation. Sept. 1st, 3034, mostly beyond youth:

3025 B. C. (= 3026 in calendar years = 3055 — "29" of the Afr.-Maneth. table), Sŏris succeeded by Sōuphis II. or Cheops, second king of the Fourth dynasty. The name of Chufu occurs at Wadi-Maghara, and in the necropolis at Gizeh; where he follows Snofru and precedes all the other kings mentioned there: — his name occurs also Shech Said, and on later monuments and genealogical tablets (Leps. d. ii. pl. 2, 10, 16, 18, 50, 55, 76, and 112).

Having selected Gizeh for the site, Chufu commencing the Great pyramid, 746 feet square at base, by 450 feet high (Birch). The necropolis around appears also to have been planned, and some of the tombs constructed during his reign.

The internal passages and chambers of the Great pyramid are of *sienite*; procured of course at the First cataract of the Nile, and floated in barges all the way down the river.

The base of the Great pyramid is said to conform to an exact *meridian* line; and other details in the construction, are given as evidence of advancement in *astronomical science*.

"On monuments of the Fourth and Fifth dynasties," the length of the cubit was ascertained to be "five hundred and twenty-four millimetres:" the standard *weights* and *measures* being those — known in later times among the Babylonians and Persians.

From the contemporaneous tombs at Gizeh, the wealthier Egyptians are found in good part devoted to *pastoral* pursuits. *Agricultural* occupations are however represented; with persons engaged in curing fish. Burdens are carried by a balance-beam on the shoulder: — as to the present day among the Polynesians.

Hornless *cattle*, Bos taurus, now make their appearance, figured in herds under the Fourth dynasty — (Leps. d. pl. 22 and 9): figures continue on the monuments under the . . . . dynasty. I have sometimes seen hornless cattle in America, but do not know, whether they constitute a distinct breed. (See Socotra).

A wooden statue of the time of the Fourth dynasty and remarkable as a work of art was found by Mariette 77 to have been originally covered with a thin layer of "stuc." The smooth hard stucco called around the Indian Ocean *chunam* was observed by myself to have been in use in Egypt from the commencement of Monumental history; — and to the present day well known along the coasts of Arabia, employed even for sheathing ships; well known also from ancient times in Hindustan, being the material on which the paintings in the Adjunta cave-temples were executed.

In an inscription enumerating offerings by king Chufu, mention is made of images worked in *ivory* (Mariette 77). The material was of course procured from the *African elephant* on the Upper Nile.

The skull of Prince Merhet, of Chufu's family, — discovered with evidence of its identity by Lepsius (Eg. and Sin. p. 62).

Sōuphis II. succeeded by Sōuphis III., third king of the Fourth dynasty. The name of king Chnemu-chufu occurs in contemporaneous tombs at Gizeh; and in this necropolis, — and on the subsequent monuments, he is invariably placed next after Chufu (Leps. d. ii. pl. 50).

Chnemu-chufu carried on war in or beyond the Sinai peninsula; as appears from his name and portrait at Wadi Maghara, where he is represented in the act of smiting the above-mentioned bearded nation belonging to the *White Race* (Leps. d. ii. pl. 2)?

The name of Chnemu-chufu occurs in quarry-marks on stones of the Great pyramid; in one instance, accompanied by the name of his predecessor. Chnemu-chufu therefore completed the Great pyramid; and apparently, from the central chamber upward.

These original quarry-marks rudely drawn with *red chalk*, further demonstrate: That *hieroglyphic writing* was in general use, was rapidly executed, and was the only kind of writing known.

Thirty-ninth generation. Jan. 1st, 3000, mostly beyond youth:

Allium Ascalonicum of the East Mediterranean countries. Called in Britain *scallion* or *shalot*, in France "echalote" (Nugent), in Germany "schalotte," in Italy "scalogno" or "ascalonia" (Lenz), in Greece "gēthuōn" (Zalikogl.), and figures in different tombs at Gizeh, agreeing always in the bulb hardly swelling, — appeared to me to belong here (compare Leps. d. ii. pl. 36 and 98); the same figures doubtless correspond to the "krōmmua" and "skōrōtha" of the interpretation to Herodotus of the inscription on the Great Pyramid: A. Ascalonicum was observed in Egypt by Alpinus; and by Hasselquist in Palestine (Linn.). Farther North, the "gēthuōn" is mentioned by Phrynichus, Anaxandrides, Alexis, Epaenetus, and Theophrastus; A. Ascalonicum was observed by Bory and Chaubard in stony places in the Peloponnesus; by Visiani, under cultivation in Dalmatia; and according to Koch, has become naturalized near Fiume on the Adriatic (A. Dec.). Farther West, is termed "cepa sterilis" by C. Bauhin; is described by Morison iv. pl. 14; is known to occur in Italy (Lenz), and under cultivation throughout middle Europe. Eastward from Egypt, has been long known in Hindustan (Roxb., and D'roz.), and was observed by Graham "cultivated" around Bombay; by Mason, "exotic" in Burmah; and by Loureiro, under cultivation in Cochinchina. By European colonists, was carried to Northeast America, where I have found it cultivated to some extent in our Middle States.

2982 B. C. (= 2983 in calendar years = 2920 + "63" of the Afr. Maneth.-table), the accession of Shafra, fourth king of the Fourth dynasty, may be placed provisionally at this date. His name occurs in contemporaneous tombs in the necropolis at Gizeh: — and in the "Eighty-sixth" tomb (Leps. d. ii. pl. 8 to 13), he precedes Menkera.

The small temple of "alabaster" (stalagmite?) and "syenite," situated behind the Great Sphinx, was built by Shafra (Birch). Shafra also built a pyramid, as appears from the sign of one accompanying his name; and (according to Herodotus, and Diodorus i. 64. 1) the Middle pyramid at Gizeh was built by king Kĕphrēn or Havruēn. A statue of king Shafra, also remarkable as a work of art, — is now in the museum at Paris (Mariette 77).

One of the tombs at Gizeh, is supposed to be that of the "architect" employed by king Shafra.

Fortieth generation. May 1st, 2967, mostly beyond youth:

Apart from the hieroglyphic writing, a *monkey*, Cercopithecus, is figured in tombs at Gizeh; having of course been brought from Equatorial Africa beyond the Desert: — the species continues the same throughout these tombs (Leps. d. ii. pl. 13 and 36): but under the Twelfth dynasty at Beni-hassan, other species make their appearance, all of them African. Throughout the monuments, I was unable to discover any connexion of monkeys proper with the Egyptian mythology; a marked distinction from the Hindu system.

Typha angustifolia of the Mediterranean countries and the shores of the Atlantic as far as Northeast America. A smaller kind of *cat-taïl flag* called by the Greeks "tōsazi" (Forsk.), and possibly that figured among offerings in tombs at Gizeh — (Leps. d. ii. pl. 14, 36, and 68): T. angustifolia was observed by Delile on the Mediterranean border of Egypt near Rosetta. Farther North, was observed by Forskal from Smyrna to Constantinople, having "two female spikes" and used for feeding horses; by Sibthorp, and Fraas, in the marshes of Greece Westward, is known to grow in Italy (Lenz), and along the Atlantic as far as Britain (Curt. lond. iii. pl. 62): and farther West, has been observed by myself only in the submaritime pools of Massachusetts Bayón New England.

Typha latifolia of Northern climates. Called in Britain *cat's tail* or *reed-mace* or *bull-segg* or *pool-sedge* (Prior), in Germany "rohrkolbe" (Grieb), in Italy with other species "tifa" or "sala" or "mazza sorda" (Lenz), in Greece "psathē" (Sibth.): agreeing better with the above figures on the monuments, the root besides edible — (Linn.), but not met with by modern visitors in Egypt. Farther North, "psiathōs" mats are mentioned by Aeschylus ag. 1521, and Aristophanes ran. 567; the "tuphē," by Theophrastus i. 8, growing according to Dioscorides in the stagnant water of marshes; and in these situations T. latifolia was observed by Sibthorp in Greece. Westward, is described by Fragus (Spreng.); is termed "t. palustris major" by Tournefort inst. 530; and is known to grow in Italy, Algeria, Portugal (Brot., Desf., and Munby), and throughout middle and Northern Europe to the border of the Arctic region (fl. Dan. pl. 645, Fries, and A. Dec.). Eastward from the Mediterranean, is known to grow about Caucasus, the Caspian, the Altaian mountains, and throughout Siberia (Gmel., Pall., Bieb., and Ledeb.). Farther East, was observed by Drummond on the Saskatchewan in Lat. 54°, by Nuttall on the Arkansas, and is known to grow along the Atlantic from Lat. 51° in Newfoundland to and beyond 31° in Florida (Lapylaie, Ell., Baldw., Chapm., and myself): "flags" were gathered by the aboriginal women of New England to make mats for their dwellings (W. Wood prosp. ii. 20); and the poorer settlers of Virginia were "very fond" of the plant "because it has a sweetish taste" (Forst. cat.).

2960 B. C. (= 2952 + his "9th year" in an inscription, Chabas), accession of Mĕnhĕrēs fifth king of the Fourth dynasty. The name of king "Menkaura" occurs in contemporaneous tombs at Gizeh; — and in the "Eighty-ninth" (Leps.), he is placed after Shafra and before Aseskef. His name occurs also in the genealogical tables of later times, and in sacred writings and prayers: for his memory appears to have been long venerated by the Egyptians.

2952 B. C. (= 2953 in calendar years = 1413 + 1540 = 2210 + "16 + 43 + 185 + 100 + 100 + 0. 75 d. + 203" of Euseb.-Maneth. continued in Afr.-Maneth. + "9 + 7 + 22 + 25" + 39 or "31 years" of Mōshĕrēs in Eratosthenes = 2498 + "203 + 448" of Euseb.-Maneth. continued in Afr.-Maneth. — "29 — 63 — 66" — 38 or 39th year of Mĕnhĕrēs), end of the first Great Year. (The "heliacal rising of Sirius in the ninth year of Menkeres" is however placed by Biot "between 3007 and 3010 B. C," Boston Transcript for Friday, May 5th, 1876).

The Third pyramid at Gizeh is connected with this event; was attributed to "rōthŏpis" (a phœnix according to C. Muller fragm. Maneth. p. 520 to 555) when Herodotus ii. 100 was in Egypt; to "nitŏkris" by Manetho, though misplaced under the Sixth dynasty; "vōkhōris" is made the successor of Mĕghĕrinōs or Mukĕrinōs by Diodorus i. 65; and the pyramid is known to have been built by Menkaura. Though the smallest of the three, it must have been very costly, being exclusively of *sienite* brought from the First cataract (in entire accordance with the account of Herodotus ii. 134).

In one of the contemporaneous tombs at Gizeh (Leps. d. ii. pl. 36), men probably of the *Negro Race* are represented; at least, if we may judge from their wearing the three-lobed emblem. — At Benihassan (Champoll. pl. 361), this emblem is clearly a black writing-stile:

Iris sisyrinchium of Egypt and the Mediterranean countries. Called in Greece "agriōkrinōs" (Sibth.), in Egypt "zambak" (Forsk.), and in other instances seems the three-lobed emblem, the flowers agreeing in form and to some extent in colour — (the Ethiopians being termed "kuanōi" by Homer), and the growing plant occurring as a hieroglyphic character from the Seventeenth dynasty to the Ptolemies (Leps. k. pl. 51): I. sisyrinchium, the only species known to grow wild in Egypt, is described by Forskal p. 12 as a flower "plurimæ dignitatis" in colour "violaceus medio petalorum croceo;" was observed by him, and Delile, on the Desert-margin from the Pyramids to Alexandria. Farther North, was observed by Sibthorp, Chaubard, and Fraas, on hills along the sea from Cyprus to the Peloponnesus; is known to grow also in Barbary, Spain, and Portugal (Tourn. inst. 365, and Pers.).

Anona Senegalensis of Tropical Africa. A small tree called in Unyoro "mtaotao" (Grant); and as early doubtless as this date its hard twigs used for rubbing fire by Negro tribes on the Upper Nile, — as at the present day witnessed by Schweinfurth vi to xii; A. Senegalensis was observed also by Grant from "2° to 3° N." on the Nile, its fruit eaten, and wood made into hoe-handles; was received by Jussieu from Senegal (Pers.).

Forty-first generation. Sept. 1st, 2934, mostly beyond youth:

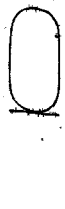
The name of king Menkaura occurs on his own wooden coffin, discovered within the Third pyramid. The inscription containing the name, is alleged by Birch to be an extract from the "Osiris-myth;" a sacred drama, whose high antiquity is thus demonstrated.

Cedrus Libani of the Lebanon and Taurian mountains. The *Cedar of Lebanon* is called by the Syrian Arabs "arz" (Royle in Kitt. bibl. cycl.). in Egyptian "tshĕnsĕifĕ" or "tshĕnsēvĕ" or "tshĕnsifi" (transl. Sept.), and is possibly the "kind of cedar" of which this coffin is made, there being no Coniferous trees large enough for the purpose nearer than Palestine: — the "arz" is prescribed by Moses for purifying the unclean and in leprosy (Lev. xiv. 4, and Num. xix. 6); was brought for building from Tyre to Jerusalem (2 Sam. v. 11, and 1 K. vi. 9 to 20); is mentioned as growing on Lebanon in Psalm xxix. 5, xcii. 12, and Jer. xxii. 7 to 23; as a lofty tree by Amos ii. 9, Isaiah ii. 13, and Ezekiel xxxi. 3; is also mentioned in Cant. i. 17, Zeph. ii. 14, Job xl. 17, Zech. xi. 1, 1 Esdr. iv. 48, and Sirach xxiv. 13; and the "cedrus magna" or "cedrelaten," by Pliny xiii. 11 and xxiv. 11 as yielding resin, having fruit like "cupresso," and incorruptible timber employed for images of the gods: C. Libani has become rare on Lebanon, but a grove continues to be shown to travellers, and trees have been found in unfrequented portions of this mountain-range by American missionaries (Kitt. bibl. cycl., forest).

The tree selected for the coffin was in all probability felled in Syria, and seems to imply the existence of *navigation* upon the Mediterranean: — river-barges, larger than any now used on the Nile and propelled by numerous oars, are figured at the beginning of the Fifth dynasty in the beautiful tomb at Saccara.

2919 B. C. (= 2920 in calendar years = 2953 — 33 = 2983 — "63" of the Afr.-Maneth. table), accession of Ratōisēs, sixth king of the Fourth dynasty; — to whose reign "twenty-five" years are assigned. The name of king Ratatef occurs on the monuments (Leps. k. pl. 7), and is referred here by Birch.

Forty-second generation. Jan. 1st, 2900, mostly beyond youth:



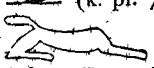
2894 B. C. (= 2895 in calendar years = 2920 — "25" of the Afr.-Maneth. table), Ratōisēs succeeded by Viĕris, seventh king of the Fourth dynasty; — to whose reign "twenty-two" years are assigned. The "vōkhōris" of Diodorus i. 65, may be compared (see above, Mĕnhĕrēs): a judicial decision attributed to Vokhoris is preserved by Clemens Alexandrinus strom. iv. 18.

2872 B. C. (= 2873 in calendar years = 2895 — "22" of the Afr.-Maneth. table), Viheris succeeded by Sĕvĕrhĕrēs, eighth king of the Fourth dynasty; to whose reign "seven" years are assigned. The name of king "Aseskaf" occurs in contemporaneous tombs at Gizeh: — and in the "Eighty-ninth" he is placed after Menkaura and before Useserkaf (Leps. d. ii. pl. 41, 50, and 55). Asychis according to Herodotus succeeded Menkaura.

Forty-third generation. May 1st, 2867, mostly beyond youth:

Some time after the building of the Great pyramid (Leps. trav. 28 and 52 to 118) but before the close of the Fourth dynasty (Birch), a *canon of proportions* first adopted in representations of the human form. — This canon continued unchanged throughout the "Twelfth dynasty."

2865 B. C. (= 2866 in calendar years = 2873 — "7" of the Afr.-Maneth. table), Severheres succeeded by Thampthis, ninth king of the Fourth dynasty: — to whose reign "nine" years are assigned. The name of king Tha-mĕd has been found on the monuments by Lepsius (k. pl. 7); with evidence, that he preceded the Tenth dynasty.



As the sphinx possibly indicates taxation, the earliest representation becomes a point of interest. The above headless figure occurs under the Fourth dynasty at Sakara (Leps. d. ii. pl. 96), but is not free from ambiguity; and Lepsius eg. and gin. p. 67 states, that the image of the sphinx is "not in general met with in the Pyramid period." — Heads of sphinxes were found in the tomb of the mother of the first king of the Seventeenth dynasty; and from this time, representations of the sphinx become frequent; forming besides a hieroglyphic character from at least the Nineteenth dynasty to the Greek conquest (Leps. k. pl. 32 to 50).

2856 B. C. (= 2857 in calendar years = 2866 — "9" of the Afr.-Maneth. table = 2210 + "16 + 43 + 185 + 100 + 100 + 0,75 d. + 203" of the Euseb.-Maneth. table), Thampthis succeeded by Ousĕrhĕrēs, head of the Elephantinite dynasty. To whose reign "twenty-eight" years are assigned. The name of king Usesurkaf occurs in contemporaneous tombs at Gizeh: — and in the "Eighty-ninth," he is placed after Aseskaf and before Sehura. His name occurs also at Shech Said (Leps. d. ii. pl. 40, 48, and 112).

A tomb at Sakara containing the name and constructed during the reign of Usesurkaf, may be regarded as vindicating in the beauty of the sculptures the judgment of Herodotus: in placing certain Egyptian works of art on a par with any in Greece.

Khnumhotep was priest of the king's pyramid, — which has not as yet been identified (Birch).

Forty-fourth generation. Sept. 1st, 2834, mostly beyond youth:

2828 B. C. (= 2829 in calendar years = 2857 — "28" of the Afr.-Maneth. table), Ousĕrhĕrēs succeeded by Sĕphrēs, second king of the Fifth dynasty: to whose reign "thirteen" years are assigned. The name of king Sehura occurs at Wadi Maghara, and in contemporaneous tombs at Gizeh: — and in the "Eighty-ninth," he is placed after Usesurkaf; and in the "fifteenth," after Chufu and before Nofirikara (Leps. d. ii. pl. 39, 47, 50, 55, and 74). His name occurs also in the genealogical tables of later times, as in the chamber of kings at Karnak.

Sehura carried on war in or beyond the Sinai peninsula: his portrait at Wadi Maghara representing him in the act of smiting the before-mentioned bearded nation belonging to the *White Race* (Forty days in the Desert pl. 12).

Sehura built the North pyramid at Abusir; his name occurring in red quarry-marks on one of the component blocks of stone.

2815 B. C. (= 2816 in calendar years = 2829 — "13" of the Afr.-Maneth. table), Sĕphrēs succeeded by Nĕphĕrhĕrēs, third king of the Fifth dynasty: to whose reign "twenty" years are assigned. The name of king Nofirikara occurs at Sakara, and in contemporaneous tombs at Gizeh: — and in the "Fifteenth," he is placed between Sehura and Raensesur; but by a rare inconsistency, before Sehura in the "Seventeenth" tomb (Leps. d. ii. pl. 47, 50, 55, and 59).

A *porcupine*, Hystrix cristata, is figured in one of the above tombs (Leps. d. ii. pl. 46). The original may have been imported from beyond the Euphrates: — for I have met with the animal only in Hindustan, where quills are occasionally found throughout the country; the possible origin of the legend mentioned by Pliny viii. 53, that the porcupine shoots its quills. Pliny however attributes "hystrices" to both India and Africa; showing at least, that the animal became known to the Romans through Africa.

Nofirikara built a pyramid: and several functionaries of his reign were buried in the tombs at Gizeh (Birch).

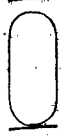
Forty-fifth generation. Jan. 1st, 2800, mostly beyond youth:

2795 B. C. (= 2796 in calendar years = 2816 — "20" of the Afr.-Maneth. table), Nĕphĕrhĕrēs succeeded by Sisirēs, fourth king of the Fifth dynasty: to whose reign "seven" years are assigned. The name of king Raensesur occurs at the "pyramid at Reggah" (Glid. analect.), also at Wadi Maghara, Sakkarah, and in contemporaneous tombs at Gizeh: — in the "Fifteenth" and "Seventeenth" tombs, he is placed after Sehura and Nofirikara (Leps. d. ii. pl. 55, 57, 59, and 152).

His surname "An" (Birch) occurs in the tombs at Gizeh; and in the "twenty-seventh" (Leps. d. ii. pl. 76) is placed after Chufu and before Tankara; — in the chamber of kings at Karnak, is placed after Sehura and before Asesa; occurs also in other genealogical tables; and under the Twelfth dynasty, on a "fragment of a granite statue" (C. Mull. fragm. Maneth. p. 548).

Raensesur built the middle pyramid at Abusir; as appears from his name in "red ochre" quarry-marks on some of the component blocks of stone.

2788 B. C. (= 2789 in calendar years = 2796 — "7" of the Afr.-Maneth. table), accession of Hĕirēs, sixth king of the Fifth dynasty: to whose reign "twenty" years are assigned. The name of king Horakau occurs in contemporaneous tombs at Gizeh: — and in the "Twenty-sixth," he is placed after Sehura and Kaka. The same name quadrangularly enclosed, occurs in the "Twenty-seventh" tomb (Leps. d. ii. pl. 74 and 76).



2768 B. C. (= 2769 in calendar years = 2789 — "20" of the Afr.-Maneth. table), Hĕirēs succeeded by Rathōurēs, seventh king of the Fifth dynasty: to whose reign "forty-four" years are assigned.

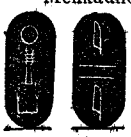
Forty-sixth generation. May 1st, 2767, mostly beyond youth:

Forty-seventh generation. Sept. 1st, 2734, mostly beyond youth:

2724 B. C. (= 2725 in calendar years = 2769 — "44" of the Afr.-Maneth. table), Rathōurēs succeeded by Mĕnhĕrēs II., eighth king of the Fifth dynasty: to whose reign "nine" years are assigned by Manetho; but "eight" only, in the Turin papyrus. The name of king Menkauhor occurs at Wadi Maghara: — and on monuments of later times (Leps. d. ii. pl. 39, and k. pl. 5).

A slab containing a portrait of Menkauhor — was found in excavating the Serapeum at Memphis (Birch).

Menkauhor built a pyramid: — which has not as yet been identified (Birch).



2715 B. C. (= 2716 in calendar years = 2725 — "9" of the Afr.-Maneth. table, the Egyptian Chronicle giving 2497 + "217 years" = 2714), end of the reign of Mĕnhĕrēs II. He was succeeded by Tanhĕrēs, ninth king of the Fifth dynasty: to whose reign "forty-four" years are attributed by Manetho; but "thirty-eight" only, in the Turin papyrus. The name of king Tankara occurs at Wadi Maghara, Sakkarah, and in contemporaneous tombs at Gizeh: — where, in the "Twenty-seventh," he precedes Asesa (Leps. d. ii. pl. 39, 63, 65, and 76).

His surname Assa (Birch) occurs at Sakkarah; and in the necropolis at Gizeh is inscribed in the "seventeenth, twenty-sixth, twenty-seventh," and "thirty-fifth" tombs. — A different form of apparently the same name, occurs subsequently in the chamber of kings at Karnak (Leps. d. ii. pl. 67, 74, 76, 78, and k. pl. 6).

2712 B. C. = "fourth year of Assa" (Birch), commissions sent to Wadi Maghara, "to examine the state of the locality and excavations."

Forty-eighth generation. Jan. 1st, 2700, mostly beyond youth:

A papyrus written by an officer under king Asesa (discovered in Thebes by Prisse) is described by De Rougé as having the characters slightly *cursive;* the initial stage therefore of hieratic writing.

2671 B. C. (= 2672 in calendar years = 2716 — "44" of the Afr.-Maneth. table), Tanhĕrēs succeeded by Onnōs, tenth king of the Fifth dynasty: to whose reign "thirty-three" years are assigned by Manetho; but only "thirty," in the Turin papyrus. The name of king Onas occurs in the "Twenty-sixth" tomb at Gizeh (Leps. d. ii pl. 75), on a vase procured in Egypt by Abbott (Glid. analect.), and on other movable articles in the museums of Europe (Birch).

Evidence that the name and title of Onas were identical is given in Leps. k. pl. 5; and, with the two exceptions above given, single ovals appear to have been to this time employed by the Egyptian kings.

Forty-ninth generation. May 1st, 2667, mostly beyond youth:

Of the above-mentioned tombs at Gizeh, several were pointed out to me by Mr. Bonomi, others besides not later than the Fifth dynasty, and on the walls I remarked figures of three additional plants:

Cynara scolymus of the Mediterranean countries. Called in Britain *artichoke*, in France "artichaux," in Spain "artichofa" or "alcachofa," in Italy "articiocco" (Prior), in Germany "artischoke," in Greece "agkunara" (Fraas) or "agriokunara" (Sibth.), in Egypt "charsjuf"

(Forsk.) or "kharchouf" (Del.), and figures in one of the tombs, possibly intended for the lettuce, more resemble floral heads of the artichoke: — the "kinara" was found by Ptolemy III. Euergetes on the river Lethon in Lybia (Athen. ii. 84); and C. scolymus was observed by Forskal, Delile, Clot-Bey, and myself, abundantly cultivated in Egypt. Farther north, the "kinara" is mentioned by Hecataeus, Sophocles, Sopater of Paphos, and Galen al. fac. ii. 51; C. scolymus was observed by Sibthorp, and Chaubard, abounding throughout the Peloponnesus, but according to Fraas is only seemingly wild. Westward, the "cinara" is mentioned by Columella xi. 3. 14, Scribonius, and Pliny viii. 41; is described by Lobel pl. 2. 6; is termed "c. sylvestris latifolia" by Tournefort inst. 442; is known to occur as a weed in cultivated ground in Italy, Sicily, Barbary, Portugal, Southern France, and is besides regularly cultivated as far as middle Europe (Pers.). Eastward from Egypt, is called in Bengalee "hatickak" (D'roz.), in the environs of Bombay "kingin" and "cultivated in Deccan gardens" (Grah.); was observed by Ainslie mat. ind., and Roxburgh, under cultivation in other parts of Hindustan. By European colonists, was carried to America, where I have found it sparingly cultivated for its edible calyx-leaves in our Middle States.

Cucumis flexuosus of Equatorial Africa. The long *curving cucumber* called in Egypt "gŭttĕh" (as heard by myself), "cucumer longissimus" in Egyptian "shŏpi" (Edw., "cucumer" being "tshplŏk" or "tshplŏk," Kirch.) agrees with the long green slightly-curved fruit figured in tombs at Gizeh — as well as under the Seventeenth or Eighteenth dynasty: the "htĕ" is mentioned in Ex. ix. 32; the "kathe" by Rhazes, Abd-allatif, and Alpinus: C. flexuosus was observed in Egypt by Hasselquist; by myself, the fruit only, curving to the length of three or four feet, and devoid of papillæ. Farther North, the "cucumis anguinus" is mentioned by Varro i. 2. 25, Columella vii. 10. 5, and Pliny.

Citrullus vulgaris of Equatorial Africa. Called in English *watermelon*, in German "wassermelone" (Grieb), in French "pastèque" (Nugent), by the Greeks "karpōusia" (Fraas) and by the Turks "carpus" (Forsk.), in Russia "arbus" (Erman i. p. 235), in Persia "hinduanach" (Ainsl.), in Egypt "batykh" (Del.), in Egyptian "pĕlĕpĕpŏn" (Sept. transl. Num. xi. 5) or "pĕlpĕn" (Kirch.), and agreeing in shape and relative size with a green fruit figured in tombs at Gizeh — as well as under the Seventeenth and Eighteenth dynasties: the "abatyhym" of Egypt were longed for by the Israelites in the Desert; the "batykh" is mentioned by Serapion, Ebn Baitar, and Abd-allatif; and C. vulgaris was observed by Forskal, Delile, Clot-Bey, and myself, under cultivation in Egypt. Farther North, "melopeponas" are mentioned by Columella, and Pliny xix. 23; the "mēlōpĕpŏn," by Florentinus (Geopon. xii. 20), and is distinguished by Galen alim. ii. 5 by its internal substance that contains the seeds being edible; C. vulgaris is described by Matthioli p. 369, Lobel obs. pl. 641, and Dalechamp p. 625; was observed by Forskal in gardens at Constantinople, but in general seems little known in Western Europe. Southward and Eastward from Egypt, the fruit was observed by myself in market at Mocha and Muscat: C. vulgaris is called in Sanscrit "chaya pula" (Ainsl., and Pidd.), in Bengalee and Hindustanee "tarbuj" (D'roz.), in the environs of Bombay "tarbooza," and "extensively cultivated" (Graham, and myself). Farther East, was observed by Mason v. p. 456 "exotic" in Burmah, cultivated by both Karens and Burmese, and called "pha-rai;" by Loureiro p. 730, in Cochinchina and China; by Rumphius v. pl. 146, in the Malayan archipelago (A. Dec.); and by Thunberg, under cultivation in Japan and called "suikwa." By European colonists, was carried to Brazil and the West Indies (Marcgraf p. 22, and Sloane i. p. 226); to Northeast America, where it continues abundantly cultivated; to the islands of the Pacific, as ascertained by myself on the Hawaiian, Samoan, Tongan, and Feejeean groups, and as far as New Zealand and Australia.

Of the plants thus far mentioned, those displaced by the hand of man came principally from Northern climates. Nine however are decidedly Tropical: the *date-palm*, possibly from Hindustan beyond the Persian Gulf; but the remainder, the *doum-palm*, *Papyrus*, *Arundo donax*, *fig*, *watermelon*, *curving cucumber*, *Acacia Nilotica*, and *Nymphæa coerulea*, all from either Tropical Arabia or the Upper Nile.

King Onas was buried in the Mastabat-el-Faraoun, a long building at Sakkarah inscribed with his name and constructed of enormous blocks of limestone, anciently inlaid with hard stones: — and it appears from a total in the rubric in the Turin papyrus, "that his reign was one of those fixed points from which the ancient Egyptians computed the chronology of the old monarchy" (Birch).

The above oval will be found to correspond with the Babylonian account of Oannes; who came out of the Persian Gulf, and taught mankind the art of writing with other branches of learning, all mechanical arts, the building of cities and temples, geometry, agriculture, law-making, and everything essential to the well-being of society: — since which time, nothing new or at least nothing better has been found out (Beros.). Oannes is represented on the Assyrian monuments as having the

body of a fish with the human face and feet; and is mentioned also by Apollodorus (Euseb. i. p. 8, and Syncell. p. 28).

2638 B. C. (= 2639 in calendar years = 2672 — "33" of the Afr.-Maneth. table), Onnōs succeeded by Othōēs, head of the Sixth dynasty, a Memphite dynasty. The name of king Athi occurs at Hamamat (Leps. d. ii. pl. 115).

"2637 B. C." (Chin. chron. table, Amyot, and Pauth.), the *Chinese era*, the initial point of chronological reckoning among the Chinese. To all appearance derived from Babylon and the West: and therefore, the approximation or possible coincidence in dates is worthy of notice (see Fou-hi).

Fiftieth generation. Sept. 1st, 2634, mostly beyond youth:.

2620 B.C. (= 3397 — "182 — 595 = 777 yrs" of Gen. v. 28 to 31), death of Lamech. The words, "This shall comfort us concerning our work and concerning toil of our hands because of the ground which hath cursed it Jehovah," are attributed to Lamech.

In regard to the condition at this time of the human family, mention is made of "mighty men which were of old, men of renown. And God saw that the wickedness of man was great in the earth, and that every imagination of the thoughts of his heart was only evil continually." The "earth also was corrupt before God, and the earth was filled with violence" (Gen. vi. 4 to 11). Historical notices of the antediluvian period, have also been transmitted through Greek writers.

2615 B.C. (= 2015 + "600 years" of Gen. vii. 6, Samar. edit., Sept., Jos., Theoph., and Afr.), Noah. The date for the Deluge given by Josephus a. J. i. 6. 5, differs one year only (1623 + "70 + 120 + 132 + 130 + 130 + 134 + 130 + 135 + 12 years" = 2616).

Pinus pinea of wooded shores of the Mediterranean. The imported nuts are called in Germany "pinie" and other species of the tribe "kiefer" (Grieb): in Italy the *garden pine* is called "pino" or "pino domestico" (Lenz), in Greece "kōukōunaria" (Sibth.), and the same in Egyptian for the tree and nuts (ms. Par.): the "gphr" pitch trees of which the ark was made — (Gen. vi. 14) may be compared: *pine-nuts* were known to Athenaeus in Egypt, and doubtless continue to be imported. Farther North, the ship Argo was built of "pitusin" (according to the dedicatory inscription preserved by Dio Chrysostom); the tree was felled on the mountains of Greece for ship-timber in the days of Homer il. xiii. 390, but its cultivation may have commenced subsequently; the "pitus" is mentioned in connexion with Miltiades (Herodot. vii. 37), and by Cratinus, and Theophrastus; sculptured fruit of "pituōs tēs ēmĕrōu" in the hand of statues by Ptolichus and Calamis, was seen by Pausanias . . . .; "kōkkalōi" are mentioned by Hippocrates vict. acut. 409, and pine-nuts by Mnesitheus, Diocles, Alexander Myndius, Nicander, and Galen alim. fac. ii: P. pinea was observed by Forskal in gardens at Constantinople; by Sibthorp, and Chaubard, in the Peloponnesus, in maritime sand, becoming rare inland, its timber excellent for ship-building. Westward, the "pinus in hortis" is mentioned by Virgil ecl. viii. 65; the "pinea," by Columella; is enumerated by Pliny xvi. 16 and xvii. 11 as "peregrinae" foreign to Italy, directions for planting "pineae nucleis" also given; the smoke rising from the eruption of Vesuvius witnessed by the younger Pliny is compared by him to this tree: P. pinea is termed "p. sativa" by Tournefort inst. 585; is known to occur seemingly wild in Italy (Lenz), and its umbrella-shaped top was observed by myself everywhere conspicuous in sailing along the coast of Southern France and Spain. By European colonists, was carried to Madeira (Lemann, and A. Dec.): its nuts were found by myself largely imported into Spanish colonies in America.

Olea sylvestris of Persia and the shores of the Caspian. Called in English *olive*, in Germany "olivenbaum" or "oelbaum" (Grieb), in France "olive" and "olivier" (Nugent), in Italy "oliva" and "olivo" (Lenz), in Greece "ĕliĕs" or "agrŏĕlia," but by the Turks "jaban zeitan Agagi" (Forsk., and Sibth.), in Egypt "zeytoun" (Del.), in Egyptian "jōit" or "jōĕit" (transl. Sept.), in which we recognize the "zyd" leaf brought to Noah — (Gen. viii. 11), the tree itself occurring in Palestine and the neighbouring countries in the time of Moses (Ex. xxvii. 20 and Levit. xxiv. 2), Jotham (Judg. ix. 9), and Micah vi. 15: the "zaitun" is mentioned by Ebn Baitar: the "ĕlaia" in the days of Theophrastus iv. 3 was cultivated in Cyrene; in the days of Pliny at Thebes in Egypt, but has since disappeared from the vicinity; lower down in the Fayoum are olive trees older than the Muslim conquest, plantations having been established only recently under Mohammed Ali (Clot-Bey ii. 29), but single trees were observed by Forskal in gardens at Cairo. Farther North, a tree attributed to the time of king Argus was standing at Argos in the days of Pliny xvi. 89; the "ĕlaia" was regarded as introduced at Athens by Minerva (Plut. is. and osir., Paus. i. 24. 3 and vi. 26. 2), is mentioned by Hesiod, Homer, Aeschylus, Euripides, and the "ĕlaia ēmĕra" distinguished by Dioscorides; O. sylvestris was observed by Forskal, Sibthorp, and Fraas, cultivated as well as seemingly wild throughout Greece and the Greek islands. Eastward, its oil was not used by the Persians of the time of Herodotus . . ., and to the present day its fruit is disliked by the Turks (Forsk. p. 202); the tree is described by Persian medical writers, and is known to grow in sheltered situations along

the Caspian (Ledeb.): is said by Strabo ii. 1. 14 to be unknown in Bactria, but was observed by Elphinstone p. 46 seemingly wild in Cabul, devoid however of a Sanscrit name (Pidd., Royle, and A. Dec.). Westward from Greece, prior to the reign of Tarquinius Priscus was unknown in Italy, Barbary, and Spain (Fenest.); its oil was employed by Hannibal (Liv. xxi. 54); the "olivina" is mentioned by Plautus; the "oliva" or "olea" and its culture, by Cato, Varro, Cicero, Horace, Virgil, Columella, and had reached Gaul and Spain before the time of Pliny; O. sylvestris was observed by Bontier in "1403" on the Canary Islands, and is even regarded by Buch, and Webb, as indigenous. By European colonists, was carried prior to "1560" (Vega 391, and Holmes) to Peru, in which country as well as in Chili I met with fresh fruit of good quality; in "1837," was carried from Egypt to Hindustan (Graham).

By Noah, an *altar* built: on which, "of every clean beast and of every clean fowl," he "offered burnt offerings" (Gen. viii 20).

Until the founding of Babylon, of the city and tower of Babel, "the whole earth was of one *language* and of one speech" (Gen. xi. 1 to 9). This language was of course that of the Egyptian hieroglyphics, the so-called "Coptic" language; certainly at this date in existence, while no other known language can be traced so far back. — The fact is further confirmed by the Chinese having retained a monosyllabic form of language; by the secondary or triliteral form of the Shemitic or Chaldaic; while yet further syllabic addition characterizes the Sanscrit and Ind-European class of languages. Confirmation is also found in the order of affiliation: many Hebrew and many Sanscrit words having been taken from the Egyptian language, while with the possible exception of names of foreign animals and plants, no Egyptian word has been borrowed from either the Hebrew or Sanscrit; many Greek words have been borrowed from the Hebrew, but no Hebrew word from the Greek; many Latin words from the Greek, but no Greek word from the Latin; and many English words from the Latin, but no Latin word from the English.

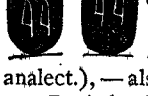
The poetical account of Lamech and his two wives, in which the seven-fold vengeance protecting Cain is mentioned (Gen. iv. 23 and 24), is regarded as "most probably the oldest specimen of *Hebrew poetry* extant" (Kitt. bibl. cycl.). The poetical curse on Canaan, in which Shem and Japheth are mentioned (Gen. ix. 25 to 27), is attributed to Noah himself. — Poetry, it should be noted, can be transmitted without the aid of writing.

The tomb of Abeba, an officer who accompanied king Athi "in his voyages to the edifice of the South," has been found at Sakkarah (Birch).

The presence of the name of king Athi on the road leading to the port of Kosser, is evidence of the existence of *navigation* upon the Red Sea, of *maritime commerce* with Arabia and countries beyond. The harbour of Abu Zelimah in the Sinai peninsula (according to Lepsius eg. and sin. p. 305), was "a position of great importance long before the time of Moses."

Vessels from the Red Sea probably visiting Hindustan as early as this date; following Desert shores to the new aspect of nature beyond the Persian Gulf.*

Dillvaria iliciifolia of the Tropical seashore from Hindustan throughout the Malayan archipelago. One of the first objects to attract attention on landing, — a maritime shrub from its foliage called *sea-holly*, but in Burmah "kha-ya" (Mason); in Pampango "dulavari," in Tagalo "diliuario" or "doloariu" or "laguio laguio" or "tingloi," in Bisaya "tiotio" (Blanco): observed by Graham about Bombay, growing "abundantly in salt marshes;" by Rheede ii. pl. 48, in Malabar; by Roxburgh, along the Eastern side of Hindustan; by Mason, on the seashore of Burmah, its root according to the natives "a cure for the bite of poisonous snakes;" by myself, abounding throughout the Malayan archipelago to the Philippines, where also it was observed by Blanco.



2608 B. C. (= 2609 in calendar years = 2857 — "248" dynastic years of the Afr.-Maneth. table, the Euseb.-Maneth. table giving 2498 + "203 — 100 + 6" = 2607), Othoes or Athi put to death by his own guardsmen, and succeeded by Phiôs. The name of king Pepi occurs at Wadi Maghara, Sauiet el Meitin, Shech Said, Hamamat (Leps. d. ii. pl. 110 to 116), and beyond Dongola as far up the Nile as Napata (Glidd. analect.), — also on monuments of later times, as the chamber of kings at Karnak.

Pepi clearly has two hieroglyphic ovals; a title or surname apart from the name. The *cobra* or asp projecting from the forehead, also now designates a king (compare Horap. i. 57 to 60).

2607 = "second year of Pepi," the inhabitants of the Sinai peninsula reconquered — (Birch).

Tamarix Africana of the Desert and its Northern border from the Atlantic to Hindustan. Called in English *tamarisk* (Prior), in Greece "murikia" or "armurikia" (Fraas) or by the Turks

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* In the following pages, the horizon of Egypt includes the nearest portion of Hindustan; the line of demarcation separating plants growing farther East that even through their commercial products continue unknown to the Egyptians.

"il ghin" (Sibth.), in Egypt "tarfæ" (Forsk.), in which we recognize the Egyptian "trvačin", or "trvěčin" or "těrvěčin" (transl. Sept., and ms. Par.) identical with the "tshĕ-n-ōsi" mischief-wood (Kirch.); also the "murike" a most ancient plant, coronary among the Egyptians in religious processions, — and among the Magians of Media, according to Metrodorus: T. Africana was observed by Forskal, and Delile, in the Egyptian Desert, affording inferior charcoal; by myself, on the Desert-margin in Upper Egypt and around Mocha. Farther North, the "murikē" was used even among the Scythians by soothsayers, the Apollo on Lesbos holding a branch (Alcaeus, Herodot., Dinon, and schol. Nicand. ther. 613); is mentioned by Homer il. vi. 39 and x. 466 as growing around Troy; by Hecataeus, Theophrastus, Strabo; and the "myricen" by Pliny xxiv. 41 as "infelicem arborem" never planted in Italy: T. Africana was observed by Sibthorp, Chaubard, and Fraas, frequent in the Peloponnesus and other parts of Greece; by Desfontaines i. p. 269, in Algeria; by Forskal, near Marseilles; is termed "t. narbonensis" by Tournefort inst. 661, "t. gallica" by Linnæus; is known to grow also in Italy and Spain (Pers., and Lenz). Eastward from Arabia, was observed by Deacon abounding "on the banks of the Indus and throughout Cutch and Scinde, where it is commonly used for fire wood" and is called "jhaoo" (Graham); according to Thunberg, grows also in Japan and is called "iione." By European colonists, was carried to Northeast America, where it continues an ornamental plant in gardens. The bark according to Lindley "is slightly bitter and astringent." (See T. Germanica).

In the Sinai peninsula, "an abundance of a white sweet gummy substance resembling manna" is collected from Tamarix Africana; ascertained by Seetzen, Burckhardt, and Ehrenberg to be an exudation produced by an insect, *Coccus manniparus* (Spreng., and Lindl.). Beyond the Euphrates and a little farther South, Persian manna called "gen" (see above) was observed by Frederick to be "formed by an insect in that way," but "only on the larger branches covered by those minute insects, and none is formed near wounds or cracks in the bark;" agreeing with another "traveller who saw it in the same country both on a tamarisk and on the small oak of Kermanshaw" (Malcolmson).

Alhagi Maurorum of the Desert, from North Africa to Hindustan. The *camel's thorn*, a hard-stemmed plant a foot or two high growing in loose beds in the Desert, is called in Egypt "aghul" (Forsk.), in Egyptian "ali" (lex. Oxon.), the same word meaning to take — (transl. Sept.); and its exudation is regarded by some writers as the "mn" manna of the Israelites: the "thrōsŏmĕli" or "ačrōmĕli" of Lebanon, procured by shaking the branches of a plant, is mentioned by Galen fac. al. iii. p. 739; the "shirchashak" described as the best kind of manna by Eltamini, and Ebn Baitar, is referred by Sprengel, and Sontheimer, to A. Maurorum; the chief source of the "manna of the Arabs," as ascertained by Rauwolf, and Tournefort trav. i. p. 247, collected "by merely shaking the branches" (Lindl.): the plant, much relished by camels, was observed by Forskal p. 136, Delile, and myself, frequent in the Egyptian Desert. Farther East, is called in Persia "shooturk," in Sanscrit "yasa" or "yavasa," in Hindustanee "juwasa" (Lindl.); was observed by Burnes throughout Scinde; and by Law, "common in Guzerat and S. M. country" (Graham).

Artemisia inculta of the Egyptian and Syrian Desert. Called in Egyptian "hrim" (ms. Copt., and Edw.), while a word perhaps not distinct means interior of the Desert — (transl. Sept. Ex. iii. 1): the Greek word "ĕrēmŏs," if not the Hebrew "hrm," may therefore be derived from this plant: in the days of Dioscorides, the "sĕriphōn" or "apsinthiōn thalassiōn" was substituted for olive branches in Isis-processions at Taphosiris (West of Alexandria): A. inculta is described by Delile, as observed by him toward the Red Sea in the Desert, with marks of having been cropped by cattle. Farther North, the "sĕrīphōn" or "apsinthiōn thalassiōn" employed as a vermifuge, is further described by Dioscorides as an herb with slender branches resembling the "avrōtŏnŏ mikrŏ," and abounding along the Taurian mountains in Cappadocia where cattle fatten on it; an account repeated by Pliny xxvii. 29 and xxxii. 31. Sprengel ascertained by experiment that cattle will feed on various species of Artemisia.

Fifty-first generation. Jan. 1st, 2600, mostly beyond youth:

2593 B. C. = "16th year of Pepi," found on the monuments — (C. Mull. fr. Maneth. p. 555).

2591 B. C. = "4th Mesori, 18th year of Pepi," in a tablet at Wady Maghara, examination of the mines there by a commission — (Birch).

An inscription by Una, priest of the pyramid of Pepi, has been found at San or Tanis. — The pyramid was probably "one of the group at Gizeh" (Birch).

The name of king Merenra occurs at Wadi Maghara, Chenoboskion (Leps. d. ii. pl. 113), in a tablet on the Kosser road (Glid. analect.), and in an inscription at Abydos with evidence that he immediately succeeded Pepi — (Mariette 79); also on monuments of later times, as in the chamber of kings at Karnak, and a different form of apparently the same name in the tablet of Abydos.

The priest Una, after holding office under Athi and Pepi, was placed by Merenra in charge of an expedition up the Nile, to procure syenite for the royal pyramid — (Birch).

Merenra himself ascended the Nile, and an inscription at Asouan records his passage and return — (Birch).

The quarries of *granite* and *breccia-verde* at Hamamat, worked under this dynasty; to which belong "nineteen rock tombs" at Zauiet-el-meitin; and a few days farther South, groups of tombs at Schech-Said, El-Harib, Wadi-Selin; and farther on at Qasr-e-Saiat, these being the last in this direction of the "interesting tombs of the Old Monarchy" (Lepsius eg. and sin. p. 16, 22, and 116).

"2577 B. C. = beginning of the Second cycle" (Chinese chron. table, further referred to the "21st year of Chao-hao": but reducing the reigns anterior to 2255 to the limit of possibility, makes the date too early for the commencement of Chinese history).

Fifty-second generation. May 1st, 2567, mostly beyond youth:

Merenra succeeded by his brother Neferkara — (Leps. k. pl. 6, and Birch).

2555 B. C. (= 2608 — "53" = 2496 calendar years + "7 + 53" of the Afr.-Maneth. table). The "nitôkris" (= Seventh dynasty of seventy days) is placed "before Neferkara" in the Turin papyrus (Birch).

2554 B. C. = "second year of Neferkara," arrival of a commission to continue the works at Wady Maghara. — (Birch).

Accession of the Eighth dynasty, a Memphite dynasty. The name of king "Snofreka-annu," not found on contemporaneous monuments, — occurs in about this place in the tablet at Abydos.

Alorus, a Chaldean, and regarded by the Chaldeans as their first king (Abyden., Beros. in Alex. Polyhist., Euseb. i. p. 5, and Syncell. p. 39), born in Babylon as early possibly as this date. — Down to the time of the Assyrians, "9 + 49 + 11 + 8 + 10" = 87 kings of Babylon are enumerated by Berosus; the alleged additional "86" may therefore be compared.

The Shemitic or *Chaldean language* and nationality, as early therefore as the time of Alorus.

2548 B. C. (= 2555 — "7 years" of the Afr.-Maneth. table), accession of Phiôps. The name of king "Nofreka-pepi seneb," not found on contemporaneous monuments, — is next in order in the tablet at Abydos.

Fifty-third generation. Sept. 1st, 2534, mostly beyond youth:

Alaparus son of Alorus, reigning at Babylon (Beros. in Alex. Polyhist., Euseb., and Syncell.).

The name of king "Nofreka * * *," not found on contemporaneous monuments, — is next in order in the tablet at Abydos.

"2517 B. C. = beginning of the Third cycle" (Chinese chron. table, further referred to the "81st year of Chao-hao"; but reducing the reigns anterior to 2255 to the limit of possibility makes the date too early for his accession).

The name of king "Nofrekara-rerele," not found on contemporaneous monuments, — is next in order in the tablet at Abydos.

Fifty-fourth generation. Jan. 1st, 2500, mostly beyond youth:

2497 B. C. (= 1413 + "348 + 103 + 190 + 443 years" of the Egyptian Chronicle, = 2498 calendar years = "348 + 103 + 190 + 16 + 43 + 185 + 100 + 100" of the Euseb.-Maneth. table, the Afr.-Maneth. table giving 2609 — "100 — 1 — 12" = 2496), a date possibly marking the accession of Ahthôês or Ahthôês head of the Ninth dynasty, a Heracleopolite dynasty. Ahthôês proved "more cruel than any of his predecessors," and "wrought evil throughout all Egypt" until becoming insane he was killed by a crocodile (Maneth.). The name of Nofrekarakhentu, not found on contemporaneous monuments, — occurs in about this place in the tablet at Abydos.

A Chaldean named Almelon or Amelon, of the city of Pantibiblis, reigning at Babylon — (Berosus in Alex. Polyhist., Euseb., and Syncell.).

The name of Tatkarama . . . ., not found on contemporaneous monuments, — is next in order in the tablet at Abydos.

Fifty-fifth generation. May 1st, 2467, mostly beyond youth:

Ammenon, a Chaldean of Pantibiblis, reigning at Babylon — (Berosus in Alex. Polyhist., Euseb., and Syncell.).

The name of Nofrekaranebi, not found on contemporaneous monuments, — is next in order in the tablet at Abydos.

"2457 B. C. = beginning of the Fourth cycle" (Chinese chron. table, further referred to the "47th year of Tchouan-hiu;" but clearly too early for his accession). Fou-hi, founder of the Chinese empire, may have been at this time living.

Hardly earlier than this date the *Sixty-year period* established in China, possibly, as alleged, by Fou-hi (Pauth. p. . . .), but clearly derived from Babylonia, *Sexagesimal arithmetic* and knowledge of the Egyptian Division of time being implied. From the time of adoption — the Chinese chronological reckoning has continued uninterrupted; a circumstance without parallel, most nations having yielded to the seductive innovation of counting by centuries.

Castanea vesca of Eastern Asia. Called in Britain *chestnut*, by Chaucer "chastein" (Prior), in Celtic "castan," or "kistin" (Davies, and Legon.), in French "chataigne" or "marron" (Nugent), in Germany "kastanie" (Grieb), in Italy "castagno" and "marone" (Lenz), in Greece "kastania" (Sibth.). Indigenous in Northern China,—relics of the original forest remaining throughout the Tcheou dynasty to the Han "about B. C. 200," the fruit more esteemed than in later times, though the tree continues to be cultivated (Cibot mem. Chin. iii.); was observed by Kaempfer, and Thunberg, in Japan, as far South as Jedo and Miaco, and called "kuri" or "ruts." Westward, is not enumerated among fruits known to the præhistorical Greeks, but was brought from Sardes (Plin. xv. 25), and derived its name, according to Nicander alex. v. 271 and scholiasts, from the city of Kastanithi (in Pontus or that in Thessaly); the "sarthianē valanōs" is mentioned by Diphilus, and Dioscorides; the "amŏta" by Agilochus (Athen. ii. 40 to 43); the "karuōn tō platu" by Xenophon anab. v. 4. 29; the "thiōs valanōs ĕuvōikē" by Theophrastus i. 18 to iii. 10, and the "kastanĕia" by Mnesitheus, Heracleon of Ephesus, and Diodorus ii. 50: C. vesca was observed by Sibthorp, and Fraas, seemingly wild in Northern Greece and throughout the middle region of the mountains; by Rabbi Schwarz, in Palestine; but the nuts known in Egypt in the time of Athenæus, and observed there by Baumgarten i. 14 were of course imported. Westward, the "castanea" is enumerated among cultivated trees by Virgil, is mentioned also by Columella, Gargilius Martial, and Palladius; C. vesca has become naturalized on the mountains of Southern and middle Europe, and a tree near Tortworth in England, noted for its great size in "1135," continues standing (A. Dec.). By European colonists, was carried to the Canary Islands and Madeira (Buch p. 178, and Lemann); and nuts to Northeast America, where they continue to be sparingly imported, but I am not aware of any attempts at cultivation.

Cannabis sativa of Tartary. Called in Britain *hemp*, in Anglo-Saxon "henep" (Prior), in Germany "hanf" (Grieb), in France "chanvre" (Nugent), in Celtic and Arabic "kanab" (Reyn., Legon., and A. Dec.), in Italy "canape" or "canapa" (Lenz), in Greece "kannavi" (Fraas), in Persian and Hindustanee "bang," in Bengalee "ganga" (Roxb.), in Sanscrit "bhanga" or "gunjika" (Pidd.). Furnishing the cloth originally worn together with furs by the Chinese;—the sign for hemp occurring in alphabetic characters older than the Tcheou dynasty (Hiu-chin, and Pauth. p. 48 to 54); the plant mentioned repeatedly in the Chou-King; observed by Bunge around villages on the Northern border of China; by Kaempfer, and Thunberg, cultivated and springing up spontaneously in Japan, and called "ba" or "ma" or usually "asa." Westward, hempen cloth is mentioned in the Institutes of Menu (transl. Deslongch.), was worn by the Thracians in the days of Herodotus iv. 74, fumigation with hemp seed being at the same time practised by the Scythians: C. sativa was observed by Loureiro ii. p. 116 in Cochinchina; by Mason v. p. 487, "exotic" in Burmah and called "ben;" is known to grow to all appearance wild in Siberia (Ledeb.) and Northern Hindustan (Roxb.), is besides cultivated throughout Hindustan "for the sake of the intoxicating liquor called 'bhang,'" and "the leaves which are smoked to cause intoxication" (Rheede x. pl. 60, and Graham); was observed by Thunberg iii. 4 in Austral Africa, under cultivation by the Caffre tribes, and in one instance by Hottentots, and called "dakkan" (a name indicating introduction by Hindus); is cultivated even by the natives of Western, Equatorial Africa, where leaves prepared for smoking were procured by H. McMurtrie (journ. Bost. nat. hist.). Northward, the "kannavis" is mentioned by Ephippus, and Dioscorides; was first made into cordage by king Hiero of Syracuse, who imported the material from the Rhone (Athen. v. 40); "cannabis" cordage is distinctly mentioned by Varro xxv (Gell. xvii. 3), Columella, and Pliny; and the use of the fibre is alluded to in the Mishna (Reyn. p. 434): C. sativa was observed by Fraas frequent in Attica; by Lenz, in Italy; and is known in at least the cultivated state in Russia and middle Europe. "About six centuries" ago (Lane), its intoxicating properties became known in Egypt, where the plant has since been cultivated under the name of "sjaranek" or "hachych" (Forsk., Del., and Clot-Bey). By European colonists, was carried prior to 1639 (W. Wood) to Northeast America, where it continues chiefly near dwellings, but on the Lower Ohio is regularly cultivated. The stem according to Burnett, and Lindley, furnishes "the best of all cordage," and the seed has the "singular property of changing the plumage of bullfinches and goldfinches from red and yellow to black if they are fed on it for too long a time or in too large a quantity."

For "certain knots made in cords" (the *quippus*), by means of which the Chinese were governed, Fou-hi substituted *writing;* employing for this purpose the "koua symbols" (Confuc. on the Y-King, and Pauth. p. 25); eight in number, consisting of parallel lines variously-broken to signify "heaven, earth, thunder, mountains, fire, clouds, water, wind"—(according to their transmitted forms figured by Pauthier). Evidence exists of the use of these symbols as early at least as the Hia dynasty (Visdelou pantheon litt. p. 138).

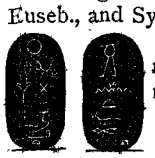
2449, Feb. 28th (F. Bailly), *conjunction of the planets* Mercury, Mars, Jupiter, and Saturn . . . . . ; described in the Chinese annals as of "five planets in the constellation Ing-che."

The stars perhaps already mapped into *constellations:*—Tables of constellations occur in Egyptian tombs under the Twentieth dynasty (Champoll.); and certain constellations are mentioned by Homer, and in Job xxxviii. From a remote period, the names of several constellations continue unchanged; translated merely into different languages.

2441 B. C. (= 2442 calendar years = 2609 — "53 — 7 — 100 + 6 — 1 — 12" of the Afr.-Maneth. table), accession of the Tenth dynasty. The name of king Nuantef has not been found on contemporaneous monuments:—but occurs in later times, in the chamber of kings at Karnak.

Fifty-sixth generation. Sept. 1st, 2434, mostly beyond youth:

Amegalarus or Megalarus, of Pantibiblis, reigning at Babylon—(Berosus in Alex. Polyhist., Euseb., and Syncell.).



Nuantef succeeded by his brother Nuantef II.; whose name occurs on contemporaneous monuments—(Leps. k. pl. 10), and on his own coffin (now in the British museum).

Fifty-seventh generation. Jan. 1st, 2400, mostly beyond youth:

"2397 B. C. = beginning of the Fifth cycle" (Chinese chron. table, further referred to the "39th year of Tikou;" but clearly too early for his accession).

Chin-noung, the successor of Fou-hi, may have been at this time ruling China. To his reign, various inventions and improvements are attributed, including *agriculture* and the introduction of the "five kinds of grain:"

Faba vulgaris of Central Asia. Called in Anglo-Saxon and current English *bean*, in Holland "boon," in Denmark "bönne," in Sweden "böna," in Germany "bohne" (Prior), in Slavonian "bob" (Moritz.), in Celtic "fa" or "fao" or "fav" (Legon.), in France "fève" (Nugent), in Italy "fava" or "fava cavallina" (Lenz), in Greece "kōukkia" (Fraas), in Egypt "ful" (Forsk.), at Surat "vackla" or "backla" (Graham). Included among the "five kinds of grain" introduced in the reign of Chin-noung:—observed by Bunge under cultivation in Northern China; and by Kaempfer, and Thunberg, cultivated in Japan and called "sandsu" or usually "sora mame." Westward, has no Sanscrit name (Roxb., and Pidd.); is regarded as only recently introduced into Hindustan (Ainsl., Royle, Wight, and A. Dec.), continuing unknown in Ceylon (Moon), but is "cultivated at Surat to a small extent" (Graham); was observed by Lerche to all appearance wild on the confines of Persia near the Caspian (Willd.). Farther West, "phwl" were brought to David at Mahanaim (2 Sam. xvii. 28), are mentioned also by Ezekiel iv. 9; the "kuamōs ĕllēnikōs," in Mul. morb. i. 608, and Dioscorides; "fabula" by Plautus, and Gellius iv. 11. 1; "fabalia" by Cato xxxvii. 2.; the "faba" by Terence, Varro, Cicero, Virgil, Columella, and Pliny: F. vulgaris was observed by Abd-allatif in Egypt, where it continues one of the principal objects of cultivation both for the seeds and stems (Forsk., Del., and Clot-Bey); was observed by Chaubard, and Fraas, under cultivation in Greece; and is known in the cultivated state in Italy and throughout Southern and middle Europe (Brot., Pers., and Lenz). By European colonists, was carried to America, where in our Middle States it continues sparingly cultivated and is distinguished as the *horse-bean*.

Triticum vulgare of the plains around the Caspian. Called in Britain *wheat*, in Anglo-Saxon "hwæte," in Gothic "hvaiteis," in ancient Danish "hveiti," in old High German "hveizi," in Lithuanian "kwetys," all meaning white grain (Prior), in Germany "weizen" (Grieb), in France "blé" or "froment" (Nugent), in Italy "formento" or "frumento" (Lenz), in Greece "sitari" (Forsk.), in Egypt "qamh" or "hontah" (Del.), on the mountains of Yemen "burr" (Forsk.), in Guzerat and on the Deccan "mar-ghoom" or "ghawut-gioon" (Graham), in Hindustanee "genhun" or "gandum" or "godhum," in Bengalee "godhum" or "gom" (D'roz.), in Burmah "gyung-sa-ba" (Mason). Included among the "five kinds of grain" introduced into China under Chin-noung—(Stan.-Jul.): observed by Kaempfer, and Thunberg, under cultivation in Japan, in two varieties and called "ko muggi." Westward, was observed by Mason "exotic" in Burmah; has a Sanscrit name (Roxb., and Pidd.), was already in Hindustan when invaded by Alexander (Theophr.), and continues to be "cultivated in various parts of the Deccan and Guzerat" (Graham): was observed by Onesicritus wild farther North in the Musicana district; by Berosus, between the Tigris and Euphrates, where also it was found wild by Olivier iii. p. 460; and according to Strabo xi. 7. 2, seeds itself in Hyrcania along the Caspian. Farther West, the "br" was already in Egypt in the days of Joseph (Gen. xli. 35 to 49), is mentioned as cultivated in Palestine in Psalm lxv. 13, Proverbs xi. 26, Joel ii. 24, and Amos v. 11; the "purōs" furnished the straw wrapped around the presents sent by the Hyperborei to Delos (Herodot. iv. 33), is mentioned as cultivated in Greece by Homer il. x. 569 to xiv. 123, Theophrastus, and Dioscorides; the "sitōs" is mentioned by Homer od. ix. 191 to xxiv. 208, Herodotus iv. 109, Demosthenes 310. 1, and Strabo; and the "triticum" by Cato, Varro, Cicero, Virgil, and Columella: T. vulgare was observed by Forskal under cultivation on the mountains of Yemen; continues abundantly cultivated in Egypt (Forsk., Del., and Lois.-Deslongch. cereal. p. 98); was

observed by Forskal, Chaubard, and Fraas, under cultivation in Greece; by Lenz, in Italy; already during the Stone Age was cultivated in Switzerland, as appears from debris of the earliest villages (Heer, and Troyon p. 44), and continues under cultivation throughout Europe as far as "Lat. 64°?" (A. Dec.). By Columbus, was carried to America (F. Columb. 53), where it has become a main object of cultivation in portions of the United States; was also carried by European colonists to Australia and New Zealand, growing crops in both countries met with by myself. (See T. turgidum).

Panicum miliaceum of Central Asia. Called in Italy "mei" or "miglio," in Greece "kĕghĕi" (Lenz), in Germany "hirse" (Fraas), in Egypt "dokhn" (Del.), in Yemen "milæb" or "kossæjb" (Forsk.), in the environs of Bombay "warree" or "sawee Cheena" (Graham). Probably one of the two kinds of *millet* introduced into China under Chin-noung: — observed under cultivation there by Bunge p. 70 (A. Dec.). Westward, was observed by Roxburgh i. p. 310 in Hindustan, by Graham "a dry grain cultivated" around Bombay. Farther West, the "thhn" (near "thgn" the general name of bread-corn in Gen. xxvii. 28, Num. xviii. 27, Deut. xxviii. 51, and Lam. ii. 12) is mentioned by Ezekiel iv. 9; the "mĕlinē," by Sophocles, and Harpocration; as cultivated in Asia, by Herodotus iii. 117, and Xenophon anab. i. 5. 10; is identified in Syn. Diosc. with the "ĕlumŏs," and the "ĕlumŏs" is mentioned in 2 Morb. mul. 2, Theophrastus viii. 1, and Strabo; the "milium," by Cato, Varro, Cicero, Virgil, Columella, and is described by Pliny xviii. 10 to 24 "comae granum complexae fimbriato capillo curvantur" and the principal food of the "Sarmatarum gentes" who eat the crude meal mixed with mare's milk or even blood, this and barley being the only kinds of grain known to the "Aethiopes": P. miliaceum is described by Bauhin theatr. pl. 502, is termed "milium semine luteo" by Tournefort inst. 514, "milium panicum" by Miller, "milium esculentum" by Mœnch, "p. panic. laxa flaccida" by Persoon; was observed by Hasselquist in Palestine; by Forskal, along the base of the mountains of Yemen; by him, and Delile, occurring spontaneously around Cairo; by Sibthorp, and Fraas, in cultivated ground in Greece; by Pollini, and Lenz, in Italy; and is known to be cultivated in middle Europe (Pers.). By European colonists, was carried to Northeast America, where I have met with it in gardens.

Setaria glomerata of Central Asia. Called in Britain *panic* (Ainsw.), in Italy "panizzo" or "panig" or "panico" (Lenz), in Greece "kĕghri" or "Phragkōkĕghri" (Fraas), in Hindustanee "kangni" (D'roz.), in the environs of Bombay "kala kangnee" or "kora kang" (Graham). Probably one of the two kinds of *millet* introduced into China under Chin-noung: — observed under cultivation there by Bunge. Westward, a species according to Mason perhaps identical is "exotic" in Burmah and called "pyoung-lay-kouk"; and S. glomerata was observed by Rumphius v. pl. 75, Roxburgh, and Graham, in Hindustan. Farther West, "phng" was carried from "Judah and the land of Israel" to the market at Tyre in the days of Ezekiel xxvii. 17; the "kĕghrŏs" (named from resemblance to fig-seeds) was cultivated from Babylon to the Borysthenes in the days of Herodotus, is mentioned also in the Hesiodic scut. herc. 398, Xenophon anab. i. 2. 22, Morb. mul. i. 619, Theophrastus, and Dioscorides; the "panicum" is mentioned by Cato, and Columella, was found by Caesar stored for food by the inhabitants of middle Europe, is described by Pliny xviii 10 to 25 as "a paniculis dictum cacumine languide nutante," cultivated in Gaul as well as on the Po in Northern Italy, and the favourite article of diet along the Black Sea: S. glomerata is figured at Pompeii (Schouw iv.); is termed "p. Italicum" and "p. Germanicum" by Linnæus; was observed by myself under cultivation in both Upper and Lower Egypt; by Fraas, rare in Greece; is known to be cultivated in Italy (Pollini, and Lenz) and as far as middle Europe (Roth, and Kit.). By European colonists, was carried to Northeast America, where it continues under cultivation in our Middle States for its seeds, but in our Southern States for the stems and leaves "as green food for cattle" (Chapm.).

Oryza sativa of Tropical Hindustan. Called in English *rice*, in French "riz" (Nugent), in German "reis," in Italy "riso" (Lenz), in Greece "rizi" or "ruzi" (Fraas), in Egypt "rouz" or "arz" (Del.), in Hindustanee "chawal" or "biranj," in Bengalee "chaul" or "tandul" (D'roz.), in Cingalese "ooruwee," in Sanscrit "arunya" (Fidd.), in Burmah "sa-ba" (Mason), in all Malay countries "padi" or "bras" (Crawfurd). Enumerated as the fifth kind of grain introduced into China under Chin-noung — (Stan.-Jul.); mentioned besides in the Chou-King (Pauth.); and to the present day extensively cultivated: was observed by Kaempfer, and Thunberg, in Japan; by Blanco, and myself, under cultivation on the Philippines; by Loureiro, in Cochinchina; and by Mason, "exotic" in Burmah. Westward, is mentioned in the Sama Veda (transl. Stevens.); was eaten by the Hindus and "ōinŏs ōruzēs" manufactured by them when invaded by Alexander (Aristot. an. viii. 25, Aristob., Megasth., Theophr.; and Athen. iv. 39); and continues cultivated in numerous varieties (Graham, and myself): "wild rice" is however mentioned in the Institutes of Menu, and a kind called by the Telingas "newaree," growing around lakes in the Circars and the seeds highly prized, is known only in the wild state (Roxb., and A. Dec.). Farther West, was carried at an early date to Madagascar (Ellis) and Equatorial Africa, and (as ascertained by myself at Zanzibar) continues cultivated by

Negro tribes as far inland as the Monomoisy: is mentioned by Hellanicus (Ruel ii. 18); in the days of Strabo xv. was cultivated in Bactriana, Suziana, Babylonia, and Syria, having already reached the Mediterranean; the "ōruza" is mentioned also by Dioscorides, and Galen; the "ělěiōgěnēs ōruza" by Hesychius; and the "oryza" by Horace satir. 2. 3. 155, and Pliny: O. sativa was observed by Delile under cultivation in Egypt; by Fraas, in Greece; and by Lenz, in Italy. By European colonists, was carried to America, where it continues extensively cultivated in the marshes of our Southern States.

"Fiftieth year of Nuantef II.," in a tablet in the Assasif at Thebes — (Birch).

The coffin of Nuantef II. was discovered in tombs of kings of this dynasty in the Gurna quarter of Thebes; and is perhaps the earliest evidence of the existence of this city. — The next or Eleventh dynasty, is the earliest Theban dynasty mentioned by Manetho.

In the ornamental work on this coffin, *ivory* is enumerated by Birch (Glid. otia Eg.); procured in all probability on the Upper Nile from the *African elephant*:

Also *obsidian*; brought from some distant country, there being no volcanic district immediately around Egypt:

And *bronze*. — The art of forming this compound metal, known from other evidence to have preceded the historical records of Greece (see Sm. dict. gr. and rom. antiq.).

The *tin* required was probably at first procured in the East, the metal occurring in Drangiana or Eastern Persia — (Strab. xv. 2. 10); its Sanscrit name "kastira" appears to have given rise to the Arabic "kasdir," and Greek "kassitĕrōs" (see Cassiterides): tin is besides enumerated in the Chou-King (Pauth. 48) among the products of China. On the other hand, no evidence has been discovered of the transportation of tin across Switzerland during the Stone period (compare Troyon p. 254).

Ornamental gilding on the same coffin, — enumerated by Birch: the Egyptian name of *gold* is given as "nōuv" or "nōuf" (Sept., and ms. Borg.); the word "nkbt" meaning gold-washing, occurs in hieroglyphic characters under or before the Twelfth dynasty (Rosselini); the terms in which the gold of Havilah is mentioned in Genesis ii. 12, imply a knowledge in the narrator of gold from other sources; and gold mines worked by ancient Egyptian kings in the mountains along the Red sea South of the Kosseir road, are described in detail by Agatharchides, Edrisi, Abulfeda, Makrizi, and Wilkinson (geogr. soc. Lond. ii. p. 47).

Erythrina Abyssinica? of the Upper Nile. A tree abounding in the Abyssinian province of Kuara, also in Fazoglo, Nuba, and Guba, its seeds used from the earliest times by the Shangalla as a weight for gold — and called "carats," giving rise to the *carats* of gold dealers (Bruce vii. pl. 19). The "kardh" is described by Abu Hanifa as a large Leguminous tree whose seeds are used for weights (Abd-allat.).

The lining of the coffin presents inscriptions in *hieratic writing* — (Birch): known to be cursive hieroglyphics, bearing the same relation to hieroglyphic characters as handwriting does to printed letters.

The name of king Muntuhotep occurs at Assuan; — also, in the chamber of kings at Karnak, and apparently the same name in the series at Gurna (Leps. d. ii. pl. 149, and k. pl. 11 and 20). This name may therefore have occupied one of the six vacant places preceding the Twelfth dynasty in the tablet at Abydos.

. Davonus or Daonus, a shepherd of Pantibiblis, reigning at Babylon — (Berosus in Alex. Polyhist., Euseb., and Syncell.).

Fifty-eighth generation. May 1st, 2367, mostly beyond youth:

"2366 B. C. (= 1st year of Ti-tchi," Chinese chron. table; but clearly too early for his accession).

Edoranchus or Euedorachus, of Pantibiblis, reigning at Babylon. — (Berosus in Alex. Polyhist., Euseb., and Syncell.)

The name of king Nuantef III. has been found on contemporaneous monuments — (Leps. k. pl. 11).

"2357 B. C. (= 1st year of Thang-yao or Yao" in the Chinese chronological table; Du Halde i. 131 further states, that "from the reign of Yau beginning in 2357," Chinese history is regarded as certain: the date is clearly too early for the accession of Yao, but) may mark the founding of a new dynasty by Hoang-ti: who guided by a car "indicating the South," obtained success in military expeditions and extended his empire Southward as far as the river Kiang (Pauth. p. 29). That the *magnetic needle* was first discovered by the Chinese, is regarded by Amyot and writers generally as certain.

"In the reign of Hoang-ti" (topog. Cant., and Pauth. p. 472), arrival in China of a stranger "from the South, journeying upon a *white deer* and offering as tribute a cup and skins" (a description agreeing better with a stranger from the North, with *reindeer* and furs): — in the region North of the Altaian mountains, the "Mecri" (according to Marco Polo 71) "chavauchent les cerf," use

the reindeer for horses. Westward, the "tarandus" of the Scythians is described by Pliny viii. 52; bones of the reindeer, Cervus rangiferinus, occur among debris of the "Stone age" in Europe; the animal has been long domesticated in Lapland; and is figured under the name of "rangier" by Gaston Phoebus (Pouchet p. 70).

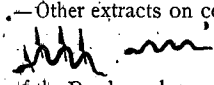
The name of king Muntuhotep III. occurs in contemporaneous inscriptions in the quarries at Hamamat (Leps. d. ii. pl. 149, and k. pl. 11).

"Second year of Muntuhotep III.," in two inscriptions at Hamamat — (Birch).

"2337 B. C. = beginning of the Sixth cycle" (Chinese chron. table; referred there to the "21st year of Yao," but clearly too early for his accession).

The accession therefore of Chao-hao, son of Hoang-ti and uncle of Tchouen-hio (Pauth. 30), not earlier than the last-named date. Chao-hao prescribed dresses to indicate the rank of civil and military officers (Pauth.); — and in his reign, a new kind of music was invented in China.

The seventeenth chapter of the Egyptian ritual or Book of the Dead, the most voluminous work in hieroglyphic writing extant, is inscribed on the coffin of queen Mentuhept (Buns. and Birch v. 89). — Other extracts on coffins have been traced by Birch as far back as the Twelfth dynasty.



"aphŏph" or "aphŏp" or "aphŏphi" giant, mighty man; "phōf" or "p-hōf" serpent. The character of the slain aphophis occurs in the Book of the Dead, — also under the . . . . dynasty (Champ. mon. iv. pl. 320 and 222); and the knives not yet inserted, under the Twenty-sixth dynasty (Leps. d. iii. pl. 26). The character of the free living aphophis occurs as early at least as the . . . . dynasty (Rosellin. mon. stor. ii. 24, and Champ. dict. 170). The aphophis wearing the crown of Lower Egypt, , occurs as early at least as the . . . . dynasty (Champ. dict. 88). Among the Greeks, Apollo slew the serpent or dragon "puthōn," and hence the name "Pythian" applied to his oracle at Delphi (Homer od. viii. 80 and xi. 581, the Hesiodic Theog. 499, Pind., Aeschyl. choeph. 928, and Herodot. viii. 47).

The above hieroglyphic characters imply knowledge of the gigantic serpents, *Pythons* of Equatorial Africa. — One of these serpents, "thirty cubits" long, was brought alive from Equatorial Africa to Alexandria in the reign of Ptolemy II. (Agatharch., in Diodor. iii. 25).

Fifty-ninth generation. Sept. 1st, 2334, mostly beyond youth:

2329 B. C. The Yang-pao-theou or pigmies who sent tribute to China in the "29th year of Yao" — (according to the Tchou-chou), are referred in the melanges Remusat iii. p. 256 to the Laplanders. The country of the Yang-pao-theou, according to the historical romance called San koue tchi, is situated Northwest of Sogdiana; they were numerous in the time of the 'Wei, according to Touchi; and are mentioned by Ma-touan-lin in the Thirteenth century A. D.

Amemphsinus, a Chaldean of Lanchares or Laranchis, reigning at Babylon — (Berosus in Alex. Polyhist., Euseb., and Syncell.).

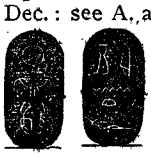
Tchouan-hiu or Tchouen-hio, a "nephew" of Chao-hao, perhaps already "elected" emperor. He reformed the calendar, making the year commence, in accordance with the above-mentioned conjunction of "five planets" with the first lunation of spring. China now extending North to Tartary, East to the sea, West to the sandy Desert, and South to Cochinchina (Pauth.).

Pæonia officinalis of mountains from Italy to Central Asia. Called in Britain *peony* or *piony*, in France "pioine" or "pivoine" (Nugent), in Germany "päonie" or "pfingstrose," in Italy "peonia femina" (Lenz), in Greece "makōs" (Sibth., and Fraas). Employed medicinally by the Chinese throughout all antiquity — (Cibot in mem. Chin. iii. p. 461); observed by Thunberg "in almost every garden" in Japan. Westward, the "paiōnia" or "glukusithē" or "pĕntōrōvōs" is considered by Pliny xxiv. 102 and xxv. 10 the earliest known medicinal plant, in use also among the Magians; derived its name from the physician of the gods sometimes identified with Apollo, was employed medicinally by the five Idaei Dactyli and their successors the Curetes and Corybantes, was cultivated in the garden of Hecate (Orph. hymn and argon. i. 916, Strab., Plut. lun., and Spreng.); is identified in Syn. Diosc. with the "ithaiōus thaktulōus" or "aglaophŏtitha" or "sĕlēniōn;" is mentioned also by Aeschylus, the comic poet Plato, in the Hippocratic treatises mul. morb. 56 and superf. 20, and by Theophrastus, and Nicander; by Pliny xxvii. 60, as collected on the mountains of Italy, precautions being taken against the "picus martius," and employed medicinally and "faunorum in quiete ludubriis;" the "paiōnia thēlĕia" is also distinguished by Dioscorides, and Pliny: P. officinalis is described by Fuchsius. 202, and Lobel pl. 682; is termed "p. communis vel fœmina" by Tournefort inst. 274; is known to grow in North Italy on the wooded slopes of the Alps (Pers., and Lenz); was observed by Sibthorp, and Fraas, on the loftier mountains of Crete and Greece; is described by Pallas (Steud.); and roots and seeds of the "pæonia" are enumerated by Alpinus, and Forskal mat. med., as imported for medicinal use into Egypt. By European colonists, P. officinalis was carried to Northeast America, where it has become frequent in gardens. Its seeds according to Lindley are "emetic and cathartic," and its "root reported to be antispasmodic."

Pæonia corallina of the Altaian mountains. Called in Britain *peony* or *piony* (Prior), in Italy

"peonia" or "peonia maschia" (Lenz), in Greece "lēgōunia" (Sibth.) or "makōs" (Fraas). Also employed medicinally by the Chinese throughout all antiquity — (Cibot): known to grow in Siberia (Pers., Pall., Bieb., and Steud.). Westward, the "paiōnia arrēn" is distinguished by Dioscorides, and according to Pliny xxvii. 60 grows also in the woods of Italy: P. corallina is described by Morison xii. pl. 1, is termed "p. folio nigricante splendido quæ mas" by Tournefort inst. 273; was observed by Sibthorp, and Fraas, on the mountains of Greece; by Lenz, in Italy; is known to occur cultivated and naturalized throughout middle Europe, and from "1803" naturalized in Britain (Engl. bot. pl. 1513, Wats., and A. Dec.).

Artemisia vulgaris of Europe and Northern Asia. Called in Britain *mugwort*, in Anglo-Saxon "mug-wyrt" or "mucg-wyrt," in old English "modirwort," in Ælfric's glossary "matrum herba," by Macer Floridus "herbarum matrem" (Prior), in France "armoise" (Nugent), in Germany "mutterkraut" (Grieb), in China "y-tsao," and known there throughout all antiquity, — for medicinal properties so highly esteemed as to be regarded the herb of physicians, employed besides for various novel purposes, and growing in all the provinces (Cibot mem. Chin. v): carried aboriginally to Java (Zoll.) and Hindustan (Dec. prodr. vi. p. 112), but known to grow wild in Northeastern Asia and throughout Siberia (Ledeb., and Wats.). Farther West, the "artemisia" was named after Artemis Ilithya, or according to others its original name "parthenis" was changed in honour of Artemisia (Plin. xxv. 36); the "mētrŏas artĕmisias" is mentioned by Heras (Galen comp. med. gen. vii. 14); A. vulgaris is termed "a. vulgaris major" by Tournefort inst. 460; is known to occur in waste places around Caucasus (Bieb.), was observed by Sibthorp around Bursa and Smyrna and in shaded situations in Northern Greece; is known to occur in Italy (Ten. p. 419), and in waste and cultivated ground as far as Lapland (Pets., and Fries). By European (or possibly Asiatic) colonists, was carried to North America, where it now occurs from the Arctic circle throughout Canada, having reached California before the voyage of Beechey (Hook., and Arn.); was observed by myself naturalized along the Lower St. Lawrence; and by Pursh, and A. Gray, in "waste places near dwellings" in our Northern States. Clearly by European colonists, was carried to Austral Africa (A. Dec.: see A. arborescens and A. campestris).



The name of king Nuantef IV. occurs on a vase (now in the possession "of Dr. J. Lee"), and on other contemporaneous monuments — (Glid. analect., and Leps. k. pl. 11 and 68): and is in about this place in the chamber of kings at Karnak.

"Second year of Ranebter" or Nuantef IV., the latest date in his reign found on the monuments (C. Mull. fr. Man. p. 535).

Sixtieth generation. Jan. 1st, 2300, mostly beyond youth:

"2297 B. C. (= 61st year of Yao," according to the Li-tai-ki-sse, and Pauth. p. 35), the Great inundation. Tikou or Tiko, a grandson of Tchouan-hiu, may have been at this date reigning. He introduced *polygamy* into China: — where the institution continues to the present day (see Pauth.).

Otiartes, a Chaldean of Lancharis or Laranchis, reigning at Babylon — (Berosus in Alex. Polyhist., Euseb., and Syncell.).

After ruling China "ten" years, Ti-tchi dethroned by the principal men. The name of the years changed from "nian" to "tsai" (Amyot, and Pauth. p. 31 and 475).

"2285 B. C. (Chinese chron. table), "Chun associated in the government by Yao." The accession of Yao himself can hardly be placed earlier than this date (see below).

The institution of the *drum and tablet* for giving advice to the emperor, established by Yao: — or according to some authorities, by his colleague and successor Chun.

Quotations regarded as belonging to the time of the Chinese emperor Yao have been preserved in the Chou-king (Pauth.); and if genuine, are the earliest *transmitted writings*.

The title of a king whose name remains unknown, occurs in a contemporaneous inscription in the quarries at Hamamat (Leps. d. ii. pl. 150, and k. pl. 11).

"In the time of Thang-Yao" (hist. Cor., and Klapr.), the Coreans having neither chiefs nor king, a supernatural man descended under a "than-mou" or santal tree and was made king. He was called Than-kiun, and resided first at Ping-jang, — but afterwards removed to Pĕ-yŏ; where his descendants reigned nearly a thousand years.

"2277 B. C. (= 81st year of Yao and 9th year of the association of Chun," Chinese chron. table), beginning of the Seventh cycle.

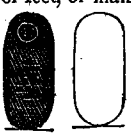
On the Egyptian monuments, *animal-headed gods* make their first appearance (compare Leps. d. ii. pl. 119, 144, and 150).

2669 B. C. (= 2210 + "16 + 43 years" of both Maneth. tables), accession of the Eleventh dynasty, a Theban dynasty.

The name of king "Nacht-en-ra," not found on contemporaneous monuments, — occurs in about this place in the chamber at Karnak.

Sixty-first generation. May 1st, 2267, mostly beyond youth:

"2255 B. C. = 1st year of Yu-Chun" (Chinese chron. table, and Pauth. p. 38), Chun now sole emperor. He abolished the practice of mutilating criminals: marking the face, cutting off the nose or feet, or making *eunuchs;* a class at first consisting only of criminals.



The title, chiefly erased, of another king whose name remains unknown, occurs on contemporaneous monuments. — He is placed next in order of succession by Lepsius k. pl. 11.

2250 B. C. = "6th year of Chun" (. . . . Pauth. p. 38), visit of the emperor Chun to the four mountains Yo, at the four cardinal points of China, to offer sacrifices to the Supreme Being; there being as yet no temples.

Chun also instituted the "Five immutable rules" or obligations: between father and children, king and subjects, husband and wife, old men and young, and between friends.

Xisuthrus, son of Otiartes, reigning at Babylon — (Berosus in Alex. Polyhist., Euseb. i. p. 5, and Syncell. p. 39).

The name or title of a third king, found on the monuments, — is placed next in order of succession by Lepsius k. pl. 11.

Sixty-second generation. Sept. 1st, 2234, mostly beyond youth:

Deluge of Xisuthrus: and accession of Euechous, a Chaldean, as king at Babylon — (Berosus in Alex. Polyhist., and Euseb. i. 4. p. 18).

"2233 B. C." (= 330 + "1903 years" of Simplicius, Clint. i. p. 282 and iii. p. 505), beginning of the series of Babylonian *astronomical Observations;* — procured on the spot by Callisthenes, and sent by him to Aristotle.

2226 B. C. (= 2210 + "16 years" of the Maneth. tables, the Turin papyrus giving "19 years"), accession of Ammĕnĕmēs, head of the Twelfth dynasty: also a Theban dynasty. Amunemhat appears to have commenced the temple at Karnak, and his name occurs on contemporaneous monuments, in the quarries at Mokattam and Hammamat — (Birch); also somewhat later, in the Second tomb at Benihassan (observed by myself), and in the chamber of kings at Karnak.

"2224 B. C., Yu associated in the government by Chun" — (Chinese chron. table).

2219 B. C. = "8th year of Amunemhat" on a stela — (now in Paris, C. Mull. fr. Man p. 563).

2218 B. C. = "9th year of Amunemhat" on another stela; the latest date in his reign found on the monuments (C. Mull. fr. Man. p. 563).

Among *proverbs* extant on papyri, some are attributed to Amunemhat. The Egyptian proverbs (according to Lepsius Eg. and Sin. p. 390) somewhat resemble those of Solomon: and (according to Diodorus . .), the wise sayings and actions of distinguished men, were read aloud to the Egyptian kings.

2217 B. C. = 39th year of Chun, and 8th year of the association of Yu" (Chinese chron. table), beginning of the Eighth cycle.

Manetho's First volume closing with the reign of Ammĕnĕmēs, indicates at least a chronological landmark. It may therefore be observed: that after excluding the extreme reigns of the Twelfth dynasty, the Turin papyrus gives "213 y. 1 mo. 17 d. — 19 y. — 3 y. 10 mo. 4 d. = 190 y. 3 mo. 13 d.; clearly the "190 years" preceding the Hyksos in the Egyptian Chronicle, and in the Euseb.-Maneth. table.

2210 B. C. (= 1413 + "263 + 518 + 16 = 184 + 453 + 160 years" of the Afr.-Maneth. table = "348 + 103 + 190 years" of the Euseb.-Maneth. table and the Egyptian Chronicle + 1539 × 2 — 1461 × 2; Manetho's general numbers giving 1540 × 2 + "16 — 2300 years" = 2209, and the Euseb.-Maneth. table giving besides 1613 + "103 + 250 + 245 years" = 2211), Ammĕnĕmēs succeeded by his son Sĕsōghŏsis or Sĕsōghŏris, second king of the Twelfth dynasty; to whom "Forty-six" years are assigned in both the Maneth. tables; but "forty-five" only in the Turin papyrus. The name of king Sesurtesen occurs on contemporaneous monuments throughout Egypt and Nubia as far as Wady Halfa: — also on monuments of later times, as in the chamber of kings at Karnak, and in the tablet at Abydos. Papyrus rolls are extant, having the names of Amunemhat and Sesurtesen written in vertical columns (Leps. eg. and sin. p. 395).

From Chun whom Yao associated, — to Wen-Wang, "one thousand" years are reckoned by Mencius (Du Halde i. p. 131).

"2205 B. C. = 1st year of Yu," now sole emperor, and head of the new dynasty of the Hia — (Chinese chron. table). An inscription attributed to Yu, is now known to be of much later date (see silk).

The inventor of an intoxicating fermented liquor or of *alcoholic distillation*, banished by the

emperor Yu — (Chinese auth.). The next emperor but one, Tai-kang, is accused in the "Elegy of the five sons" of being too fond of this fermented liquor (Chou-king ii. 3, and Pauth. p. 55); "wine from wheat," and "from rice," are both mentioned in the Chou-king. Spirituous liquors are mentioned in the Institutes of Menu (Deslongchamps version); "wine from rice instead of barley" was seen in Hindustan by Megasthenes (Strab. xv. 153); and the ardent spirit from rice was found by Jean Carpin, Rubruquis, and Marco Polo, in use in Central Asia; and by Borri, in Cochinchina. An intoxicating "vin de zucar" manufactured in Hindustan, is further described by Marco Polo 180. From the first invention in China, some three thousand years elapsed before alcoholic distillation became known in Europe.

The Hong-fan, a treatise on moral and political philosophy, science, and religion, is attributed to the reign of Yu — (Chou-king iv. 4. 3).

Divination with the herb "chi" practised by the emperor Yu (Chou-king i. 3. 18); mentioned also in the Hong-fan.

"2204 B. C." (Graha Munjari tables), beginning of the Treta Yug or Silver Age among the Hindus, and (according to Bentley as. res. viii. p. 226) of *Hindu history*. Atri, the great grandfather of king Pururava, not earlier therefore than this date.*

Chomasbelus son of Euechous, reigning at Babylon — (Berosus in Alex. Polyhist., and Euseb.).

Sixty-third generation. Jan. 1st, 2200, mostly beyond youth:

The same year (= 1976 + "224 years" of Berosus in Alex. Polyhist., and Euseb. i. 4. p. 18), Babylon captured by the Medes under Zoroaster; and the accession there of the Median dynasty: — a succession of "8," or perhaps "8 + 11," Median kings of Babylon.

Zoroaster, founder of Median power though a Bactrian king, is identified (by Berosus in Mos. Choren. i. 5) with the "Zerovanus" who lived after the Deluge of Xisuthris. Zoroaster is also termed a Bactrian by Clemens Alexandrinus, Arnobius, Justinus i. 1, and Ammianus Marcellinus; and is spoken of as the first who "discovered the magic arts, and diligently investigated the principles of the universe and motions of the stars." (See below, Ninus)

"2197 B. C. = 1st year of Ki, of the Hia" or Third dynasty (Chinese chron. table), and a son of Yu; — the succession from this time hereditary, confined to a selection among the king's sons (Pauth. 54 and 60).

A "black granite" fragment of a colossal statue of king Sesurtesen — is now in the museum at Berlin.

His portrait occurs on a stela, or stone slab, recording the conquest of Nubian and Lybian Tribes.

This stela was discovered at the Second cataract of the Nile, near the sanctuary of a temple built by him. In accordance also with his father's plans, Sesurtesen founded or continued the temple at Karnak in Thebes.

By another marked change in monumental history, *obelisks* now make their appearance: as far as known first erected by Sesurtesen; one of *granite* proper (and therefore brought from some unknown quarter) at Heliopolis; another, at Crocodilopolis in the Faium. — From this time, obelisks, bearing apparently dedicatory inscriptions, are placed in front of temples; but occur only in the royal or dynastic cities, those sometimes designated by their tutelar deities: as Memphis by Pthah or Vul-

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* *Sapindus rubiginosus* of Tropical Hindustan. A tree called in Burmah "hseik-khyæ" (Mason), and from early times affording sustenance to man in its fruit: — observed by Graham near "Bombay, rare;" by Wight in Southern Hindustan; by Roxburgh cor. i. pl. 62, its timber "very useful for a great variety of purposes, being large straight strong and durable." Farther East, by Mason v. 535 "exotic" in Burmah, and bearing "a small red fruit in bunches that is eaten by the natives."

Elæagnus conferta of the mountains of Hindustan and the Siamese countries. A large scandent shrub called in the environs of Bombay "amgool" or "amgoolee" (Graham), in Burmah "men-gu" (Mason), in Tagalo "alingaro" (Blanco), and from early times affording sustenance to man in its fruit of "an agreeable acid flavour:" — observed by Nimmo common "all along the Ghauts, Southern Concan and about Cochin;" by Roxburgh i. 440 in other parts of Hindustan; and by Hermann (Burm. pl. 39) on Ceylon. Farther East, by Mason v. 450 indigenous in Burmah, cultivated besides by the natives for its edible plum-like fruit; by Loureiro ii. p. 528 in Cochinchina; and by Blanco, along roadsides on the Philippines.

Antidesma paniculata of Tropical Hindustan and Burmah. A small tree called in Burmah "kyet-tha-hen" (Mason), and from early times affording sustenance to man in its fruit: — observed by Nimmo in the "Southern Concan" (Graham), and by Roxburgh iii. 770 in other parts of Hindustan. Farther East, by Mason v. 458, indigenous and frequent "in the neighborhood of Toungoo" in Burmah, bearing "a red sour fruit."

can; Heliopolis by Ra; Elephantine by Num or Agathodæmon; Crocodilopolis by Seb or Saturn; Abydos by Osiris; Tanis by Typhon; Thebes, perhaps by Horus; and it is known, that Sais once possessed obelisks.

"2188 B. C. = 1st year of Tai-kang, of the Hia" or Third dynasty — (Chinese chron. table).

2168 B. C. (= "43d year of Sesurtesen," Birch), death of Ameni, a military officer whose tomb is conspicuous in the series at Benihassan from the columns supporting the entrance: — supposed to have given rise a thousand years later to the "*Doric architecture*" of the Greeks.

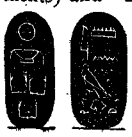
In this or another tomb of the same series, all excavated under the Twelfth dynasty, an astronomical date is given: which has been determined by Biot at "about 2200 B. C." — (Champoll. Figeac anc. Eg. p. . .).

The *Indian bullock* (Rosellin. m. civ. pl. 20), distinguished by its hump, is figured in one of the tombs at Benihassan: — and under the Nineteenth and Twentieth dynasties is always in a distant country invaded by the Egyptians, used even for drawing cars (as to the present day in Hindustan). Eastward, the bullock is mentioned in the Sama Veda (transl. Stev.), Institutes of Menu (transl. bramin., and Mason); and though not met with in the Buddhist cave-temples, I found caparisoned Indian bullocks figured in the Braminical cave-temples at Ellora. The voice of the living animal, I often had occasion to remark, is only a sort of grunt, entirely distinct from the lowing of our own domestic cattle. (See Socotra).

As the military expeditions of Sesurtesen were exclusively directed Southward, the above figure seems to imply that Hindu merchants were already settled around the entrance to the Red Sea. — In expeditions under the Nineteenth and Twentieth dynasties, clearly directed Eastward, the humped or Indian bullock is owned by a nation clad in a long narrow scarf wound like a bandage around the body (a Hindu costume observed by myself at Bombay, but at present confined to females): and in the tomb of Ramessu III., the nation wearing this winding scarf represents one of the four geographical divisions of the World known to the Egyptians.

Sixty-fourth generation. May 1st, 2167, mostly beyond youth:

The same year = "44th year of Sesurtesen" (the latest date in his reign found on the monuments) and "2d year of Amunemhat II.," on a stela — now in Leyden (C. Mull. fr. Man. p. 563).



2164 B. C. (= 2210 — "46 years" of the Maneth. tables, the Turin papyrus giving — "45" = 2165), accession of Ammanemes, third king of the Twelfth dynasty. "Thirty-eight" years are assigned to his reign in the Maneth. tables; the Turin papyrus being in this place defective. The name of king Amunemhat II. occurs in one of the tombs at Benihassan, and on other contemporaneous monuments: — also in later times, in the chamber of kings at Karnak, and on the tablet at Abydos.

"2159 B. C. = 1st year of Tchoung-kang, of the Hia" or Third dynasty (Chinese chron. table).

"2157 B. C. = 3d year of Tchoung-kang" (Chinese chron. table), beginning of the Ninth cycle.

"2155 B. C." (Li-tai-ki-sse, Chinese chron. table, Gaubil astron. Chin., and Pauth.), *eclipse of the sun*, historically recorded in China. It took place (according to the Chou-king) in "the first years of Tchoung-kang;" and the two astronomers were put to death for not having predicted it.

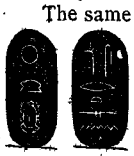
2150 B. C. = "nineteenth year of Amunemhat II.," in one of the tombs at Benihassan, Khnumhetp appointed chief of the district of Menat-Khufu — or Minieh (Birch).

"2146 B. C. = 1st year of Siang, of the Hia" or Third dynasty (Chinese chron. table); and a "son of Tchoung-kang" (Pauth.).

"2145 B. C. = "24th year of Amunemhat II.," in the tomb of Khnumhetp at Benihassan, mining operations commenced at Sarabit-el-Khadim in the Sinai peninsula — (Birch).

Sixty-fifth generation. Sept. 1st, 2134, mostly beyond youth:

The same year = "35th year of Amunemhat II." on the monuments — (C. Mull. fr. Man. p. 562).



2126 B. C. (= 2210 — "46 — 38 years" of the Maneth. tables, the "44th year of Amunemhat II." at Wady Maghara = 2125), Amunemhat II. "put to death by his own *eunuchs*." He was succeeded by Sesostris, fourth king of the Twelfth dynasty; to whose reign "Nineteen" years are assigned in the Turin papyrus. The name of king Sesurtesen II. occurs in one of the tombs at Benihassan, and on some other contemporaneous monuments (Leps. k. pl. 12): — and is next in the order of succession in the tablet at Abydos.

2125 B. C. (= 1613 y. 2 mo. + "511 years" of Manetho in Jos. c. A. i. 14), beginning of the Hyksos intrusion:

The first entrance of a body of foreigners into Egypt is represented in the tomb of Khnumhetp at Benihassan; dated (according to Lepsius eg. and sin. 111) in the "sixth" year of Sesurtesen II. (= 2121 B. C.). The strangers, clearly of the *White Race*, are termed "captives" (a point of agree-

ment with the Hyksos of Manetho), use the javelin or throwing-spear, and unlike the Egyptians, wear variegated garments (apparently the oldest known specimen of *Sidonian needle-work*).

That the strangers came from Phoenicia or at least Syria, is indicated by scarlet in their variegated garments, the dye of the *kermes* insect, Coccus ilicis: — the "shny" or kermes dye is mentioned in Gen. xxxviii. 28, Ex. xxv. 4, Lev. xiv. 4, Josh. ii. 18, Prov. xxxi. 21, Cant. iv. 3, Isai. i. 18, and Jer. iv. 30; and continues well known in Persia and Northern Hindustan (J. F. D. in Kitt. cycl. bibl.). Northward and Westward from Syria, the "kōkkōs vaphikōs" is mentioned by Ctesias, Theophrastus iii. 16, Pausanias, and Paulus Aegineta; by Dioscorides, as produced in Cilicia, Asia proper, Armenia, Galatia, and Spain; in the days of Pliny ix. 65 and xvi. 12, gathering "coccum" furnished the poor of Spain the means of paying half of their tribute, the best quality coming from Emeritam in Lusitania: and kermes dye continued in general use throughout Europe until superseded by cochineal. The kermes insect is particularly described by Emericus, and Garidel p. 254.

Quercus coccifera of the wooded portion of the Mediterranean countries and Persia. The *kermes oak* on which this insect is known to feed is a shrub or small tree — called in Greece "pirnari" (Sibth.); in which we recognize the "prinōs" alluded to as a shrub by Simonides (Plut. vit. Thes. 17), mentioned also by Aristophanes, Pausanias, and by Theophrastus iii. 8 as affording the "phōinikōun kōkkōn;" the "kōkkōs vaphikē" shrub is described by Dioscorides as growing in Cilicia, Asia, Armenia, Galatia, and Spain; the "coccum," by Pliny xvi. 8 to 12 as found on "parvæ aquifoliæ ilicis," one of the two kinds of "ilex," and procured in Pisidia, Sardinia, and Africa: Q. coccifera is termed "scarlet oak" by Gerarde (Ainsw.), "ilex aculeata cocciglandifera" by Tournefort inst. 583: was observed by Sibthorp, and Fraas, from the Peloponnesus throughout Greece and the Greek islands; by Chaubard, perhaps the most frequent little tree in the East and even of the whole Mediterranean region; is known to grow on Sicily and on both sides of the Straits of Gibraltar (Spreng., Guss., Webb, and A. Dec.).

Isatis tinctoria of the Mediterranean countries. Called in Britain *woad* or *wade*, in Anglo-Saxon "wad," in Old Saxon "wode," in old high German "weit," in old French "guesde," in current French "guêde" or "gaide" (Prior), in current German "waid" (Grieb), in Italy "guado" or "glasto" or "isatide" (Lenz), and possibly affording the blue dye in the variegated garments of the strangers: — the "isatis" yielding a dye, is mentioned by Democritus (Schneid. ann. Theophr.); by Dioscorides, as more than a cubit high with plantain-like leaves; is termed "ēmĕrōs" in Syn. Diosc., and identified with the "arōusiōn" of the prophets; and the "nilaj," mentioned according to Ebn Baitar by Dioscorides, is referred by Sontheimer to I. tinctoria: which plant was observed by Gittard in the Peloponnesus (Chaub.); and by Fraas, wild on the mountains there. Westward, the Britons are described by Cæsar v. 14 as staining their bodies with "vitrum" to look terrible in battle, an account repeated by Pomponius Mela iii. 6. 55, while Pliny xxii. 2 states that the British women stain their bodies with "glastum;" the "isatis" used for dyeing wool, is described by Pliny xx. 25 as resembling in its leaves "lapatho silvestri," and possessing various medicinal properties; the "waisda" is mentioned in the capitularia of Charlemagne; the "isatis" of the Greeks is identified by Macer Floridus 55 with the "gaisdo;" I. tinctoria was observed by Lenz wild in Italy, and is known to grow in other parts of Southern Europe (Pers.): was found by Gerarde p. 394 in Britain only in places where it had once been cultivated, but has since become naturalized (Wats., and A. Dec.). By European colonists was carried to Northeast America, where it continues sparingly cultivated, and sometimes springing up spontaneously. (See Lycopus Europæus).

Genista tinctoria of Europe and the adjoining portion of Asia. Called in Britain *base broom* or *greening weed* or *greenweed* or *dyer's greenweed* or *wood-waxen*, in old English "wodewex," in Anglo-Saxon "wudu-weaxe," in mediæval Latin "genista humilis" (Prior), in Germany "färbeginster" (Fraas): possibly affording the green dye in the variegated garments: — G. tinctoria was observed by Sibthorp on mount Athos and in the environs of Constantinople. Westward, the "genista" is termed "lenta" by Virgil geor. ii. 12. 433, is mentioned also by Vitruvius vii. 14, Columella iv. 31, by Pliny xvi. 30 to 69 as springing up to dye garments and used besides for ties: G. tinctoria is described by Tragus p. 604 (Spreng.), is termed "g. tinctoria germanica" by Tournefort inst. 643; and is known to grow in France and throughout middle Europe as far as Denmark (fl. Dan. pl. 526, Pers., and Dec.). By the first European colonists was carried to Salem in New England, "woad-seed" being enumerated prior to February 1628 in a memorandum of articles to be sent out with governor Endecott; forty years later, "wood-wax wherewith they dye many pretty colours" was found there by Josselyn rar. p. 51; in 1814 within my memory, hardly extended more than a mile from the town; in 1872 had spread in some directions at least three miles, monopolizing the soil on the rocky hills and colouring the district in the season of flowering; not disseminating itself in a scattered manner throughout the country, and as yet I have heard of only two additional localities, "Cambridge" near Boston (Tuckerm. archæol. Amer. iv. p. 186), and "Peekskill" on the

Hudson (A. Gray). G. tinctoria according to Lindley is "chiefly employed in dyeing; the whole plant affords a good yellow colour, and with woad a good green."

"2118 B. C. = 1st year of Chao-kang, of the Hia" or Second dynasty (Chinese chron. table); a "son of Siang" (Pauth.).

2117 B. C. "In nine years" (Maneth.), Sĕsŏstris "subdued all Asia and of Europe as far as Thrace." An account confirmed by Herodotus, and other Greek writers. Sesostris lived (according to Justin) before the time of Ninus.

2116 B. C. = "11th year of Sesurtesen II.;" the latest date in his reign found on the monuments (C. Mull. fr. Man. p. 562).

In tombs under the "Twelfth" dynasty at Berscheh, the transportation of a colossus is represented; stated in the hieroglyphic inscription to be of *limestone* (Lepsius eg. and sin. 113).

"2107 B. C." (Armen. hist., and Sm. b. dict.), Haïg son of Gathlas and first king of Armenia. Commencement of *Armenian history* — (Klapr. mem. i. 410).

In this year (= 2126 — "19 years" of the Turin papyrus), Sesurtesen II. succeeded by Sesurtesen III., fifth king of the Twelfth dynasty. — The Turin papyrus though partially defective in this place, affords evidence, that the reign of Sesurtesen III. lasted at least thirty years. His name occurs in the sanctuary of the temple at Samneh (Leps. eg. and sin. 120); also on the Kosser road; and he is next in the order of succession on the tablet at Abydos.

In a Third tomb at Benihassan (Champoll. pl. 396), a foreign nation, distinct perhaps from the one last mentioned and wearing only the cincture of warm climates, is represented fighting the Egyptians. The siege of a fortress is also represented. And (according to Lepsius briefe aus Aeg. p. 367), one of these foreigners reduced to servitude. — In the tomb of one of the kings of the Nineteenth dynasty, this foreign nation wears the Bedouin fillet.

Of the principal *arts* and *trades* of civilized life, a majority already known to the Egyptians, and figured on the walls of these and the remaining tombs at Benihassan.

Most of the domestic and useful animals and plants already mentioned, are again figured at Benihassan, and even in the same peculiar varieties or breeds. The additional kinds, in consideration of the long interval of time, are surprisingly few; and after careful examination, I could distinguish only the following:

Among a variety of wild species, a flock possibly of the *domestic duck*. — Ducks in the artificial pools of a garden, are figured under the Seventeenth or Eighteenth dynasty (Roşselin. ii. pl. 69). "Nēssa" and "nēssariōn," ducks and ducklings, are mentioned by Aristophanes av. 556 and plut. 1011; and "anatum ova" and tame ducks, by Plautus, Varro, Cicero, and Pliny.

Flocks also of the *domestic goose*, Anser . . . . ; this Northern bird being clearly now the companion of man: — the "hēn" and "hēnōvŏtia," geese and geese-feeding, are mentioned by Homer il. ii. 460, Xenophon, and Plato. Rome in its early history, was saved from a night-surprise by a flock of domestic geese: and the "anser" and "anserculus," goose and gosling, are mentioned by Cicero, Columella, and Pliny.

Albino *rabbits*, Lepus cuniculus, also figured, carried in cages and perhaps regarded as sacred: clearly not the hare, which is figured with longer ears in the hunting scenes. — The above were the only figures of the rabbit I could discover on the Egyptian monuments; and in the time of Athenaeus ix. 63, the animal was unknown in Egypt. Alexander captured a city by means of a burrow or mine (. . . . . .); and the "cuniculus" or rabbit is distinctly mentioned by Polybius, Posidonius, Varro, and Catullus. The rabbit seems properly a Western animal, and according to Leo Africanus, is indigenous in Mauritania.

A *cheeta* or hunting leopard, Felis jubata, led by a cord, and probably brought down the Nile from Equatorial Africa: — the cheeta is also figured in tribute-processions under the Eighteenth and Nineteenth dynasties: but does not appear to have been employed in Egypt for hunting; after the manner practised in Central and Eastern Asia, as described by Marco Polo 75.

Of the hunting scenes at Benihassan, some may be situated in Northern climates: especially as the striped lion (Leps. d. ii. pl. 131) indicates, that accounts of the *tigers* of Hyrcania, along the Caspian, had reached Egypt. — "Sĕlĕukōu tigris," a living tiger sent to Athens, is mentioned by Alexis, and Philemon.

The wild species of quadrupeds and birds figured are very numerous, as also the species of fishes, and insects: amounting to an important *treatise on zoology*, deserving the careful attention of naturalists.

Momordica balsamina of Tropical Arabia. The *balsam-apple*, called in France "pomme de merveille" (Pers.), in Egypt "ballesan," in Yemen "mokahh" or "moghadd" (Forsk.), is perhaps the Cucurbitaceous plant with deeply-lobed leaves and oblong fruit trained on a trellis — (Champ. pl. 357): M. balsamina seems mentioned by Avicenna, and Abd-allatif; was observed by Hassel-

quist, Forskal, and Delile, in the gardens of Egypt; and by Forskal, wild everywhere along the base of the mountains of Yemen. By European colonists, was carried to Northeast America, where it is occasionally seen in gardens.

2102 B. C. = "6th year of Sesurtesen III.;" found on the monuments (C. Mull. fr. Man. p. 562).

Sixty-sixth generation. Jan. 1st, 2100, mostly beyond youth:

The same year = "8th year of Sesurtesen III.," in a tablet at Samneh in Upper Nubia (Birch), Ethiopia being now for the first time conquered by an Egyptian army (Leps. eg. and sin. 245). A statue of the king has been found near by on "Bigeh," and foundations of a gigantic fortress were built in the narrow pass, — afterwards converted into a nilometer (Leps. and Buns.).

"2097 B. C. = 23d year of the usurpation of Han-tsou, and 22d of the detention of Chao-kang" (Chinese chron. table), beginning of the Tenth cycle.

2094 B. C. = "14th year of Sesurtesen III.," in the quarries of basalt at Hamamat — (Birch).

"2093 B. C. = Sixth manwantara" among the Hindus (Graha Munjari tables, and Bentley as. res. viii. 244), Pururava son of Budha, son of Soma, son of Atri, may have been at this time reigning.*

Bambusa arundinacea of Tropical Eastern Asia. The *bamboo* is called in Bengalee "bansh," in Telinga "veduru," in Tamil "mungil," in Malabar "kull-moollah" (Drur.), and the people of Hindustan at first lived on the "kalamōs" † — (Aelian, and Ruel i. 115); the "kalamōs inthikōs" is mentioned by Herodotus . . . . , and Theophrastus iv. 11. 13, and was seen in Hindustan by Megasthenes (Strab. xvii. 3. 5): boundaries according to the Institutes of Manu viii. 247 should be marked by planting bamboos (transl. Deslongch.): B. arundinacea was observed by Graham in the environs of Bombay, but by myself only under cultivation; by Rheede i. pl. 16, in Malabar; by Buchanan, Roxburgh cor. i. pl. 79, and Drury, wild in the interior forests of the peninsula, the seeds gathered for food, the young shoots eaten like asparagus, and the leaves and old stems employed for a great variety of purposes. Farther East, by Mason v. 525 in Burmah, some varieties indigenous, "houses with all their furniture" made of them, fire procured "by rubbing two bits" together, "bellows to blow the fire" also furnished, the joints supplying the place of "cup, spoon, and water-bucket," the leaves used "for plates and dishes and thatch," the "young shoots" eaten as vegetables together with the seeds "in times of scarcity;" was observed by myself planted along road-sides on the Philippines. Westward, is enumerated by Clot-Bey as recently and successfully introduced into Egypt.

"2079 B. C." (Pauth. p. 61), in China, Han-tsou dethroned by the lawful emperor Chao-kang.

Tanaus king of Scythia, before the time of Ninus — (according to Justin, Bonom. Nin. iii.: see Targitaus).

Sesurtesen III. building of dobi or sun-dried brick the small pyramid at Dashur. An inscription (interpreted to Herodotus) claimed superior value over the stone pyramids around, and if an herbarium of selected plants chopped and mixed in mud, its superiority will be vindicated. A single brick examined by Unger has at least led to important results:

Raphanistrum arvense of the Mediterranean countries. The *jointed charlock* is called in Greece "raphanitha" (Sibth.), and imbedded fragments in the brick — identified by Unger (acad. vienn., and journ. sc. lond.): the plant at the present day seems unknown in Egypt. Farther North, "raphanithas lĕptas" are commended as purgative by Diocles of Carystus in a letter to king Antigonus (Fabr. xii. p. 588): and R. arvense was observed by Sibthorp not rare in the grain-fields of

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* *Prosopis spicigera* of Tropical Hindustan. A large tree called in Tamil "parumbay," in Bengalee "shumee," in Telinga "chamee" (Drur.), on the Northern Circars "tshamie" (Roxb.); and the "sami" by rubbing which king Pururavas brought out concealed fire — (Kalidas. ragh. iii. 9), mentioned also by Susrutas sutr. 46 to kalp. 7, is referred here by Colebrooke as. res. vii. 302: the "arani" by friction of two pieces yielding the "sacred fire" (Sanhita of the Sama Veda iii. 6 to xi. 10, Stev. præf. iv to vii), mentioned also by Susrutas sutr. 36, is according to Wilford a cubic block of "sami;" and W. Jones as. res. iv. 307 found "sami" wood "extremely hard, used by the Brahmens to kindle their sacred fire by rubbing two pieces of it together:" P. spicigera was observed by Law "common in Guzerat" (Graham); by flor. ind. pl. 25, Koenig, Roxburgh cor. i. pl. 63, Wight, and Drury, in other parts of Hindustan from Delhi to Madras and Coromandel, its timber close-grained, hard, and durable, stronger than teak, and its pods full of a mealy sweetish substance eaten by the natives.

† *Bambusa* (*Dendrocalamus*) *tulda* of Eastern Hindustan. The *Bengal bamboo*, called in Bengalee "tulda bans," in Hindustanee "peka bans" (Drur.), and doubtless included in the "kalamōs" in question: — D. tulda was observed by Roxburgh ii. 193 abounding in Eastern Hindustan, being the common bamboo of Bengal, "much used for house-building," and its tender young shoots "eaten as pickles by the natives."

Greece. Westward, is described by Columna ecph. i. pl. 263 as eaten in Southern Italy (Spreng.); is termed "raphanistrum siliqua articulata glabra majore et minore" by Tournefort inst. 230; was observed by Forskal near Marseilles; is known to occur in cultivated ground in Sicily, Sardinia, and throughout middle Europe as far as Denmark (fl. Dan. pl. 678, Guss., and Moris); and in somewhat wilder situations in Dalmatia, Spain, and Portugal (Brot., Boiss., and A. Dec.). By European colonists was carried to Northeast America, where it continues a weed in grain-fields, and is called as heard by myself *charlock*.

Pisum arvense of the Mediterranean and Tauro-Caspian countries. The *field pea* is called in France "pois de pigeon" or "bisaille" (Pers.), in Greece "pisĕli" (mod. Lex.), in Egypt "besilleh" (Del.), and imbedded fragments in the brick — identified by Unger: the plant was observed by Delile under cultivation even in Upper Egypt, and the seeds given to cattle. Farther North, the green "phasēlōs," known to Athenaeus in Egypt, constituted the supper of the Spartan warriors (Polemon, and Athen. ii. 46); the "phasēlōs" is also mentioned by Aristophanes pac. 1144, and Demetrius: unless in the above modern name, I am not aware of evidence of the existence of P. arvense in Greece (see P. elatius), but the plant is known to grow wild along the Black Sea (Ledeb.), was observed by Royle ill. p. 190 along the Himalayas as far as the head waters of the Jumna, under cultivation also, and according to Piddington having a Hindustanee name (A. Dec.). Westward from Greece, the "faselum" is termed "vilem" by Virgil geor. i. 227, and as cultivated in Italy is also mentioned by Columella x. 377; P. arvense is described by Lobel ii. pl. 66, and Tournefort inst. 394; continues to be cultivated in France (Pers., and Del. cult. eg.); and is known to grow wild in Southern Spain (Boiss., and A. Dec.).

Vicia sativa of the Mediterranean and Tauro-Caspian countries. Called in Britain *fitch* or *vetch* (Prior), in Germany "futterwicke" (Grieb), in France "vesce" (Nugent), in Italy "veccia" (Lenz), in Greece "vikōs" (Fraas) or "zĕa" (Zalikogl.), in Egypt "faurum" Greek bean (Forsk.) or "dehoreg" (Del.), and imbedded fragments in the brick — identified by Unger: the living plant was observed by Forskal, and Delile, around Cairo and Rosetta. Farther North, the "kuamōs" is mentioned by Pherecrates, Aristophanes, Xenophon, Anaxandrides, Heniochus, and Demosthenes; the "kuamōs ĕllēnikōs" by Dioscorides, and the Attic "kuamōs" and "arakōn" are identified by Galen alim. i. 36 with the "vikiōn" or "vikithiōn:" V. sativa was ascertained by Fraas to have been formerly cultivated in Greece; was observed by him, and Chaubard, in wild situations in the Peloponnesus, but by Sibthorp, a weed in cultivated ground; is known to grow also in wild situations to the South of Caucasus (C. A. Meyer). Westward, the earliest inhabitants of Latium lived not on bread but "puls" or pottage, and sacred rites "pulte fritilla" continued to be celebrated in the days of Pliny xviii. 19 to 46; the "offam" is mentioned by Ennius; the "vicia" by Cato, Varro, Ovid, cultivated as appears from Pliny xviii. 67 partly for fodder, and the "vicĭarium" by Columella: V. sativa is termed "v. sativa vulgaris" by Tournefort inst. 396; is known to grow in wild situations in Italy, Algeria, and Spain (Boiss, Munby, and Lenz), but throughout middle Europe occurs chiefly as a weed in grain-fields (fl. Dan. pl. 552, Thuill., and Pers.). Eastward from the Caspian, has various names in Hindustan, none of them Sanscrit (Pidd., and A. Dec.); and was observed by Thunberg at Nagasaki and elsewhere in Japan. By European colonists was carried to Northeast America, where it continues a weed in grain-fields in our Northern States, observed by myself as far as Lat. 48° on the Lower St. Lawrence: was also carried to the Mauritius Islands, where it has in like manner become a weed in cultivated ground (Boj.).

Euphorbia helioscopia of Europe and Northern Asia. Called in Britain *sun-spurge* (Prior), in Italy "erba rogna" or "erba calenzola" or "titimalo elioscopio" (Lenz), in Greece "galatzitha" or "galthōrtŏn" (Sibth.), and imbedded fragments in the brick — identified by Unger: the living plant was observed by Delile in Upper Egypt and also around Cairo. Farther North, the "tithumalŏs ēliŏskōpiŏs" is described by Dioscorides as growing in waste ground and around villages, its root giving out four or five red branching stems full of white juice and a span high, leaves like those of "anthrahnē" but rounder, fruit as though on leaves in an "anēthōĕithĕs" capitulum that follows the sun and hence the name; is mentioned also by Rufus Ephesius, and Paulus Aegineta: E. helioscopia was observed by Sibthorp, and Fraas, from the Peloponnesus throughout Greece in the situations alleged by Dioscorides; but appears to grow in wilder places South of Caucasus (A. Dec.). Westward, the account by Pliny xxvi. 42 of the fourth "herbam lactariam," termed "helioscopion" and having the leaves of "porcilacae," seems in part taken from Dioscorides: E. helioscopia is described by Fuchsius 811; is termed "tithymalus helioscopius" by Tournefort inst. 87; was observed by Lenz frequent in Italy, by Forskal near Marseilles, and is known to occur in waste and cultivated ground throughout middle Europe as far as Denmark (fl. Dan. pl. 725, and Pers.). Eastward from the Caspian, was observed by Thunberg along roadsides in Japan and called "susa fri" or "kansui." By European colonists, was carried to Northeast America, where it seems naturalized in our Northern States and as far as Lat. 48° on the Lower St. Lawrence, though chiefly confined to the vicinity of tide-water and waste ground farther inland.

Bupleurum aristatum of . . . . Imbedded fragments in the brick — identified by Unger.

Chrysanthemum segetum of the Mediterranean countries. Called in Britain *gules* or *gowles* or *goulans* or *gowan* or *golds* or *goldin* or *goldings* or *corn-marigold* or *yellow ox-eye* (Prior), in Germany "goldblume" (Grieb), in Greece "tzitzimvōla" or "kōukōuvagia" (Sibth.), in Egypt "gahvan" (Forsk.), and imbedded fragments in the brick — identified by Unger: C. segetum was observed by Forskal around Alexandria (but Forskal's plant is referred by Delile to C. coronarium). Farther North, was observed by Forskal, Sibthorp, and Chaubard, frequent in waste places and cultivated ground from the Peloponnesus to Constantinople; by Grisebach, in somewhat wilder situations, but according to Ledebour becomes rare towards Caucasus, occurring in cultivated ground only (A. Dec.). Westward, is termed "ch. folio minus secto glauco" by Tournefort inst. 492; was observed by Forskal on Malta, everywhere frequent; by Gussone, in open situations and cultivated ground on Sicily; by Moris, in like situations on Sardinia; and is known to occur as a weed in cultivated ground only in Italy, Algeria, Spain, and throughout middle Europe as far as Sweden and Russia (fl. Dan. pl. 995, and A. Dec.).

Chenopodium murale of the Mediterranean countries. A species of *goose-foot* called in Egypt "menteneh" fetid (Del.), and imbedded fragments in the brick — identified by Unger: the living plant was observed by Delile around Cairo; was received by A. Richard from Abyssinia; and by Jacquin rar. ii. pl. 345 from Guinea (Pers.). Northward, was observed by Sibthorp along walls at Constantinople. Westward, is termed "c. pes anserinus secundus" by Tournefort inst. 506; was observed by Desfontaines i. 214 about walls in Algeria; and is known to occur in like situations throughout Europe as far as Sweden and Iceland (Bergeret phyt. pl. . . , Curt. lond. vi. pl. 20, A. Dec., and Wats.). By European colonists, was carried to Northeast America (Wats.), where according to A. Gray, and Chapman, though "rare," it continues to occur about dwellings from Boston and New York to Florida; was also carried to South America (Wats.).

2070 B. C. (= 710 + "1360 years" of Ctesias, or "1000 years" of Ctesias — 877th + 1237 years enumerated = 1360 even in Eusebius, who in i. p. 44 gives 1247 enumerated years + 43 + 776 = 2066), beginning of *Assyrian history*. — The date is confirmed, by "the increasing power of the Assyrians" proving a source of anxiety to the first Hyksos king of Egypt, less than two centuries later (see below).

The same year (= 2126 — "48 — 8 years" of the Maneth. tables), Laharēs succeeded by Amĕrēs, sixth king of the Twelfth dynasty. "Eight" years only are assigned to the reign of Amĕrēs in the Afr.-Maneth. table; but the Turin papyrus though partially defective in this place, affords evidence, that he reigned at least forty years. The name of Amunemhat III. Ma-en-ra occurs at Wadi Maghara, Sarbut-el-Chadem, and Hamamat (Leps. d. ii. pl. 137 and 138): — and in after times, in the chamber of kings at Karnak, and in the order of succession on the tablet at Abydos.

That this king is the Moeris of the Greeks, appears from Diodorus . . ; who enumerates inclusively "eighty-three" kings from Menes, in entire accordance with Manethó (Leps. krit. .).

In the Afr.-Maneth. table, the building of the *Labyrinth* is attributed to the fifth king Laharēs; but in the Eusèb.-Maneth. table, to "Lamaris" holding possibly the sixth place. The builder is called "Moeris" (by Lyceas of Naucrates); and (according to Diodorus i. 97) king "Marus" was also called "Menthes;" while (according to Strabo xvii. 1. 37) king "Imanthēs" built both the Labyrinth and pyramid. According however to Lepsius eg. and sin. p. 14 and 91, the splendid temple built by "Amenemhe" in front of the pyramid, — afterwards became the centre of the Labyrinth: but the statement of Herodotus, That the Labyrinth was built by the dodecarchs preceding Psammetichus, has not been refuted.

2069 B. C. = "2d year of Amunemhat III.," at Wadi Maghara, the mines there still worked — (Birch).

Sixty-seventh generation. May 1st, 2067, mostly beyond youth:

2062 B. C. = "9th year of Amunemhat III.," in the quarries at Hamamat — (Birch).

"2057 B. C. = 1st year of Tchou, of the Hia" or Third dynasty (Chinese chron. table).

The same year = "14th year of Amunemhat III.," commissioners sent to Samneh to examine and mark the height attained by the Nile (Birch). "From the time of Moeris" (according to Herodotus . . .), the annual risings of the Nile were recorded in distinct numbers. The "large foundation" of the temple of Kummeh at Samneh was ascertained by Lepsius to be the earliest *nilometer;* the name of Amunemhat III. occurring in inscriptions marking the highest risings: "eighteen" markings remained, demonstrating that in his reign the river rose there "twenty-six feet eight inches" above the greatest floods of the present day; and that its mean level was "twenty-three feet ten inches" higher than at present. — Farther down the river on the brink of the First cataract, as remarked by Horner, the buildings on Philæ show that the river-bed has continued essentially unchanged for the last "twenty-two hundred" years (Leps. eg. and sin. p. 20 and 509 to 528). Yet farther down the

river at Thebes, the colossi of Amunhotep III. on the river-flat reveal no material change in the river and its inundations: I was only surprised at the slight depth of river-deposit around their base.

2056 B. C. (= 776 + 43 + 1237 enumerated years = "40 + 1240," Eusebius in another place giving 1181 + 877th = 2057 = 2015 + "43d year" of Hieronymus), accession of Belus, sixth lineal ancestor of Ninus, and first king of the Assyrians; a people possessing as yet only local importance — (Abyden., Cast., Cephal., Augustin. civ. D. xviii. 21, and Syncell.). The tomb of Belus opened by Xerxes was found to contain a legible inscription (Ael. xiii. 3).

2054 B. C. (= 1413 + "348 + 103 + 190 years" of the Euseb.-Maneth. table and the Egyptian Chronicle), a date, the Egyptian Chronicle not being exclusively national, possibly referring to the last-named change in Assyrian history.

"2040 B. C. = 1st year of Hoai, of the Hia" or Third dynasty — (Chinese chron. table).

"2037 B. C. = 4th year of Hoai" (Chinese chron. table), beginning of the Eleventh cycle.

Sixty-eighth generation. Sept. 1st, 2034, mostly beyond youth:

Belus succeeded by Babius, fifth lineal ancestor of Ninus, and second king of the Assyrians (Abydenus in Euseb. i. 12. p. 36).

Amunemhat III. Ma-en-ra building the pyramid near the Labyrinth. It contains his name, and is the latest of "sixty-seven" (Leps. eg. and sin. p. 14) known Egyptian pyramids; each of them constructed for a king's tomb.

2029 B. C. = "42d year of Amunemhat III.," on the monuments — (C. Mull. fr. Man. p. 562).

2028 B. C. (= 2015 y. 10 mo. 13 d. + "4 + 8 years" of the Afr.-Maneth. table = 2210 — "46 — 38 — 48 — 8 — 42 years" of the Euseb.-Maneth. table, the "44th year of Amunemhat III." at Wadi Maghara giving 2027, and the Turin papyrus "3 y. 10 mo. 4 d. + 9 y. 3 mo. 27 d." = 2029), Amĕrēs succeeded by Amĕnĕmēs, seventh king of the Twelfth dynasty. To whose reign "eight" years only are assigned in the Afr.-Maneth. table, but "9 y. 3 mo. 27 d." in the Turin papyrus. The name of king Amunemhat IV. occurs on a stela, and on other movable articles (now in the museums of Europe): — also in later times, in the chamber of kings at Karnak, and in the order of succession on the tablet at Abydos.

2020 B. C. (= 2015 y. 10 mo. 13 d. + "3 y. 10 mo. 13 d." of the Turin papyrus, or "4 years" of the Afr.-Maneth. table), Amĕnĕmēs succeeded by his sister Skĕmiōphris, now queen of Egypt. She is referred to the Twelfth dynasty in the Turin papyrus, and in the Afr.-Maneth. table: but the title "Ra-sebaknofru," found among the ruins of the Labyrinth (Leps. d. ii. pl. 140), in its changed style indicates change of dynasty. The same title, in different forms, occurs on other monuments: — and in the order of this queen's succession in the chamber at Karnak.

Diospyrus reticulata of Madagascar. If the word "hbni" in hieroglyphic characters under the Twelfth dynasty (Leps.) is correctly translated *ebony*, this material was already brought to and down the Nile from the Indian Ocean, probably from Madagascar: — the sticks of ebony figured in tribute-processions under the Eighteenth dynasty are in the hands of Southern delegates; "ĕbnym" brought with elephants' tusks by the men of Dedan, is mentioned by Ezekiel xxvii. 15; "ĕvĕnōn" was brought by the Ethiopians on the Nile to Darius (Herodot. iii. 97 to 114), the trees growing beyond Meroe (according to Pliny vi. 35 and xii. 8); the "aithiōpikē" kind is distinguished by Strabo xvii. 2, and Dioscorides; and to the present day, Madagascar continues the main source of the ebony of commerce. D. reticulata is described by Willdenow; and according to Tennent i. 117 is the source of "the ebony of Mauritius" (Drury).

"2016 B. C." (= 1589 + "205 + 29 + 30 + 32 + 30 + 34 + 30 + 35 + 2 years" of Gen. x. 22 to xi. 32 = 710 + "1306 years" of Diodor. ii. 28, Agath., Euseb., Syncell., and Clint. v. p.), the *Abrahamic era*, also called the "Assyrian era." (Nicolas p. 24 agrees, but p. 17 places the era at "2015, Oct. 1st," = 710 + "1305 years" of Augustin. civ. D. xviii. 21 = 2070 — "55 years" of Syncell. = 1614 + "402d year" of Clemens Alexandrinus in Euseb. præp. x. p. 497).

The same year (= 2015 y. 10 mo. 13 d. = 2229 — "213 y. 1 mo. 17 d." of the Turin papyrus = 2020 — "4 years" of the Afr.-Maneth. table), end of the reign of queen Skĕmiōphris: in what manner is not mentioned, but interference with the established religion is marked by the building of temples — ceasing for nearly four hundred years.

The name of king Sebakhotep, of the Thirteenth dynasty, occurs on the foundation of the temple of Kummeh at Samneh, in inscriptions marking the highest rise of the Nile (Leps. d. ii. pl. 151 and eg. and sin. 20). Also on other contemporaneous monuments: — and he is next in the order of succession in the chamber of kings at Karnak.

"2014 B. C. = 1st year of Mang, of the Hia" or Third dynasty (Chinese chron. table).

Sixty-ninth generation. Jan. 1st, 2000, mostly beyond youth:

1997 B. C. = 2015 y. 10 mo. 13 d. — "19 years" of an obliterated name placed next after Skemiophris in the Turin papyrus. (Compare Salatis).

The name of king Sebakhotep II. of the Thirteenth dynasty, occurs on a large stela (now in Paris). — Also in a tomb under the Seventeenth dynasty at El Kab (observed by myself); and his title, partially obliterated, is next in the order of succession in the chamber of kings at Karnak.

Babius succeeded by Anebus, fourth lineal ancestor of Ninus and third king of the Assyrians (Abyden. in Euseb.).

"1996 B. C. = 1st year of Sie, of the Hia" or Third dynasty — (Chinese chron. table).

"1980 B. C. = 1st year of Pou-kiang, of the Hia" or Third dynasty — (Chinese chron. table).

The name of king Nofrehotep of the Thirteenth dynasty, occurs on a statue (now in Bologna) — And in later times, a different form of apparently his title is next in the order of succession in the chamber of kings at Karnak (Leps. k. pl. 14 and 15).

"1977 B. C. = 4th year of Pou-kiang" (Chinese chron. table), beginning of the Twelfth cycle.

1976 B. C. (= 1518 + "458 years" of Berosus in Alex. Polyhist., and Euseb. i. 4), at Babylon, accession of the Second Chaldean dynasty: — a series of "forty-nine" successive kings.

The name of king Sebakhotep III. of the Thirteenth dynasty, occurs among the ruins at Abydos (Glid. analect.), and on a colossal statue of himself (now in the museum at Paris). — His title is next in the order of succession in the chamber of kings at Karnak.

Anebus succeeded by Arbelus, great grandfather of Ninus and fourth king of the Assyrians (Abyden. in Euseb.).

In ascending the Nile beyond Philæ, the first sculptures in Nubia belonging to the Thirteenth dynasty are on the island of Argo (Leps. eg. and sin. p. 19 and 233).

Seventieth generation. May 1st, 1967, mostly beyond youth:

The name or title of a king of the Thirteenth dynasty — has been obliterated in this place in the chamber of kings at Karnak (Leps. k. pl. 15).

Arbelus succeeded by Chaalus, grandfather of Ninus and fifth king of the Assyrians — (Abyden. in Euseb.).

The name of king Sebakhotep IV. of the Thirteenth dynasty, occurs among the ruins at Abydos (Glid. analect.). — And an obliterated title occurs in his place in the chamber of kings at Karnak (Leps. k. pl. 14 and 15).

Some time after the "Twelfth" dynasty (Leps. eg. and sin. 28, and 118), a new canon of proportions for the human figure substituted in the Egyptian sculptures. — This second rule or canon continued unchanged until the time of the Psammetichi.

The name of king Sebakhotep V. occurs on a granite altar at Abydos (Glid. analect.): — and his title is next in the order of succession in the chamber at Karnak.

Seventy-first generation. Sept. 1st, 1934, mostly beyond youth:

1931 B. C. (= 1413 + "518 yrs" of the Afr.-Maneth. table), possible date of the accession of the Fourteenth dynasty.

The partly erased title of a king of the Fourteenth dynasty occurring on contemporaneous monuments — is possibly identical with No. 227 (Leps. k. pl. 15) in the chamber of kings at Karnak, next in the order of succession.

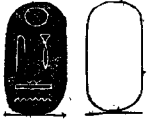
As early perhaps as this date (Graha Munjari tables, and Bentley as. res. viii. p. 244), Ayu reigning in Hindustan.

"1921 B. C. = 1st year of Kioung, of the Hia" or Third dynasty — (Chinese chron. table).

"1917 B. C. = 5th year of Kioung" (Chinese chron. table), beginning of the Thirteenth cycle.

1914 B. C. (= 2016 — "100 — 2 years," Gen. xi. 10), Arphaxad. Beginning of *Hebrew lineage* and *history*.

The same year (= 1862 + "52 years" of Cephalion, Euseb. i. and ii., and Syncell., see also Abyden.), the date attributed to Ninus; but according to the limit of probability agreeing better with the accession of his father Arbelus II., sixth king of the Assyrians. — From this date, the extant List of Assyrian kings, as seen by Cephalion, contained "no reign of less than twenty years;" and would seem therefore to be genealogical. In fact, Berosus makes his period of "526 years" occupied by "forty-five" Assyrian reigns, where Eusebius has scarcely more than eighteen.



The title of a king of the Fourteenth dynasty not found on contemporaneous monuments, — is next in the order of succession in the chamber of kings at Karnak.

The *sepulchral vases* having the form of "the Four genii of the dead," first used under the Fourteenth dynasty — (Birch).

Mention is made of "beer" (probably the Egyptian beverage *booza*) on mummy-

cases under the Fourteenth dynasty — (Birch): manufactured according to Herodotus ii. 27 from *barley*, and to the present day well known in Egypt.

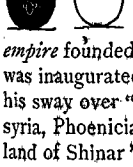
Lolium temulentum of Europe and Northern Asia. Called in Britain from the time of Wycliffe, and Shakespeare, *darnel*, by Galfridus pr. pm. "dernel," in the days of Glantvilla 194 "ray" from its French name "ivraie" drunkenness (Prior), in Germany "taumel-lolch," in Italy "loglio" or "loglio inebbriante" (Lenz), in Greece "ēra" (Sibth.), in Egyptian "ĕntēj" (transl. Matth.) or "ĕntēsh" (ms. Borg), and doubtless mixed in the booza — as to the present day, Alpinus witnessing the adding of "farina loliacea:" the "zizaniōn" is mentioned in Matthew xiii. 25, the "zwnyn" in the Talmud, the "ziwan" by Abu Hanifa, Ebn Baitar, and Forskal p. 199; and L. temulentum was observed by Forskal, and Delile, around Cairo and Rosetta. Farther North, the "airas" is mentioned by Pherecrates, Theophrastus, Dioscorides, Galen, and Eustathius; is identified in Syn. Diosc. with the "lŏlĭōum" of the Romans; the "lolium" is mentioned by Plautus, Ovid, Columella, and Pliny, the "infelix lolium" by Virgil, and "farina loliacea" by Varro: L. temulentum is termed "gramen loliaceum spica longiore aristas habens" by Tournefort inst. 516; was observed by Sibthorp, Link, and Fraas frequent in the grain-fields of Greece; by Lenz in Italy; by Gerarde in 1597, one of the most frequent weeds in Britain; and is known to occur in fallow ground throughout middle Europe (fl. Dan. pl. 160, and Pers.). Eastward from Syria, was observed by Thunberg in Japan. By European colonists, was carried to Northeast America, where it continues rare in cultivated ground and not as yet naturalized; to Brazil (Kunth, and A. Dec.), Montevideo and Chili (Lindl.); and to West Australia, where it has become naturalized (J. Drummond). According to A. Gray, is almost the only grass known to produce noxious seeds.

Lolium perenne of Europe and Northern Asia. Called in Greece "ēmĕra ēra," in Egypt "haschisch el farras" (Forsk.), much resembling the preceding and probably as long known in Egypt, — where it was seen by Forskal, and Delile around Cairo and Alexandria. Farther North, was observed by Forskal, Sibthorp, Chaubard, and Fraas, frequent along roadsides from the Peloponnesus throughout the Greek islands to Smyrna. Westward, is termed "gramen loliaceum angustiore folio et spica" by Tournefort inst. 516; was observed by Forskal in the environs of Marseilles; and is known to grow abundantly throughout Europe as far as Britain (Pers., and Engl. bot. pl. 315). By European colonists, was carried to Northeast America, where it has become naturalized and has been found "a pretty good pasture-grass" (A. Gray).

Seventy-second generation. Jan. 1st, 1900, mostly beyond youth;

"The same year = 1st year of Kin, of the Hia" or Third dynasty — (Chinese chron. table).

As early perhaps as this date (Graha Munjari tables, and Bentley as. res. viii. 244), Nahusha reigning in Hindustan.



The title "ra-s-anch-het" of a king of the Fourteenth dynasty, not found on contemporaneous monuments, — is next in succession in the chamber of kings at Karnak.

"1879 B. C. = 1st year of Koung-kia, of the Hia" or Third dynasty — (Chinese chron. table).

The same year (= 1862 + "17 years" of Ctesias, in Diodor. ii. 1), the *Assyrian empire* founded by Ninus or Nimrod: by whom the policy of "continual possession of domination" was inaugurated. Aided at first by Ariaeus an Arab chief, Ninus — in "seventeen" years extended his sway over "Babylonia, Susiana, Persis, Carmania, Hyrcania, Media, Armenia, Asia Minor, Coelesyria, Phoenicia," and even "Egypt." Babel or Babylon, "Erech, and Accad, and Calneh, in the land of Shinar" are included in the dominions of Nimrod in Gen. x. 10.

Pistacia terebinthus of the Tauro-Caspian countries. The *terebinth* tree is called in Italy "terebinto" (Lenz), in Greece "tĕtramithōs" or "kōkkōrĕtza" or "kōkkōrōvithia" (Sibth.), in Syriac "bwtma" Gesen.), in Egypt "botm" and the imported nuts "habbeh khadrah" (Del.). The Persians according to tradition subsisted on the nuts before becoming acquainted with bread, and hence are termed "tĕrminthōphagōus" by Astyages (Nic. Damasc. fr. 66, Ael., and Belon): "btnym" were among the productions of Palestine brought by Joseph's brethren on their second visit to Egypt (Gen. xliii. 11); the "tĕrĕvinthōs" is mentioned by Josephus b. j. iv. 9. 7 as growing in Palestine; its resin in the days of Dioscorides was exported from Arabia Petraea, Judea, Syria, Cyprus, the Greek islands, and Cyrene; and the nuts of P. terebinthus were found by Forskal mat. med. much used in Egypt for mixing compounds. Among the Greeks, "tĕrĕvinthinōs" is mentioned by Xenophon anab. iv. 4. 7; the "tĕrminthōs," in the Hippocratic fistul. 888, and Theophrastus iii. 15, and its edible nuts by Strabo xv. p. 229: P. terebinthus was observed by Forskal in gardens at Constantinople; by him, Sibthorp, Chaubard, and Fraas, frequent and seemingly wild from Asia Minor throughout Greece and the Greek islands; yielding according to Lindley *Cyprus turpentine*. Farther West, the "terebinthus" is mentioned by Virgil aen. x. 136, and Celsus; is described by Pliny xiii. 12 as bearing "folliculos emittentes quaedam animalia ceu culices," the follicular horn-like galls employed in the days of Clusius in preparing a glutinous sanative balsam (Linnæa x. 58 and 442),

and giving rise to one name of the tree "cornocapra:" P. terebinthus is termed "t. vulgaris" by Tournefort inst. 579; was observed by Lenz seemingly wild in Italy, by Forskal near Marseilles, and is known to occur in Barbary (Pers.).

Lepidium sativum of Persia. Called in Britain with other species *pepper-wort* or *cress*, by Cotgrave "kars" or "kerse," by Chaucer "kers," in Anglo-Saxon "kerse" or "kyrsys" or "cærs," in medieval Latin "crissonium" (Prior), in France distinctively "cresson alénois" (A. Dec.), in Germany "gartenkresse," in Italy "agretto" or "nasturzio ortense" (Lenz), in Greece "karthamō" (Sibth.), in Egypt "rechad" (Del.) or "habrasjat," in Yemen "half" (Forsk.), in Egyptian "sĕmĕth" (Syn. Diosc.); in which we recognize the "karthamōn" eaten by the Persians before — becoming acquainted with bread (Aelian, and Ruel i. 115); seen by Xenophon cyr. i. 2 to 8 eaten by them; produced of the best quality in Babylon according to Dioscorides; and called in Persian "skaphōs" according to the scholiast of Aristoph. nub. 234: L. sativum was observed by Olivier trav. iii. 120 to all appearance wild in Persia. Westward, the "karthamōn" is mentioned by Aristophanes vesp. 455 and 1357, Antiphanes, the Hippocratic writings, Diocles Carystius, Polyaenus, and as having acrid seeds by Theophrastus i. 12. 1, and Dioscorides: L. sativum was observed by Sibthorp, and Chaubard, in cultivated ground from the Peloponnesus to Cyprus; by Forskal, and Delile, in the gardens of Egypt; and by Forskal, under cultivation in Yemen. Farther West, the "karthamōn" is identified in Syn. Diosc. with the "nastōurkiōum" of the Romans, by Cicero with the "nasturtium," mentioned also by Varro, Columella, and Pliny: L. sativum is described by Bauhin prodr. pl. 43; is termed "nasturtium hortense vulgatum" by Tournefort inst. 213; was observed by Forskal in gardens on Malta; and is known to be cultivated from Italy throughout middle Europe (Pers., and Lenz). Eastward from Persia, is called in Hindustanee "taratezak" or "halim," in Bengalee "halim" (D'roz.); was observed by Graham "cultivated in gardens" in the environs of Bombay, by Wight in peninsular Hindustan; by Mason "exotic" in Burmah, called "sa-mung-nee," and its "seeds sold in bazar for medicinal purposes." By European colonists, was carried to Northeast America, where it continues under cultivation in our Northern and Middle States, and is called *peppergrass*.

Cordylocarpus lævigatus of the East Mediterranean countries. Called in Greece "karthamōn" or "karthama" (Fraas), and possibly the "karthamōn" of the Persians: — clearly the "karthamis" identified by Zopyrus, Galen, and Erotian with the "saurithiōn" of Hippocrates ulc. 8, "saurēn" of Nicander, and "saurion" of the Athenians (mentioned by Pliny xix. 54): C. lævigatus is termed "eruca chalepensis flore dilute violaceo siliquis articulatis" by Morison i. 3. pl. 25, "erucaria aleppica" by Gaertner; was observed by Tournefort trav. i. pl. 35, Sibthorp, D'Urville, and Fraas, frequent from the Peloponnesus to Crete and the Greek islands; by Delile, on the Mediterranean border of Egypt near Alexandria.

The same year (= 1914 — "35 years" of Gen. xi. 12), birth of Salah.

The title of "rahem-smentoti," not found on contemporaneous monuments, — occurs in the chamber of kings at Karnak.

IV. THE HYKSOS OR SHEPHERD KINGS.

"In the reign of Timaus" (Maneth.), "the Hyksos, a people from the East of obscure or ignoble origin, in some unexpected manner acquired possession of Egypt" without fighting; and its rulers being in their power, proceeded to maltreat the people, "killing some, reducing the wives and children of others to slavery," burning cities, "demolishing temples," and at length made one of their number king:

1873 B. C. (= 1613 .. 2 mo. + "49 .. 2 mo. + 50 .. 1 mo. + 61 + 36 .. 7 mo. + 44 + 19 yrs" of Manetho in Jos. c. A. 14), accession of Salatis, the first Hyksos king. He resided at Memphis, and establishing military stations rendered both Lower and Upper Egypt tributary; but chiefly directed his attention to the Northeastern frontier, where he placed an army and fortified the city of Auaris, from jealousy of the increasing power of the Assyrians.

A triangular Military game had commenced between Egypt, the North, and the East, — and continues unsettled to the present day. Geographical position will explain, Why the Persians only after acquiring Asia Minor moved against Egypt, and only after acquiring Egypt moved against Greece; and Why Alexander would not move against Persia without first securing Egypt: the very latest invader on establishing himself in Egypt adopted at once the Egyptian view, and in accordance therewith shaped his measures (see Thiers revol. Franc.).

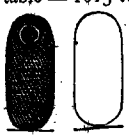
The Hyksos are termed Phoenicians in the Maneth. tables, and according to Josephus c. A. i. 14 were by some regarded as Arabs; but their long domination did not displace the spoken language of Egypt, as will appear presently. Notwithstanding the enumeration of Hyksos kings in the Maneth.

tables, the hieroglyphic ovals on the monuments seem to belong to legitimate Egyptian kings, who maintained their line of succession together with some authority, especially in Upper Egypt.

Seventy-third generation. May 1st, 1867, mostly beyond youth:

As early perhaps as this date (Graha Munjari tables), Daesha reigning in Hindustan. — He is mentioned in the Puranas. (Bentley as. res. viii. p. 230).

1864 B. C. (= 1413 + "348 + 103 years" of the Egyptian Chronicle and Euseb.-Maneth. table = 1613 .. 2 mo. + "250 yrs" of the same table), accession of the Fifteenth dynasty.



The title "ra * * *" of a king of the Fourteenth dynasty not recognized on contemporaneous monuments, — is in about this place in the chamber of kings at Karnak.

The last war of Ninus; against the Bactrians, and their chief city captured through the agency of Semiramis, who became his wife. The Bactrian king Oxyartes is called "Zoroaster" by Ctesias, Cephalion, and Justinus i. 1 (see above, Zoroaster).

1862 B. C. (= 1820 + "42 years" of Ctes., Cast, Diodor. ii. 20, Euseb. i. and ii., and Syncell.), Ninus succeeded by his wife Semiramis, now Assyrian empress.

Semiramis invading Hindustan was opposed by Stavrovates with war elephants — (Ctes. assyr. ii. 16): the *Indian elephant*, E. Indicus, is figured in the cave-temples at Adjunta used for riding and for killing tigers; also, in Braminical cave-temples; was employed in warfare against Alexander and the Greeks; is mentioned in the Institutes of Manu, and in the Sama Veda (Stev.). Westward, the young elephant led in the Tribute-procession to the Egyptian king Tutmes III., is clearly the Indian species; subsequently by the successors of Alexander imported in numbers for the purposes of warfare in the Mediterranean countries; so that even in Italy, the Romans were obliged to fight against elephants.

Bambusa (*Dendrocalamus*) *ballcooa* of Tropical Eastern Asia. The *giant bamboo*, perhaps the "kalamōu" of which the boats on the Indus were made — (Ctes. assyr. ii. 17): boats in India made of a joint of "kalamōu" are mentioned by Herodotus iii. 98: the large kind of bamboo called "kuttung," sometimes "ten inches in diameter," was seen by Temple only on the Deo and Sonar tributaries of the Godavery; and D. ballcooa, "from its size" and strength, is regarded by Roxburgh as perhaps preferable to any other kind for house-building (Drur.). Farther East, a large kind of bamboo is mentioned in the Chou-King as growing in the Southern provinces of China (Pauth. 48); var. "maxima" was seen by Loureiro in Anam; by Mason v. 525, in Burmah, having joints "from twenty to twenty-four inches in length and as much as thirty-six inches in circumference."

Bambusa (*Dendrocalamus*) *strictus* of Eastern Hindustan. Called *male bamboo*, in Telinga "sadanapa vedroo" (Drury), and probably furnishing the spears of the army opposing Semiramis: — the male "kalamōs inthikōs" is described by Theophrastus iv. 11. 13 as "stĕrĕōs" solid: D. strictus was observed by Roxburgh cor. i. pl. 80 in Coromandel, growing in drier situations than other bamboos, "very straight," and having "great strength and solidity" much used by the natives "for spears, shafts, and similar purposes" (Stewart punj., and Drur.).

Bambusa (*Melocanna*) *baccifera* of mountainous situations in Chittagong. A *bamboo* called there "pagu-tullu," in Bengalee "bish-bansh," in Malabar "beesha," in Travancore "vaysha" or "vay" (Drur.); and probably furnishing bows and arrows to the army opposing Semiramis: — the bows and arrows of the Indian auxiliaries in the army of Xerxes were of "kalamōu" (Herodot. . .): the "katthaka" reed bearing fruit to its own destruction, is mentioned in the Dhammapada 164: M. baccifera was observed by Pierard wild in mountainous situations in Chittagong, and in common use for every purpose of building, arrows and bows according to Roxburgh cor. iii. pl. 243 made from the stems by the natives, and pens from the younger shoots; by Drury, "very common on the Travancore hills, growing also in the low country," perishing after yielding its remarkable large pendulous fruit, its leaves placed "on verandahs and roofs of houses to keep away the white ants;" by Rheede v. pl. 60, in Malabar; but only "in 1833," according to Graham, was introduced into the environs of Dombay.

Sanseviera Zeylanica of Ceylon and Tropical Hindustan. The *bow-string hemp* is called in Bengalee "moorga" or "moorgavee," in Tamil "marul" (Royle), in Telinga "saga" or "chaga" (Drury), and may have furnished the string sending the arrow with which Semiramis was wounded — (Ctes. assyr. ii. 19): the sacrificial zone of the military class according to the Institutes of Manu should be of "murva" (W. Jones): S. Zeylanica, affording one of the strongest fibres known, is "common" on Ceylon (Royle fibr.); is known to grow also on the Dindigul hills and as far as Bengal (Drur.); was observed by Garrow "in 1831" growing "wildly and profusely in all the moist woods of the neighbourhood" of Cuttack; is made into paper at Trichinopoly; was observed by Rheede xi. pl. 42 in Malabar: by Law, "on rocks at Badamee" in the Bombay district, but by Graham 218 and 254 only in "gardens." Transported to Europe, is described by Plukenet pl. 256, and Miller.

"1857 B. C. = 23d year of Koung-hia" (Chinese chron. table), beginning of the Fourteenth cycle.

1854 B. C. (= 1873 + "19 years" of Manetho in Jos. c. A. i. 14, and both the Maneth. tables), Salatis succeeded by Bnŏn, now second Hyksos king of Egypt.

The title "ra-s-sesur-te-ti" of a king of the Fourteenth dynasty not found on contemporaneous monuments, — is next in succession in the chamber of kings at Karnak.

1849 B. C. (= 1879 — "30 years" of Gen. xi. 14), Eber born to Salah.

"1848 B. C. = 1st year of Kao, of the Hia" or Third dynasty — (Chinese chron. table).

The title "rakamai" of a king of the Fifteenth dynasty, occurs in one of the excavated chambers or tombs at Siut, as verified by myself (see also Leps. d. ii. pl. 150). — And a different form of apparently the same title, is next in succession in the chamber of kings at Karnak (Leps. k. pl. 15).

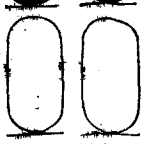
The Egyptian *soldiers* figured in the same tomb (Champoll. pl. 349) are all on foot; and the military dress and equipments of the Twelfth dynasty at Benihassan continue.

"1837 B. C. = 1st year of Fa, of the Hia" or Third dynasty — (Chinese chron. table).

The title "ra-meri-hem" of a king of the Fifteenth dynasty, not found on contemporaneous monuments, — is next in succession in the chamber of kings at Karnak.

As early perhaps as this date (Graha Munjari tables, and Bentley as. res. viii. p. 244), Danu reigning in Hindustan.

Seventy-fourth generation. Sept. 1st, 1834, mostly beyond youth:



The obliterated title of a king of the Fifteenth dynasty, — is next in order of succession in the chamber of kings at Karnak.

The Armenian prince Anouschavan, son of Ara and surnamed Sos, slain in war against Semiramis — (Mar Apas Catina).

Populus alba of Europe and Northern Asia. Called in Britain *abele* or *white poplar*, by Galfridus pr. pm. "awbel" or "ebelle," in the medieval Latin of Lambertus Ardensis "albellus," in Holland "abeel," in France "aubel," in Germany "alber," in Italy "albero" or "albera" (Prior), in Germany "silberpappel," in Italy "gattice" or "gattero" or "pioppo bianco" (Lenz), in Greece "lĕukē" (Sibth.), in Egypt "hour" (Del.), and the above Armenian surname "sos" — is referred here by writers: the "ahĕrŏis" (from "hour" the current name in Egypt) is mentioned by Hesiod, and Homer il. xiii. 389 to xvi. 482; but the word becoming obsolete, "lĕukē" was substituted before the days of Aristophanes nub. 1087, Nicander fragm., Dioscorides, Pausanias v. 13, and Galen, the "lĕukē" being expressly mentioned by Theophrastus as occurring in Egypt: P. alba was observed by Forskal, Delile, and Clot-Bey in the gardens of Egypt; by Sibthorp, Chaubard, and Fraas, from the Peloponnesus and Greek islands to Constantinople, planted, and besides wild in the forest. Westward, the "populus alba" is enumerated by Pliny xvii. 32 and xxiv. 32 as planted in Italy; "albaro" planks are mentioned in a chart "A. D. 971" (Prior); P. alba is described by Lobel pl. 2. 193; is termed "p. alba majoribus foliis" by Tournefort inst. 592; was observed by Lenz wild in Italy, and is known to grow throughout middle Europe as far as Britain (Pers., and Engl. bot. pl. 1618). Eastward from the Caspian, is known to grow throughout Northern Asia, being enumerated by A. Decandolle among plants extending two-thirds around the Subarctic circuit of the Globe. By European colonists, was carried to Northeast America, where it continues sparingly planted in both our Northern and Southern States, but extending by suckers may have acquired firm foothold.

The fortified city of Van in Armenia, is attributed to Semiramis (Samuel Aniens. i. 7). Also according to other writers, various extensive structures in the region of the Euphrates: as the "walls of Babylon;" meaning possibly the so-called "Median wall," traces of which are found "extending from the Tigris forty miles obliquely to the Euphrates."

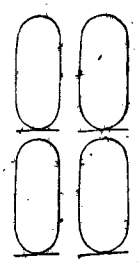
1820 B. C. (= 1782 + "38 years" of Euseb. i. and ii., and Syncell.), accession of Ninyas or Zames, son of Ninus and Semiramis, as Assyrian emperor. He is named also by Castor, and Diodorus ii. 1 to 31.

The name of king Sebakem-f, of the Fifteenth dynasty, occurs at Konosso, at Hamamat on the Kosser road (Leps. d. ii. pl. 151), and on a coffin dated in his reign (and now in the museum at London). — His title is next in the order of succession in the chamber of kings at Karnak.

"1818 B. C. = 1st year of Kie-kouei, of the Hia" or Third dynasty — (Chinese chron. table).

1815 B. C. (= 1849 — "34 years" of Gen. xi. 16), Peleg born to Eber. — The Hebrews appear to have derived their name from Eber; the word "phlg" signifies division, and to this day among the Arabs an opposing class claim to be descendants of Peleg's brother, Joktan.

The usual formula relating to the *doctrine of Transmigration*, is inscribed (according to Birch) on the scarabæus of king Sebakem-f — (now in the museum at London).



A king of the Fifteenth dynasty, — is designated by his erased title next in the order of succession in the chamber of kings at Karnak.

1810 B. C. (= 1773 y. 5 mo. + "36 y. 7 mo." of Manetho in Jos. c. A. i. 14), accession of the Hyksos king Apahnas.

Another king of the Fifteenth dynasty — is designated by his erased title next in the order of succession in the chamber of kings at Karnak.

Pteris aquilina of sparsely-wooded districts all over the Globe. Called in Britain *brakes* or *bracken*, in Sweden "braakin" (Prior), in France "fougeraie" (Nugent), in Germany "gemeiner farrn" (Fraas) or "adlerfarn," in Italy "felce maggiore" or "felce imperiale" (Lenz), in Greece "ptĕris" (Sibth.), and according to Syn. Diosc. by the Egyptians "aima ōnōu" — (growing in Palestine), and observed by Forskal on the mountains of Tropical Arabia. Farther North, the "ptĕrin" is enumerated by Epicharmus as edible; by Dioscorides as growing in rocky and mountainous situations, stemless without flower or fruit, leaves incised like a wing and on a stalk a cubit high, root longish and black, superficial, somewhat astringent, and given against tapeworm: P. aquilina was observed by Forskal, Sibthorp, Chaubard, and Fraas, frequent in mountainous and certain open situations from the Peloponnesus to Cyprus and Constantinople. Westward, the "ptĕris" is identified in Syn. Diosc. with the "philikĕm" of the Romans; the "filicetum" or "filictum" is mentioned by Columella; the "urenda filix" by Horace; one of the two kinds being according to Pliny xxvii. 55 the "ptĕrin" of the Greeks: P. aquilina is termed "filix ramosa major pinnulis obtusis non dentatis" by Tournefort inst. 536; was observed by Desfontaines in Barbary; is known to grow on the Canaries, where "a miserable sort of bread is made by mixing the flour" with barley meal (Lindl.); and from Italy throughout middle Europe as far as Sweden (Engl. bot. pl. 1679). Farther West, is frequent in the wooded portion of North America from Canada to Arkansas and the Mexican Gulf (Nutt., Chapm., and myself). In the Tropics and Southern Hemisphere, was observed by myself in many distant parts of the Globe, its rhizoma constituting the principal food of the New Zealanders. The Greek name is derived by Smith from the rhizoma cut across having "a branched appearance, resembling a spread-eagle" (Lindl.).

Plantago media of Europe and Northern Asia. Called in Italy "piantaggine media" or "petacciola" (Lenz) in Britain *lamb's tongue* (Prior), and from the character of the leaves deserving the name; possibly the Egyptian "asŏnth" or "asōēth" (Syn. Diosc.) or "asōut" from "ĕsŏōu" sheep — (Kirch.), for "P. media?" called "bizr bælledi" was observed by Forskal on the mountains of Tropical Arabia. Farther North, the "arnōglŏssōn mikrōn" as described by Dioscorides has narrower softer and more tender leaves; and the "plantago minor" by Pliny xxv. 39 as having leaves "linguae pecorum simillimis:" P. media is termed "p. latifolia incana" by Tournefort inst. 126; was observed by Sibthorp in pasture-land around Constantinople; and is known to grow in like situations from Italy throughout middle Europe as far as Denmark (fl. Dan. pl. 581, and Pers.; see P. major).

Tribulus terrestris of the Desert and its borders from the Atlantic to Hindustan and Lake Baikal. Called in Italy "tribolo" or "tribolo terrestre" (Lenz), in Greece "trivōli," or by the Turks "demio dikieni" (Sibth.), in Egypt "kharchoum el-nageh," or by the Nubians "kenyssa kou" (Del.), in Tropical Arabia "kotāba" (Forsk.), in Egyptian "sĕrōji" — (transl. Matth.): the "trivōlos" is mentioned in the Septuagint translation of Hosea x. 8, and in Matthew vii. 16, as growing in Palestine: T. terrestris was observed by Delile in both Lower and Upper Egypt, by Forskal p. 88 in Tropical Arabia, by Denham in Nigritia, and was received by A. Richard from Senegal and Abyssinia. Northward and Westward from Egypt, the "trivōlos" is mentioned by Aristophanes lys. 576; by Theophrastus vi. 5 as having "ĕrĕvinthos"-like leaves; the "trivōlos hĕrsalos" by Dioscorides as growing about houses and along rivers; the "tribulus" by Virgil. geor. i. 153, and as a weed in gardens by Pliny xviii. 44 to xxii. 12: T. terrestris is described by Lobel pl. 84, and Morison ii. pl. 8; is termed "t. terrestris ciceris folio seminum integumento aculeato" by Tournefort inst. 266; was observed by Desfontaines in Barbary; by Lenz in Italy; by Sibthorp, Chaubard, and Fraas, frequent in waste and cultivated ground from the Peloponnesus to the Dardanelles; is known to grow in Southern Russia and from Caucasus along the border of Siberia as far as Lake Baikal (Ledeb.); was received by Fischer from Thibet; and was observed by myself, indigenous on the Deccan. In Austral Africa, may have arrived without European intervention; but clearly by European colonists was carried to the Mauritius Islands (Drège, Boj., and A. Dec.).

Croton (*Crozophora*) *tinctorium* of the Northern border of the Desert from Barbary to Arabia. Called in France "tournesol" (Pers.), in Greece "sklarōhortō" or "agriŏphasoulia" (Forsk.) or "agriŏphaskia" (Sibth.), in Egypt "ghobbeyreh" (Del.), in which we recognize the Egyptian "hōupĕr" — identified with "cupressus herba" in lex. Oxf. p. 80: C. tinctorium was observed by Forskal, and Delile, around Cairo; and according to Clot-Bey ii. 38, oil is made from its seeds. Farther North, is described by Gesner, Lobel, and Camerarius; is termed "ricinoides ex qua para-

tur tournesol Gallorum" by Tournefort inst. 655; was observed by Forskal, Sibthorp, and Chaubard, frequent from the Peloponnesus and Crete to the Dardanelles; is known to grow also in Barbary (Pers.); is besides cultivated in Southern France "for the deep purple dye called *turnsole*," and its seeds ground "and mixed with oil are employed as a cathartic" (Lindl.).

Croton (*Crozophora*) *villosum* — described as distinct, and called in Greece "ēliōtrōpiōn" (Sibth.); in which we recognize the "heliotropium" worn by the Magians in intermittent fevers, and termed "tricoccum" by Pliny xxii. 29: the "herba solaris" of Celsus v. 27 may also be compared, as well as the "solago minor" of Apuleius 63: C. villosum is termed "ricinoides ex qua paratur tournesol Gallorum folio oblongo et villoso" by Tournefort cor. 45, and was observed by him, Sibthorp, and Chaubard from the Peloponnesus throughout the Greek islands.

Croton (*Crozophora*) *plicatum* of Tropical Arabia. An allied species — called in Hindustanee "soubalh," in Bengalee "khoodi-okra" (Drur.), in Nubia "qoddeh" (Del.): observed by Delile from Cairo to Nubia, where it is called "qoddeh;" by myself, a weed in cultivated ground in Upper Egypt. Eastward, is known to grow in Yemen (Pers.); was received by N. L. Burmann pl. 62 from Hindustan; was observed by Graham around Bombay, "common on rice fields in the cold weather," by myself occurring as a weed only; by Drury, "common in the Peninsula;" by Roxburgh, and Ainslie as far as Bengal and Behar.

As early perhaps as this date (Graha Munjari tables), Vrishaparvan reigning in Hindustan; a grandson of Dacsha — according to the Puranas (Bentley as. res. viii. p. 230).

Seventy-fifth generation. Jan. 1st, 1800, mostly beyond youth:

"1797 B. C. = 22d year of Kie-kouei" (Chinese chron. table), beginning of the Fifteenth cycle.

"In the time of the Hia" (topog. Cant., and Pauth. p. 472), arrival in China of "islanders, bringing as tribute garments embroidered with flowers."

Chrysanthemum Indicum of Japan. Called in English gardens *Christmas flower* (Graham) from flowering late, in Egypt "karaouè" (Clot-Bey), in the environs of Bombay "gool daodee" (Graham), in Japan "kikokf" or "kiku" (Thunb.), and probably the flower copied on the embroidered garments: * — was observed by Kaempfer, and Thunberg, wild in Japan, cultivated besides around dwellings. Westward, the "kiu-hoa" flower was embroidered on dresses of the Chinese empress and ladies of the court under the Tcheou dynasty, is mentioned also in the Chin-nong herbal, Eulh-ya dictionary, Tchun-tsieou of Confucius, and in Li-ki (Cibot mem. Chin. iii.): was observed by Mason "exotic" in Burmah; by Rumphius v. pl. 91, in the Malayan archipelago; by Rheede x pl. 44, in Malabar; by Graham "very common in gardens" around Bombay, and by myself, flowers among temple-offerings on the Deccan. Farther West, was observed by Clot-Bey in Egypt, where it seems recently introduced, having perhaps previously reached France (Bomatuelle journ. hist. nat. ii. and Pers.). By European colonists, was carried to Northeast America, where it continues frequent in greenhouses and gardens.

"In the time of Oanamuchi-no-mikoto, long before the historical period" (old Jap. legends, and Jap. centen. comm. 59), *pottery* invented in Japan by Oosei-tsumi, — "afterward honored with the divine appellation of Kami."

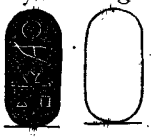
The title "ra-chu-te-ti" of a king of the Fifteenth dynasty not found on contemporaneous monuments, — is next in succession in the chamber of kings at Karnak.

1785 B. C. (= 1815 — "30 years" of Gen. xi. 18), Reu born to Peleg.

"1783 B. C. = 1st year of Tching-tang" — (Chinese chron. table).

1782 B. C. (= 1752 + "30 years" of Euseb. i. and ii., and Syncell.), accession of Arius as Assyrian emperor. He is called Areius by Julius Africanus.

1773 B. C. (= 1712 y. 5 mo. + "61 yrs" of Manetho in Jos. c. A. i. 14), accession of the Hyksos king Apophis.



The title "ra-meri-atep" of a king of the Fifteenth dynasty not found on contemporaneous monuments, — is next in the order of succession in the chamber of kings at Karnak.

Seventy-sixth generation. May 1st, 1767, mostly beyond youth:

"1766 B. C. = 18th year of Tching-tang; who vanquishing Kie," now becomes the

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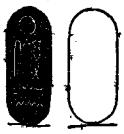
* *Cycas revoluta* of Subtropical Japan. Called "sotetsu," three to five feet high, with its palm-like trunk a foot or more in diameter crowned with long feathery fronds, and from early times cultivated in gardens — (Jap. c. c. 35): observed by Cleyer iii. 3. 118 (Spreng.), and Kaempfer 897 in Japan; by Thunberg trav. and fl. growing spontaneously and often cultivated, its fruit edible, and its sago-like pith so remarkably nutrient in small quantities that carrying the plant out of the country is prohibited by law. A description however of the "tētsjoe" is given by Rumphius i. pl. 24. According to Lindley, "the wounded stem, leaves and fruit, abound in a white transparent mucilage, which hardens into a sort of gum."

head of the new dynasty of the Chang. Tching-tang changed the name of the years to "sse," after the four annual sacrifices at the solstices and equinoxes (Chinese chron. table): and ordered, "that the twelfth moon or month of the Hia should be the first of the civil year of the Chang." — A practice from this time adopted on change of dynasty.



1761 B. C. (= 1413 + "348 years" of the Egyptian Chronicle and Euseb.-Maneth. table, the Afr.-Maneth. table giving 1614 + "151 y" = 1765, and Ramessu II. at San 1366 + "400 yrs" to the reign of the Hyksos king Seti or Saites = 1766), accession of the Sixteenth dynasty. The title "ra-s . . . -en-ra," by the change in style, seems to indicate a new dynasty: is not found on contemporaneous monuments, — and is next in the order of succession in the chamber of kings at Karnak.

As early perhaps as this date (Graha Munjarī tables), Yayati reigning in Hindustan. He married Devayani grand-daughter of Bhrigu, and Sarmishta great grand-daughter of Dacsha. Bhrigu, Yayati, Devayani, and Sarmishta, — are mentioned also in the Puranas (Bentley as. res. viii. p. 244).

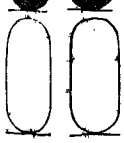
"1753 B. C. = 1st year of Taï-kia, of the Chang" or Fourth dynasty — (Chinese chron. table).

The same year (= 1785 — "32 years" of Gen. xi. 20), Serug born to Reu.

1752 B. C. (= 1712 + "40 years" of Euseb. i. and ii., and Syncell.), accession of Aralius or Amyrus, as Assyrian emperor.

The name and title of king Rahotep, of the Sixteenth dynasty, occurs on contemporaneous monuments: — and a different form of apparently the same title, is next in the order of succession in the chamber of kings at Karnak (Leps. k. pl. 15).

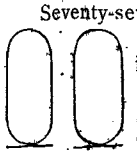
"1737 B. C. = 17th year of Taï-kia" (Chinese chron. table), beginning of the Sixteenth cycle.



A third king of the Sixteenth dynasty, — is designated by his obliterated title next in order of succession in the chamber of kings at Karnak.

"1736 B. C. = the Seventh manwantara" among the Hindus (Graha Munjari tables). King Turvasu may have been at this time reigning. He is mentioned in the Sama Veda iii. 9 (transl. Stev.); and as the son of Yayati and Devayani, in the Puranas; his brother Yadu, and half-brothers Druhya, Anu, and Puru, are also mentioned in the Puranas (Bentley as. res. viii. p. 230).

Seventy-seventh generation. Sept. 1st, 1734, mostly beyond youth:



A fourth king of the Sixteenth dynasty, — is designated by his obliterated title next in order of succession in the chamber of kings at Karnak.

Artemisia absinthium of the Uralian plains. Called in Britain *wormwood*, in Anglo-Saxon "wermod" or "wyrm-wyrt," in Germany "wermut," in Old High German "werimuota," in Old Saxon "weremede" (Prior), in France "absinthe" (Nugent), in Italy "assenzio" or "assenzio romano" (Lenz), in Greece "apsinthia" (Fraas), in Egyptian "sōmi" (Syn. Diosc.), "shŏm" meaning garden — (transl. Sept., and Luke xiii. 19): the "apsinthion" was known to Athenaeus iv. 9. in Egypt; A absinthium is enumerated by Clot-Bey as long known there; its alkali "melh afsantin" was found by Forskal mat. med. employed medicinally; and absinth cordial was found by myself well known to the Egyptians. Farther North, the "apsinthiŏ" is mentioned by Euripides, Diphilus, by Theophrastus ix. 18 as growing in Pontus, by Dioscorides as excessively bitter and placed among clothing to keep out moths, employed besides medicinally and mixed in a wine used in Thrace and around the Propontis: A. absinthium is known to grow in the Crimea (Lindl.); was observed by Gmelin ii. pl. 63 in Siberia; by Forskal, in the gardens of Constantinople; and by Fraas, seemingly wild on Naxos, Milos, and Santorin. Westward, "absinthium" was employed from the earliest times in the sacred rites of the Romans (Plin. xxvii. 28); is termed "ponticum" by Cato, and Columella; is mentioned also by Lucretius, and Quintilian: A. absinthium is mentioned by Macer Floridus, and in Ortus Sanitatis 3 (Prior); was observed by Lenz seemingly wild in Italy; is known to occur in Barbary (Lindl.), and in waste places throughout middle Europe as far as Britain (Lam. fl. fr. 45, Pers., and Engl. bot. pl. 1230). By European colonists, was carried to Northeast America, to Newfoundland (Lindl.), observed by A. Gray in our Northern States, along "road-sides, sparingly escaped from gardens." The plant according to Lindley "is a powerful bitter, much extolled as a stomachic," employed also against worms, and said to be added by brewers "to their hops," by "rectifiers to their spirits;" yields "a very bitter alkali called *absinthium*," but the so called *salt of wormwood*, procured usually from this herb, retains "none of its peculiar qualities."

Iris sambucina of the Mediterranean countries. Called in English gardens *flower-de-luce*, in France "fleur-de-lis" (Nugent), in Germany "schwertlilie" (Grieb), in Greece "krinŏs," or by the Turks "susen" (Sibth.), in Egypt "zambak" (Forsk.), in Egyptian "tshŏtshĕn" — (transl. Sept.), a name found besides in hieroglyphic characters by Champollion dict. 392: the "shwshn" was modelled in the ornamental work on Solomon's temple (1 K. vii. 19, and 2 Chron. iv. 5), is mentioned as growing in Palestine in Cant. ii. 1 to vii. 2, and Hosea xiv. 5; and the "krinōn" wild in Palestine, in

Matthew vi. 28: I. sambucina was observed by Forskal in the gardens of Egypt. Farther North, the "sōusōn" of the Persians, mentioned by Aristobulus fr. 13, and which seems to have given its name to the city of Susa beyond the Tigris, is identified by Athenaeus with the "krinōn;" the word "sōusinōn" occurs in the treatise 2 Mul. morb. 74; the "krinōn" is mentioned by Anacreon, and as springing up from tears falling on the ground by Theophrastus ii. 2. 1 and caus. i. 4. 6: I. sambucina was observed by Forskal, Sibthorp, and Fraas, in the open country on Crete, and frequent in cemeteries and about villages throughout Greece as far as Rhodes. Westward, following the example of emperors of Constantinople and certain French kings, Louis VII. in 1137 placed "fleurs de lis" on his escutcheon (Montf.), and hence according to Prior the English name, as though "fleur de Louis:" I. sambucina is described by Tabernæmontanus pl. 647; is termed "i. latifolia germanica sambuci odore" by C. Bauhin pin. 31, "i. vulgaris germanica sive sylvestris" by Tournefort inst. 358; is known to grow in Italy and other parts of Southern Europe (Savi, and Pers.); and is cultivated in middle Europe for ornament. By European colonists, was carried to Northeast America, where it continues a favorite flower in gardens. (See Lilium candidum).

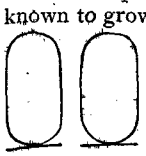
1723 B. C. (= 1752 — "30 years" of Gen. xi 22), Nahor born to Serug.

"1720 B. C. = 1st year of Wou-ting, of the Chang" or fourth dynasty — (Chinese chron. table).

The Northern language from which certain Greek words were taken, probably at this time in existence.

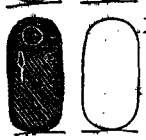
The Greek word "linōn" (used by Homer and others) is regarded as derived from some Northern language; — possibly from the *Celtic* "llin" meaning a thread, as maintained by Theïs gloss. bot. p. 276. (See Linum usitatissimum, Tilia Europæa, and Paritium tiliaceum).

Quercus robur of Europe and the adjoining portion of Asia. Called in Britain *oak*, in Anglo-Saxon "ac" or "æc," in Scotch "aik," in Sweden "ek," in Denmark "eg," in ancient Danish "eik," in Germany "eiche," in Low German "eik" or "eek," in Old High German "eih" (Prior), in France "chene" (Nugent), in Italy "querce commune" or "rovere" (Lenz), in Greece "thĕnthrō" the tree (Sibth.) or by the Turks "mesiæ" or "mesjæ" (Forsk.): the Greek word "akulōs" (used by Homer) was adopted from Northern nations — (according to Plato), and is identified with the *German* "eichel" by Adelung, and Grimm: the "thruōs" at Dodona where the will of Jove is made known (visited by Ulysses according to Homer od. xiv. 327 and xix. 296) seems connected with or the origin of the "druidae" or ancient priests of middle and Northern Europe: the "thrus" is also mentioned by Hesiod op. 228, Aeschylus prom. 834, Sophocles, Theophrastus, and Dioscorides; and Q. robur was observed by Forskal, Sibthorp, Chaubard, and Fraas, around Constantinople and on the mountains of Greece. Farther South, oaks at Thebes in Egypt are mentioned by Theophrastus, planted of course, for the grove disappeared before the days of Pliny: oaks according to Clot-Bey continue to be sparingly cultivated in Egypt, but were seen by myself only in the botanic garden at Cairo, apparently Q. robur. Westward, the "quercus" and "robur" are mentioned by Cato, Varro, Cicero, Virgil, and Pliny; Q. robur furnished piles or posts of lake-villages in Switzerland during the Stone period (Troyon); is mentioned in Britain in Ina's statutes during the Heptarchy; the two varieties are distinguished by Tournefort as "q. latifolia mas quæ brevi pediculo est" and "q. cum longo pediculo;" were observed by Lenz in Italy, by Moris on Sardinia, and are known to grow throughout middle Europe as far as "Lat. 60° 57'" (Martins, and A. Dec.)



A fifth king of the Sixteenth dynasty, — is designated by his obliterated title next in the order of succession in the chamber of kings at Karnak.

1713 B. C. = (1662 y. 4 mo. + "50 y. 1 m." of Manetho in Jos. c. A. i. 14), accession of the Hyksos king Iannas.



1712 B. C. (= 1682 + "30 years" of Euseb. i. and ii., and Syncell.), accession of Xerxes or Baleus, as Assyrian emperor.

The title "ra-f? * * *" of a king of the Sixteenth dynasty, — is next in order of succession in the chamber of kings at Karnak.

Seventy-eighth generation. Jan. 1st, 1700, mostly beyond youth:

The title "s-het-* *-en-ra" of a king of the Sixteenth dynasty, not found on contemporaneous monuments, — is next in order of succession in the chamber of kings at Karnak.

1694 B. C. (= 1723 — "29 years" of Gen. xi. 24), Terah born to Nahor.

"1691 B. C. = 1st year of Tai-keng, of the Chang" or Fourth dynasty — (Chinese chron. table).

The title "ra-s-nefru * *" of a king of the Sixteenth dynasty not recognized on contemporaneous monuments, — is next in order of succession in the chamber of kings at Karnak.

1682 B. C. (= 1644 + "38 years" of Euseb. i. and ii., and Syncell.), accession of Amramithes as Assyrian emperor. He is called Armamithres, by Syncellus.

"1677 B. C. = 15th year of Tai-keng" (Chinese chron. table), beginning of the Seventeenth cycle. Also in the reign of Tai-keng (mem. Chin. viii. p. 192), first historical notice of a *language* differing from the Chinese: certain people coming to render homage requiring interpreters (see below, Tai-wou).

As early perhaps as this date the *Greek language* in existence, with the inhabitants in the first stage of society, the Stone Age or so-called "Golden Age," when (according to Hesiod, and Dicearchus) mankind lived on spontaneous fruits, and dissensions injustice and war were unknown — (much as among the tribes of Interior Oregon when visited by myself).

Quercus pubescens of the Mediterranean countries. Resembling Q. robur and equally called in Greece "thĕnthrō" (Sibth.), in Italy "rovere" though distinguished as "eschio" or "querce gentile" (Lenz): included doubtless in the Greek proverb "alis thruōs" sufficiency in the oak, referred to the Golden Age — by Dicearchus: the "platuphullōs" bearing excellent acorns but the timber inferior, is mentioned by Theophrastus iii. 8, also by Pausanias viii. 13. 1: Q. pubescens was observed by Sibthorp, Chaubard, and Fraas, from the Peloponnesus to mount Athos and Constantinople. Westward, the account by Pliny xvi. 8 of the "latifolia" seems chiefly taken from Theophrastus: Q. pubescens is described by Clusius hist. i. pl. 18; is termed "q. foliis molli lanugine pubescentibus" by Tournefort inst. 583; and is known to grow in Italy and Sicily (Guss., Philippi, and A. Dec.).

Quercus ægilops of the East Mediterranean countries. Called in Greece "vĕlanithĭa" (Sibth.), in which we recognize the "valanōi" eaten from the earliest period by the Greeks, — mentioned also by Hesiod op. 228, Homer od. x. 241, and "valanēphagōi" by the Oracle after the death of Lycurgus prohibiting Spartans from warring against Arcadians (Herodot. i. 66, and Paus. viii. 1, 6): the "aigilōps" is described by Theophrastus iii. 8 as the loftiest of the oaks, and bearing the bitterest and worst acorns; and the account by Pliny xvi. 8 seems taken from Theophrastus: Q. ægilops is termed "velani" or "q. orientalis castaneæ folio glande recondita in cupula crassa et squamosa" by Tournefort cor. 40 and trav. i. 128, "q. orientalis" by Pococke trav. iii. pl. 87; was observed by Sibthorp, Chaubard, and Fraas, a large and magnificent tree abounding near the sea from the Peloponnesus throughout the Greek islands to Asia Minor, its large acorn-cups exported under the name of *valonia* for dyeing cloth: the acorns notwithstanding their "disagreeable flavour" were found by J. D. Hooker linn. trans. xxiii. eaten in Syria. Westward, Q. ægilops is enumerated by Lenz as not indigenous in Italy, and therefore in France and Spain (Pers.) doubtless also introduced.

Quercus cerris of the Mediterranean countries. Called in Italy "cerro" and the acorn "cerra" (Lenz), in Greece "agria vĕlanithia" or "mĭkra vĕlanithia" (Fraas), and probably included in the "valanōi" eaten by the earliest Greeks: — the "ēmĕris" or "ĕtumōthrun" described by Theophrastus iii. 8 as not lofty but of a stunted habit with many branches, its acorns second in quality, may be compared: Q. cerris was observed by Fraas in Greece, frequent towards the North. Westward, the "cerrus" and "cerrea glans" are mentioned by Nigidius, Vitruvius, Columella, Pliny xvi. 6 to 8, and Palladius i. 9; and Q. cerris is known to grow in Italy, Southern France, and as far as Spain (Durol ii. pl. 5, Pers., Lam. fl. fr., and Dec. fl. fr.).

Quercus ballota of the Mediterranean countries. Called in Greece "prinari" (Fraas), and producing edible acorns: — the tree called by the Arcadians "smilaka" is described by Theophrastus iii. 16 as resembling the "prinŏ" but its leaves softer and not prickly; the "iligna glans" is mentioned by Horace, and Virgil ecl. vii. 1; that from the kind that is not prickly is commended by Columella vi. 3; and according to Pliny xvi. 6 to 8, one of the two kinds of "ilex" has leaves differing not much from those of the olive, and by some Greeks is called "smilaces:" Q. ballota is described by Clusius hist. i. 23; is termed "ilex folio rotundiore molli modiceque sinuato" by Tournefort inst. 583; was observed by J. D. Hooker in Syria (Daub.); by Sibthorp, Chaubard, and Fraas, from the Peloponnesus to the Greek islands, the acorns not eaten habitually as in Spain; by Desfontaines ii. 350, in Barbary; by Webb, and Boissier, on both sides of the Straits of Gibraltar (A. Dec.); but has not been observed by Lenz wild in Italy.

Quercus Tournefortii of the East Mediterranean countries. The "aliphlōiōs" or "ĕuthuphlōiōn," one of five kinds of oak producing edible acorns distinguished by the inhabitants of Ida, — further described by Theophrastus iii. 8 as having worthless timber, used only for axles and the like, is referred here by Bosc (Steud.): the "alian thrun" is mentioned by Eupolis, and Plutarch symp. 4. 1; and Pliny xvi. 8 in taking his account from Theophrastus clearly unites the "aliphlōiōs" with the "asprin" of the Macedonians: Q. Tournefortii is termed "q. orientalis latifolia foliis ad costam pulchre incisis glande maxima cupula crinita" by Tournefort cor. 40 as observed by him in Armenia (Pers.), was observed also by Olivier trav. ii. 5 in Asia Minor, and either here or in Greece by Sibthorp.

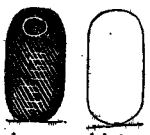
Arbutus unedo of the Mediterranean countries. Called in Britain from the shape and colour of its fruit *strawberry-tree* (Prior), in Germany "erdbeerbaum" (Grieb), in France "arbousier" (Nugent),

56305

at Verona "fraghe de montagna," in other parts of Italy "corbezzolo" or "albatro" or "arbuto" (Lenz), in Greece "lagōmēlia" or "kōumaria" or by the Turks "chogia jemischi" (Sibth.), in which we recognize the "arbutum" fruit eaten in the Golden Age — (Varro rust. ii. 1): "kōmarōphagōi" are mentioned by ancient Greek writers; the "kōmarōs" by Aristophanes av. 621, Amphis, its fruit according to Theophrastus iii. 16 edible and called "mĕmaikulōn;" and "mĕmaikula" are mentioned by Crates, Pherecrates, Eupolis, Theopompus, and Amphis: A. unedo was observed by Sibthorp, and Chaubard, frequent from the Peloponnesus throughout Greece and the Greek islands; by Forskal, in gardens at Constantinople, its fruit though edible employed only for feeding pheasants. Farther South, "mimaikula" are enumerated in the Scylacean Periplus 108 among trees planted in the gardens of the Hesperides (West of Cyrene and Barkē on the Tripolitan coast); and were known to Athenaeus xiv in Egypt. Westward, the "comaron" of the Greeks is identified by Pliny with the "arbutus" or "unedo," bearing "fragis" that resemble those growing on the ground, a single one sufficing; the "arbutus" is mentioned also by Virgil, Ovid, and Columella; A. unedo is termed "a. folio serrato" by Tournefort inst. 598; is known to grow in Italy and other parts of Southern Europe, and after a wide interval in Ireland (Pers., and A. Dec.). According to Lindley, "wine is made from the fruit in Corsica, but it is reported to be narcotic, if taken in quantity." (See Ficus vasta).

Arbutus andrachne of the East Mediterranean countries. Called in Greece "agriōkōumaria" (Sibth.), and the fruit possibly eaten during the Golden Age; — the "anthrahlē" is described by Theophrastus iii. 16 as resembling in leaf and fruit the "kōmarō" but a smaller tree, its bark smooth and peeling off; the "kōmarōs" of Dioscorides having fruit as large as a plum "kōkkōmēlōu" and disagreeing with the stomach when eaten, causing headache, is referred by Sibthorp to A. andrachne; the "adrachne" of the Greeks according to Pliny xiii. 40 and xvi. 33 is a tree growing not in the open country but in the forest and resembling the "unedo," its leaves evergreen and smaller, he also infers, xv. 28 from the two names "comaron" and "memecylon" that there are two species: A. andrachne is termed "a. folio non serrato" by Bauhin, and Tournefort cor. 41 (Pers); was observed by Sibthorp, and Chaubard, a fine tree on mountains from the Peloponnesus throughout the Greek islands to Cyprus and Smyrna.

Sorbus domestica of the Mediterranean countries. Called in English gardens *service tree* from the Latin "cerevisia," but in former times *sorb* (Prior), in Germany "speierbaum" (Grieb), in Italy "sorbo" and its fruit "sorba" (Lenz), in Greece "sōurmpa" or "skarōupa" (Sibth.), and probably included among the "poma" berried fruits eaten during the Golden Age: — the "ōua" of Hippocrates vict. acut. 405, Dioscorides, and Galen, or "ōuē ēmĕrē" and "agria" wild and cultivated of Theophrastus ii. 12, is referred here by writers: S. domestica was observed by Sibthorp, and Fraas, wild on mountains from the Peloponnesus and Greek islands to Athos, and Hæmus; by Forskal, in the gardens of Constantinople, the fruit not ripening on the trees but gathered and protected by a covering of garments. Westward, the "sorbus" according to Mago should be planted in moist cool places (Plin. xvii. 11); is mentioned also by Cato, Varro, Celsus, Columella, Martial, Apicius, and the kind with pear-shaped fruit "turbinatio piri" by Pliny xv. 23; perry or fermented cider "fermento atque acidis imitantur vitea sorbis" by Virgil geor. iii. 380: "cerevisia" was known to Pliny xxii. 82 as a fermented drink used in Gaul and other provinces, is mentioned also by Isidorus: S. domestica is termed "s. sativa" by Tournefort inst. 633; is known to grow wild in Italy (Lenz) and other parts of Southern Europe (All., Jacq. austr. pl. 447, and Pers.); and according to Evelyn sylv. 15 "beer brewed with these berries, being ripe, is an incomparable drink."



The title "ra * * * " of a king of the Sixteenth dynasty not recognized on contemporaneous monuments, — is next in order of succession in the chamber of kings at Karnak.

Seventy-ninth generation. May 1st, 1667, mostly beyond youth:

"1666 B. C. = 1st year of Siao-kia, of the Chang" or Fourth dynasty — (Chinese chron. table).

1663 B. C. (= 1613 y. 2 mo. + "49 y. 2 mo." of Manetho in Jos. c. A. i. 14), accession of the Hyksos king Assis.

"1649 B. C = 1st year of Young-ki, of the Chang" or Fourth dynasty — (Chinese chron. table).

1644 B. C. (= 1609 + "35 years" of Euseb. i. and ii., and Syncell.), accession of Belochus as Assyrian emperor.

1640 B. C. (= 991 + "105 + 162 + 382 years" of Castor in Euseb. i. p. 129, compare 1071 + "about 570 years" of Clint. i. p. 19), Inachus: the earliest name (according to Ocellus and others) known to the Greeks.

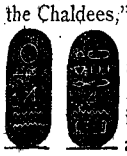
"1637 B. C. = 1st year of Tai-wou, of the Chang" or Fourth dynasty — (Chinese chron. table).

1635 B. C. = "3d year of Tai-wou" (Li-tai-ki-sse, and Pauth. 67), arrival at the court of Tai-wou of ambassadors from "seventy-six foreign kingdoms:" *interpreters* were also present, to translate what was said into Chinese.

Eightieth generation. Sept. 1st, 1634, mostly beyond youth: Nahor the younger (Gen. xi. 26 to 29, xxii. 20, and xxiv. 15), Seir the Horite (Gen. xxxvi. 20 and 1 Chron. i. 38).

1628 B. C. (= 1613 y. 2 mo. + "14 yrs" of the Armenian Euseb.-Maneth. table), accession of the Hyksos king Aphophis. The name and title of the Hyksos king Apepi occurs on the monuments — (Leps. k. pl. 15).

1624 B. C. (= 1694 — "70 years" of Gen. xi. 26), Terah "seventy years" old. After the death of his son Haran, "Terah took Abram his son, and Lot the son of Haran," and "Sarai his daughter in law, his son Abram's wife," and they went forth "from Ur of the Chaldees," and "came unto Haran and dwelt there" (Gen. xi. 27 to 31, and Josh. xxiv. 2).



Ra-sekenen Taakan ruling Upper Egypt and warring against the Hyksos king Ra-apepi — (pap. Brit. mus.). Ra-sekenen was buried at Drah Abu-el-Neggah in the Assasif at Thebes, but his tomb has not yet been discovered (Birch). His name occurs in a tomb at El-Kab (observed by myself); also in the chamber of kings at Karnak, and the series at Der-el-Medinet.

El-Kab or Eileithya, unlike the other Egyptian cities being walled, has evidently been held by an armed force; and the power of the Hyksos may thus have been prevented from extending farther up the river.

"1617 B. C = 21st year of Tai-wou" (Chinese chron. table), beginning of the Eighteenth cycle.

"In the reign of Tai-wou" (Pauth. 68), death of Ou-hien, author of a "*Catalogue of the stars*:" — quoted by Chinese astronomers of after times.

1614 B. C. (= 1574 y. 10 mo. + "13 + 25 y. 4 mo." of Manetho in Jos. c. A. = 2015 — "402d year of the Assyrian empire" in Clem. Alex., the "32d year of the eighth Assyrian king Belochus" of Clem. Alex. in Euseb. præp. x. p. 497 giving — 1644 = 1613), at the end of "five hundred and eleven years" and after protracted war, the Hyksos excluded from the greater part of Egypt, as far as the before-mentioned stronghold of Auaris on the Northeastern frontier. The event is referred to "the reign of Inachus at Argos and of Amosis in Egypt" (by Ptolemæus of Mendes as quoted by Apion, Just. Mart., Tatian, and Clem. Alex.; though confounded by him, Josephus, and others, with the Jewish Exodus. Compare Gen. xii. 6).

End of the Turin papyrus: some two hundred and fifty successive kings being enumerated; of whom the last "sixty-five" have been referred to the Hyksos period. — The papyrus was composed under the "Nineteenth or Twentieth" dynasty (Leps. eg. and sin. p. 395, and C. Müller fr. Man. p. 563). Traditionary reminiscences of the Hyksos, are found in Gen. xlvi. and xlvii., and Herodot. ii. 128.

V. THE PHARAOHS.

The Egyptian king who recovered his authority, is in the Maneth. tables called Amŏs or Amŏsis. A portrait of king Aahmas occurs on a stela (now in the museum at Marseilles): and his name — is at the head of a new dynasty on the tablet at Abydos, and in the series of kings at Gurna.

The name of king Aahmas occurs also at El Kab, in the above-mentioned tomb of an officer bearing the same name; who witnessed the capture of Auaris, and whose father served under Ra-sekenen.

A striking change now takes place in Egyptian monumental history: temples are again erected, Aahmas repairing that at Karnak — (Birch); figures of gods are no longer rare, but all sculptured walls teem with manifestations of Polytheism; while military campaigns cease to be conducted on foot:

The same tomb at El Kab contains figures of foreigners of the White Race in servitude, and of the *horse* — (Leps. d. iii. pl. 10 and 12); the domesticated animal brought from perhaps Tartary: with this acquisition, the Egyptians soon became a warlike conquering people, amply illustrating on their monuments the so-called Heroic Age; figures of the horse or accompaniments being very generally present during this epoch. Joseph in Egypt rode in a chariot (Gen. xli. 43); the Egyptians in chariots pursued the Israelites (Ex. xiv. 9); the war horse is described in Job xxxix. 19 to 25; and horses and chariots at the siege of Troy, are a constant theme with Homer. The horse bones among remains of Swiss villages of the Stone Age (Heer and Troyon p. 273) may have been of the animal in its wild state; "ippŏus agriŏus" among the Alps, are mentioned by Polybius (Strab. iv. 6. 10); and "equorum greges ferorum" herds of wild horses in the days of Pliny viii. 16 inhabited the North "septemtrio" (meaning perhaps the plains of central and Eastern Europe). Farther East, the horse seems known in China earlier than in Egypt, its sign occurring in the primitive characters of Chinese writing (Pauth. p. 84): a dwarf breed, long introduced throughout the Malayan archipelago, was observed by myself on Luzon; in Hindustan, figures of horses and horsemen were observed by myself in the Budhist cave-temples at Adjunta, and the horse is mentioned in the Sama Veda (transl.

Stev.), and Institutes of Manu (transl. Bramin.). By Columbus himself, the horse was carried to America (F. Columb. 45 to 51), where it is now employed throughout, even among uncivilized tribes, and in both Northern and Austral America has besides relapsed into secondary wildness.

The same tomb at El Kab presents the earliest distinct figures of the *pig* I could find on the Egyptian monuments; a herd substituted for the goats previously employed for treading in seeds scattered on the soil: — pigs continued to subserve this agricultural purpose in Egypt in the days of Herodotus ii. 14; afterwards, another change took place, in the substitution of sheep, witnessed by Baumgarten i. 15. The hieroglyphic character of the pig, occurs as early at least as the Ptolemies (Leps. d. iv. pl. 26), and is mentioned by Horapollo ii. 35. The flesh of the "hzyr" or pig was prohibited by Moses (Levit. xi. 7): the pig is also mentioned by Homer, Aeschylus; and in Switzerland, during the Stone period, was kept domesticated, as appears from debris of the earliest villages (Troyon). Eastward, in Hindustan, the pig is mentioned in the Sama Veda (Stevenson), and in the Institutes of Manu (Deslongchamps' version); and figures of boar-headed personages were observed by myself in a Braminical cave-temple at Ellora. In China, the pig has been long known. Farther East, was aboriginally introduced throughout the Tropical islands of the Pacific (as verified by myself); but was absent from New Zealand until carried there by colonial Whites: and was carried to America by Columbus (F. Columb. 81).

Zizyphus vulgaris of the Southern border of the Sahara. Called in Italy "giuggiolo" and its fruit "giuggiula" or "zizola" or "zinzola" (Lenz), in Greece "tzitzuphuia" and its fruit "tzitzupha" (Fraas), around Lebanon "ziziphi" (Rauwolf), in Egypt. "önnab" (Forsk.), and heaps of red fruit figured in the same tomb — possibly belong here: Z. vulgaris was pointed out to me by an Arab attendant as bearing "the best of all known fruits," in accordance with the account of Lotophagi by Homer od. ix. 97; the "lōtōs" of Cyrene, its timber much used in Egypt and its fruit yielding wine, is mentioned by Herodotus ii. 56 and iv. 177, Theophrastus iv. 3, Polybius, Strabo xvii. 3. 17, and Athenaeus xiv. 65; "lōtōs ětěrōs" yielding wine and its fruit eaten, is enumerated in the Scylacean Periplus among trees planted in the garden of the Hesperides, occurring also farther West along the Syrtis of the Lotophagi (Tripolitan coast): Z. vulgaris is mentioned by Mohammed kor. 53 (transl. Sale); was observed by Mungo Park in Interior Africa (Pers.); by Abd-allatif, Forskal liii., Delile, and Clot-Bey, under cultivation in Egypt, its timber of excellent quality and a cold infusion of its fruit much used. Farther North, the "zizuphōn" is mentioned by Galen, Oribasius, and in Geoponica x. 3; Z. vulgaris was observed by Rauwolf around Lebanon; by Sibthorp, Chaubard, and Fraas, on Parnassus and the mountains of Attica, also in gardens. Westward, "zizipha" were brought from Syria towards the close of the reign of Augustus by Sextus Papinius, seen consul (A. D. 36) by Pliny xv. 14; and the tree is mentioned as cultivated in Italy by Columella, and Palladius: Z. vulgaris is termed "ziziphus" by Tournefort inst. 627; was observed by Ray (Hogg in Hook. journ.), and Lenz, cultivated and seemingly wild in Italy; and by Shaw, in Barbary. Eastward from Egypt, is known to occur in Persia (Pall. fl. ross. ii. pl. 59, and Lindl.); was observed by Roxburgh in Hindustan; by Graham, the "*cultivated kheir* generally found about old Musselman cities in the Deccan and Goozerat, and probably introduced at the time of Mahomedan conquest" According to Lindley, "the pleasant pectoral lozenges called *pâte de jujube* are prepared" in part from this species. (See Z. jujuba, and Z. melanogona).

Allium cepa of the Desert-margin in Syria and Persia. Called in Britain *onion*, in a Wycliffite transl. Num. "uniowns," in France "oignon" (Prior), in Germany "zwiebel" (Grieb), in Italy "cipolla" (Lenz), in Greece "krōmmuthi" (Sibth.), in Egypt "basal" (Forsk.), in Egyptian "mjŏl" (transl. Sept.) or "ĕmjŏl" (Kirch.) or "ĕmjōl" (ms. Borg.) or "mjōul" (lex. Oxf.); and standing crops figured in this tomb, brown-headed and pulled while the stems are green, — seem to belong here; notwithstanding the superior height of a similar crop at Bab-el-meluk under the Nineteenth dynasty; strings of onions are distinctly figured under the Seventeenth or Eighteenth dynasty (Champ.-Fig. pl. . .): "btzlym" were longed for by the Israelites in the Desert (Num. xi. 5); and "caepas" were held sacred like gods by the Egyptians in oaths, in the days of Pliny xix. 32, and Juvenal xv: A. cepa was observed by Forskal, Delile, Clot-Bey, and myself, under cultivation in Egypt; and by Hasselquist, growing in the open country along the Dead Sea near Jericho (A. Dec.). Farther North, the "krōmmuōn" is mentioned by Homer, Aristophanes, Theophrastus, Dioscorides; is identified in Syn. Diosc. with the "kĕpam" of the Romans; the "cepe" or "caepa" is mentioned by Varro, Horace, Persius, Columella, and according to Pliny xix. 32 to xx. 20 is unknown in the wild state: A. cepa is termed "c. vulgaris floribus et tunicis candidis" by Tournefort inst. 382; was observed by Sibthorp, Chaubard, and Fraas everywhere under cultivation in Greece, as throughout Europe. Eastward from Egypt, the Tsoung ling or onion mountain-chain passing near Kachgar, derives its name from the abundance of the plant (Klapr. mem. ii. 295): A. cepa is successfully cultivated within the Tropics, as witnessed by myself at Mocha and in Hindustan; is mentioned in the Institutes of Manu (transl. Deslongch.), is called in Sanscrit "palandu" or "latarka" or "sukandaka"

(Pidd., and Ainsl.), in Bengalee "palandu brikhya" or "tanmul," in Hindustanee "basal" or "piyaz" (D'roz.), and "piaz" in the environs of Bombay long famed "for the cultivation" (Graham). Farther East, was observed by Mason "exotic" in Burmah and called "kyet-thwon-nee;" by Loureiro, under cultivation in Cochinchina and China; by Kaempfer and Thunberg, cultivated here and there in Japan and called "soo," or usually "fitomosi." By European colonists, was carried to Peru before the visit of J. Acosta, observed there by myself; to the West Indies before the visit of Sloane i. p. 75; to New England before the visit of W. Wood i. 5 in 1629, continues abundantly cultivated in Northeast America, and partly from this source has been distributed throughout the Pacific, as ascertained by myself on the Hawaiian and Feejeean islands, New Zealand, and Australia.

Metallic *money*, probably of *silver*, at this time in use in Egypt, as shown by heaps of rings figured at El Kab (Leps. d. iii. pl. 10). — The pieces of silver given by Abimelech to Abraham, and those "weighed" for the purchase of the sepulchre at Hebron (Gen. xx. 16 and xxiii. 16), were probably of this description. Rings, regarded by Champollion-Figeac p. 208 as of silver, are figured in a tribute-procession to Tetmes III. under the Eighteenth dynasty: a mummy belonging to the time of perhaps the Twenty-fifth dynasty, was found on being unrolled in London to contain "a silver plate." Among the Greeks, the discovery of silver was attributed to Erichthonius of Athens, or by some to Aeacus (Plin. vii. 57); and "argurōēlōs" silver-studded, and "argurōtōxōs" bearing a silver bow, are expressions used by Homer il. i. 37 and ii. 45.

1612 B. C. (= 1587 y. $239\frac{23}{86}$ d. + "430 — 400 years" of ten lunations of Ex. xii. 40 and Gen. xv. 13 = 24 j. y. $93\frac{6}{86}$ d., for 30 years × 10 ÷ 12 = "100–75 years" of Gen. xii. 4 and xxi. 5), the Call to Abram; and his departure from Haran for the land of Canaan.

The "gml" of the sojourn of Abram in Egypt (Gen. xii. 16), according to the name current there and the received opinion, is the *camel*; Camelus dromas: — the "gmt" is also mentioned in Genesis xxxvii. 25, Leviticus xi. 4, Judges vii. 12, viii. 26, 1 Kings x. 2, and Job i. 3; but by Herodotus, in connexion with the East only; is figured in the Khorsabad sculptures at Nineveh (Botta pl. 98, and Bonom. iv. 1), and on Himyaritic monuments in Yemen (observed by myself), but seems entirely excluded from the Egyptian monuments. Egypt besides, appears to have continued for many centuries a barrier to the diffusion of the living animal Westward: even to the time of the Romans, the camel is hardly mentioned more than once in Numidia (Caes bell. afr. 68); and its final complete introduction, carrying population into districts previously uninhabitable, doubtless revolutionized society throughout North Africa. In Hindustan, the camel is mentioned in the Institutes of Manu, and as used for riding by bramins (Braminical and Deslongchamps' versions); riding camels in India, is also mentioned by Herodotus, and Arrian, and was occasionally witnessed by myself; but I found no figures of the animal in the cave-temples. Recently, the camel has been introduced upon our Western plains, and with some promise of success.

The city of Hebron at this time in existence (Gen. xiii. 18, xviii. 1, and xxiii. 2). "Hebron was built seven years before Zoan in Egypt" (Numb. xiii. 22). In regard to the latter city, called also San or Tanis, no Tanite dynasty is named by Manetho anterior to the present date; — and the earliest relics found there are inscribed with the name of Menepthah II. of the Nineteenth dynasty.

1609 B. C. (= 1071 + "25th + 27 + 19 + 42 + 30 + 8 + 32 + 30 + 45 + 45 + 40 + 40 + 30 + 22 + 30 + 30 + 32 years" of Eusebius i. + "12 years" in another place), accession of Balaeus as Assyrian emperor. (The alleged "12 years," not reaching Cephalion's limit, cannot be correct; and in fact, "fifty-two" years are assigned to this reign in Euseb. i and ii, and Syncell.).

Amosis abolished the *human sacrifices* to Hera or Juno in Heliopolis; and in place of the victims, ordered "kērinōus" to be laid aside (Manetho, in Porphyr. de abst. ii. 55). The Greek word may in one sense mean destiny-images or soul-certificates, and therefore the small blue *sepulchral images* so frequently exhumed in Egypt. — A box for holding such images, dated in the succeeding reign, is mentioned by Birch as the earliest instance known of the custom of depositing them: he further states, that these images are all inscribed with the same extract from the Ritual or Book of the Dead.

This interfering in religious rites seems connected with the real commencement of *Greek history*, Inachus first king of Argos being a worshipper of Hera or Juno (Pausan. ii. 15. 4). The inhabitants of Greece had by this time reached the Second stage of society, the consequence (according to Dicearchus) of accumulating provisions, slaying wild animals and domesticating certain kinds, multiplying herds through pastoral pursuits, and the introduction of war. As to the Third stage, critical examination of whatever is practically useful leading to *Agriculture*, the art if not already in Greece would probably be brought by refugee priests of Hera.

Malva sylvestris of Europe and the adjoining portion of Asia. Called in Britain *mallow* or *round-dock*, by Chaucer "dock" (Prior), in Italy "malva" or "malva selvatica" (Lenz), in Germany "wilde käsepappel," in Greece "mōlōha" or "malōha" (Fraas), in Egyptian "jŏj," the same word meaning unleavened bread (Kirch.), in which we recognize the "malahē" eaten as early as this

date in Greece — (Hesiod op. 41), mentioned also in the Batrachomyomachia 161, and identified with the "mōlōhē" by Athenaeus ii. 52; the "mōlōhēs" root is mentioned by Antiphanes (Athen.): M. sylvestris was observed by Sibthorp, Chaubard, and Fraas, in low ground and waste places frequent from the Peloponnesus throughout Greece and the Greek islands, its leaves eaten (Walpole trav. p. 245); by Delile, wild near Alexandria, and is enumerated by Clot-Bey among the esculent plants of Egypt. Westward, the "malva" is enumerated among esculents by Cicero, and Horace; by Pliny xx. 84 as eaten and called "malachen" by the Greeks; and the "moloche" is mentioned by Columella x. 247: M. sylvestris is termed "m. vulgaris flore majore folio sinuato" by Tournefort inst. 95; is described by Persoon as erect; was observed by Forskal on Malta and on the hills around Marseilles; and is known to occur in waste places and fallow ground throughout middle Europe as far as Britain (Cav. ii. pl. 26, and Curt. lond. ii. pl. 51). By European colonists, was carried to Northeast America, where it was observed by A. Gray along "way-sides" in our Northern States. The plant according to Lindley is "mucilaginous and emollient." (See M. rotundifolia.)

Asphodelus ramosus of the Mediterranean countries. Called in Italy "asfodillo" (Lenz), in Greece "karavōuki" or "spōurthakula" or "asphōthēlŏ" (Sibth.), in which we recognize the "asphōthēlōs" eaten by the Greeks as early as this date, — and in after times held sacred, planted on tombs and before gates of cities (Plin. xxi. 68, and Eustath.); mentioned as esculent by Hesiod op. 40, Theophrastus vii. 12, and the favourite diet of Pythagoras (Porphyr.); mentioned as growing wild by Homer od. xi. 538 to 573; and the "lĕukŏn asphōthēlōn," by Cratevas: A. ramosus was observed by Sibthorp, Chaubard, and Fraas, abounding in open situations from the Peloponnesus throughout Greece and the Greek islands, extensive tracts coloured with its flowers. Westward, its stem called "anthĕrikōs" was according to Hellanicus employed by the Numidians for building huts, a practice alluded to by Diodorus xx. 57, the time of gathering is defined by Mago, and the "anthĕrix" is also mentioned by Theocritus i. 52: the "asphothēlōs" is identified in Syn. Diosc. with the "alvōukiŏum" of the Romans, but according to Pliny xxi. 68 the "albucum" of Italy is the stem: A. ramosus is termed "a. albus ramosus mas" by Tournefort inst. 343; was observed by Lenz here and there in Italy, and is known to grow in other parts of Southern Europe (Pers.).

1608 B. C. (tomb of officer Aahmes, and Birch), after a siege of "six years," Sharuhana in Palestine captured by king Aahmes. — The city of Sharuhen is mentioned in Joshua xix. 6.

1605 B. C. = "15 years before the reign of Phoroneus" (Anticlid., in Plin. vii. 56), letters or *alphabetic writing* invented by Memnon or Menon, an Egyptian. The *Phoenician alphabet* is clearly not older than the domestication of the *camel;* this animal being substituted for the Cynocephalus or baboon for the third letter.

The tomb of Aahotep mother of king Amosis (discovered by Mariette 91) was found to contain: a breastplate ornamented with precious stones, *red cornelian, turquoise,* and *lapis-lazuli* (the latter of course brought from Media): — "antique Egyptian jewelry set alternately with bits of lapis lazuli" was known to C. W. King ant. gem, who further refers here the "sapphirus" of Pliny from its coming "from Media:" according to Marco Polo 47, "balasci" and "pieres duquelz l'en fait le azur" come from Balascia:

Also a diadem of gold, ornamented with two diminutive *sphinxes:* a poignard having the blade of *bronze,* and handle of *silver:*

And three bees carved in gold. The *honey-bee,* Apis mellifica, is enumerated as a hieroglyphic character — by Horapollo 59; is figured in a tomb above Girgeh of the time of Mienptah (observed by myself), is mentioned in the history of Samson (Judg. xiv. 8), also in Proverbs xxiv. 13, Psalm cxviii. 12, and by Hesiod, Homer il. ii. 87, and subsequent Greek and Latin writers. Eastward, is mentioned in the Sama Veda (transl. Stev.), the Institutes of Manu (transl. Deslongch.), and the Mahavansi of the Ceylon Budhists. By European colonists, was carried to Northeast America, where it continues kept in hives and has become naturalized; and in "1869," the first swarm of bees with a "store of wild honey" were found in a tree "on the west side of the Sierra Nevada mountains," there "were no wild bees" in the country beyond the Sierra when first occupied by emigrants from the Atlantic States, by whom however bees were soon imported (B. Transcript, Apr. 14th, 1869).

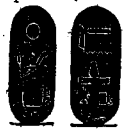
Eighty-first generation. Jan. 1st, 1600, mostly beyond youth: Bethuel (Gen. xxiv. 24 and xxviii. 5), Zibeon (Gen. xxxvi. 24 and 1 Chron. i. 38).

Ficus sycomorus of Abyssinia and the mountains of Yemen. The *sycamore* is called in Yemen "sokam" or "obre" or "chanas," in Egypt "djummeiz" (Forsk.), and mummy-cases under the Seventeenth dynasty are usually of its wood — (Birch): a tank with trees planted around, apparently of this species, is figured in the beginning of the Eighteenth dynasty; also the mystical sacred tree (Leps. d. iii. pl. 37 and 40), shown by later and more highly finished representations to be the sycamore: the "sukaminōs" is mentioned by Theophrastus iv. 2 as not growing North of Egypt; the "djummeiz," by Temimi, and Abd-allatif; and F. sycomorus was observed by Forskal, and Delile, in Egypt, by myself, planted on the river-flat throughout. Farther South, by Lepsius eg. and sin. p.

128 to 170, among the trees clothing the banks of the Nile beyond Lat. 14° 30′ and Abu Haras; by Bruce, and Salt, abounding on the Taranta mountains in Abyssinia; and the "sukaminōn aiguptiōn" is enumerated by Artemidorus, among other trees growing South of the entrance to the Red Sea (Strab. xvi. 4. 14). Eastward, F. sycomorus was observed by Forskal wild on the mountains of Yemen: and dried *sycamore figs* "from the Persian Gulf" were once shown me.

The name of king Aahmas occurs in the *alabaster quarries* at El Bosra, opposite Siut (Leps. eg. and sin. 32 and 115).

1593 B. C. = "22d year of Aahmas," in the *quarries* at Massara, the date of opening these quarries, to repair temples at Memphis.



1592 B. C. (= 1417 + "37 + 31 + 9 + 26 + 13 + 22 + 24 + 13 years" of the Afr.-Maneth. table = "38 + 31 + 9 + 26 + 12 + 21 + 13 + 25 years" of the Euseb.-Maneth. table), accession of the second king of the Seventeenth dynasty. The name of king Amunhotep is next on the monuments; both contemporaneous, — and in the tablet at Abydos, and the series of kings at Gurna.

Amunhotep built a portion of the temple at Karnak (De Rougé); and (according to Champollion-Figeac) foreign wars are recorded on some of his constructions:

1590 B. C. (= 1640 — "50 years" of Castor in Euseb. i. p. 129 to 131, see also Apollod. ii. 1, and Pausan. ii. 5 to 8), Inachus succeeded by Phoroneus, second king in the Peloponnesus. He collected the scattered inhabitants into a town, named after him Phoronikon (Pausan. ii. 15. 5).

His brother Aegialeus collected the inhabitants of a neighboring district on the Isthmus into a town, named after him Aegialea, and became the first king of Sicyon (Apollod. ii. 1. 1, and Paus. ii. 5. 5).

The Arcadians living on the leaves of trees and roots of herbs before — the time of Pelasgus, according to tradition (Ruel i. 115).

Apargia tuberosa of the Mediterranean countries. Called in Greece "rathiki" or "agriŏrathikōn" (Sibth.); and perhaps included among the roots of herbs eaten by the Arcadians: — the "kihŏriŏ agriŏ," edible according to Theophrastus ix. 12. 4, may also be compared: A. tuberosa, sent by Busbecke from Constantinople, is termed "cichorium constantinopolitanum" by Matthioli comm. pl. 388; was observed by Sibthorp, and Chaubard, frequent in meads more or less sandy from the Peloponnesus to Cyprus. Westward, is described by Lobel pl. 232; is termed "dens leonis asphodeli bulbillis" by Tournefort inst. 468; is known to grow in Italy and Southern France (Pers.), and was observed by Brotero as far as Portugal (Spreng., and Steud.).

1589 B. C. (= 1587 y. 239$\frac{3}{8}$ d. + "100 — 99 years" of Gen. xvii. 1 and xxi. 5), the Promise to Abraham. Establishment of the rite of *circumcision*. And destruction of the two cities of Sodom and Gomorrah.

According to the Septuagint and English Versions "vŏuturōn" or *butter* is mentioned in Gen. xviii. 8. — The art of making butter (according to Oppian cyneg. iv. 271) was brought from the Issedones or other Northern nations by Aristaeas; according to the Hippocratic writer morb. iv. p. 357, was derived from the Scythians, and their process of making butter from mare's milk is distinctly described: butter, used among the mountaineers of Portugal is mentioned by Strabo iii. p. 414; butter from sheep's or goat's milk is prescribed by Dioscorides; and from cow's milk, by Galen fac. simpl. x. p. 272 (Spreng.).

The same year (= 1557 + "32 years" of Euseb. i and ii. = 1609 — Cephalion's 20 years limit) is given for the accession of Altadas as Assyrian emperor: but suspicion here arises of conformity to a chronological landmark; as he is called "Sethos" by Syncellus, with "fifty" years assigned to his reign.

"Towards the close of the Treta Yug" or Silver Age (Puranas, Graha Munjari tables, and Bentley as. res. viii. p. 231), Bharadwaja reigning in Hindustan.

1588 B. C. (= 1587 y. 239$\frac{3}{8}$ d. = 1240 + "430 years" of Ex. xii. 40, compare also 1413 + "175 years" of Gen. xxv. 7), Isaac born to Abraham and Sarai.

"Hĕvrŏn" is placed in this year by Manetho (= 1574 y. 10 mo. + "13 years" of Jos. c. A. i. 15); the "thirteen years" of Hĕvrŏn or Hĕvrŏs occur also in the Maneth. tables, but at different dates, and there is no such king on the Egyptian monuments. Manetho seems therefore to have been acquainted with this date in Jewish history.

Cordia myxa of Tropical Arabia and Hindustan. A large tree called in Burmah "tha-nat" (Mason), in Hindustanee "lusora" or "lesoora," in Telinga "nekra," in Bengalee "bohooari" (Lindl.), in the environs of Bombay "bhokur" (Graham), in Tamil "vidi-marum" (Drur.), in Egypt "mokhayet" (Del.), in Yemen "onneb" or "gharaf" or "sehæli" or "eschell" (Forsk.), in which we recognize the "ashl" planted by Abraham at Beer-sheba — (Gen. xxi. 33), that under which Saul abode at Gibeah, and a third under which he was buried in Jabesh (1 Sam. xxii. 6, and 1 Chron. x. 12): mummy-cases are said to be made in some instances of wood of C. myxa; the "mokhaita" is men-

stoned by Ibrahim Magrebi, Ishak ben Amran, and Ebn Baitar; the living C. myxa was observed by Alpinus, Lippi, Forskal, and Delile, in Egypt, by myself on the river-flat planted throughout, a Tropical tree that may succeed in Palestine but hardly farther North: is known however to occur in Persia (Lindl.). Farther South, was observed by Forskal p. 33 planted as well as wild among the mountains of Yemen and the fruit eaten by boys, its wood tough and solid employed by carpenters, also to procure fire by friction. Eastward, was observed by Graham "on the Ghauts and about villages throughout the Concan," its fruit pickled and eaten by the natives; by Rheede iv. pl. 47, in Malabar; by Roxburgh, and Royle, in other parts of Hindustan; by Mason, in Burmah. The "sebesten" of Avicenna, Serapion, and Averrhoes, is also referred here; and according to Gaertner, Graham, and Lindley, the transparent glutinous pulp of the fruit of C. myxa becomes when dried the true *sebesten* of the shops.

In the valley of Der-el-Medinet at Thebes, an example of the *arch* occurs in a tomb inscribed with the name of Amunhotep, and built of dobi or sun-dried brick (Wilk. topog. theb. 81).

The portraits of Amunhotep are sometimes accompanied by that of his wife, queen Aahotep (Leps. d. iii. pl. 1); a woman possibly of the Nubian Race, but to all appearance, a negress.

A statue of king Amunhotep is (now in the museum at Turin): — and his memory appears to have been held in after times in veneration by the Egyptians.

1579 B. C. (= 1592 — "13 years" of the Afr.-Maneth. table), end of the reign of the second king of the Seventeenth dynasty. The name of king Tutmas is next on the monuments, — in the tablet at Abydos, and the series of kings at Gurna.

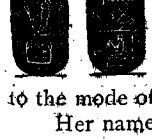
The "first year of Tutmas" occurs on the rocks at Assouan, and in the quarries of Kerman opposite the isle of Tombos in 19° N. — (Birch).

1578 B. C. = "2d year of Tutmas" (Leps. k. tab. p. 17, and eg. and sin. 233), in an inscription at Tombos; the latest date in his reign found on the monuments.

Tutmas continued the temple at Karnak, placed there two obelisks (Birch); and according to Champollion-Figeac, built the earliest portion of the temple at Medinet Abu and a rock-temple at Ibrim in Nubia; a "magnificent colossal statue" of him is now in the museum at Turin.

1576 B. C. (= 1575 + his "1st year"), the accession of Tutmas II. not earlier than this date. His name is next on the monuments, contemporaneous — as well as in the tablet at Abydos, and the series of kings at Gurna.

"First year of Tutmas II." (Leps. k. tab. p. 17), the latest date in his reign found on the monuments. His name occurs in one or more rock tablets at Tombos (Leps. eg. and sin. 18); and (according to Champollion-Figeac), he built additions to the temple at Medinet Abu, and edifices at Semneh in Nubia, and at Esneh.



1575 B. C. (= 1554 y. 3 mo. + "20 y. 7 mo." of Manetho in Jos. c. A., or "21 years" in the Euseb.-Maneth. table), accession of Amĕnŏphis, in the Afr.-Maneth. table called "Amĕnŏphthis" (the termination indicating a female). The name of queen Amun-u-hnumut is next on contemporaneous monuments; — but does not occur in the genealogical series at Abydos, nor in that at Gurna (an omission due perhaps to the mode of reckoning).

Her name is associated with that of Tutmas II. at Medinet Abu, in the Assasif, and elsewhere — (Birch): and occurs in a tomb at Thebes belonging to the earlier part of the Eighteenth dynasty (Poole hor. eg. 65).

Peaceful expedition by sea as far as Punt (Pontus?), now first visited by the Egyptians — (Birch).

Among the articles brought back to Egypt, "stibium" is enumerated — (Birch): the practice of blackening the eyelids with "kohl" (a preparation said to be mainly composed of *antimony*) seems figured on the monuments as early as the Seventeenth dynasty: the use of "kohl" or eye-paint is mentioned in 2 Kings ix. 30; also by Ion, and Julius Pollux v. 16. 101, the material being termed "stimmi" by the Greeks, and "stibium" by Celsus: the custom continues in Egypt to the present day; and the importation there of antimony "from Europe," is mentioned by Forskal mat. med.

Echium setosum of the East Mediterranean countries. A rough bristly-leaved herb called in Egypt "el kahæli," its red root and bark persistently and beautifully staining the skin, and employed as a cosmetic (Forsk.); included perhaps in that composed by queen Amun-u-hnumut on the return of the Expedition — (see Birch): "aghōusa riza" used as cosmetic by women, giving rise to the term "aghōusizĕsthai," is mentioned by Hesychius; the "riziōu" used by women as cosmetic, by Dioscorides iv. 98: the "ghōusa" or "aghōusa," by Aristophanes lys. 48 and eccles. 929; and is described by Theophrastus vii. 8. 3 to 9. 3 and od. 31 to 33 as having leaves spreading on the ground and a red root, imported from Syria for colouring ointments: E. setosum was observed by Sibthorp pl. 182, and Chaubard, from Crete to the Peloponnesus; and by Forskal p. 41, and Delile, on the Mediterranean border of Egypt.

Populus nigra of Europe and Northern Asia. Called in Britain *black poplar* (Prior), in Germany

"schwarzpappel," in Italy "albaro" or "pioppa" or "pioppo nero" (Lenz), in Greece "kavaki", (Sibth.), in Egypt "baks" (Forsk.); and possibly among the foreign trees brought by the fleet and planted in Egypt — (see Birch): tall ornamental trees are figured in garden-plans at Gurna (Champ. pl. 174, and Rosselin. ii. pl. 68): the "bkaym" of David's victory at Rephaim (2 Sam. v. 23 and 1 Chron. xiv. 14) may prove the origin of the consecration of the "populus" to Hercules (see Samson): P. nigra was observed by Forskal, Delile, and Clot-Bey, in the gardens of Egypt; is known to occur also in Palestine (Royle in Kitt. bibl. cycl.). Farther North, the "aigĕirōs" is mentioned by Hesiod, Homer, Theophrastus, Dioscorides, and the "aigĕirōu krētikēs" in 1 Mul. morb. 108: P. nigra was observed by Sibthorp, and Chaubard, in wooded situations from the Peloponnesus and Cyprus throughout Greece. Westward, the "populus" is mentioned by Cicero, Ovid; as grateful to Hercules, by Virgil ecl. vii. 61, and Pliny xii. 2; and the "populus nigra," by Pliny xvii. 35. 22: P. nigra is described by Tournefort inst. 592, and Blackwell pl. 248; was observed by Lenz wild in Italy, and is known to grow on river-banks throughout middle Europe as far as Britain (Engl. bot. pl. 1910, and Pers.). Eastward from the Black Sea, is known to grow throughout Northern Asia, being enumerated by A. Decandolle among the plants extending two-thirds around the Subarctic circuit of the Globe. By European colonists, was carried to Northeast America, where it continues planted for ornament, especially in and near the district drained by the Hudson river. The young leafbuds according to Lindley are "employed as the basis of a balsam and tincture," and occasionally in the preparation of "unguentum populeum." (For the art of making the tree grow unnaturally tall, see P. tremula).

Pyrus communis of Europe and the Caucasian countries. Called in Britain *pear*, in Anglo-Saxon "pera," in France "poire," in Spain "pera" (Prior), in Germany "birn" (Grieb.), in Slavonic "krusska" or "gruscha," in Celtic "peren" (A. Dec.), in Italy "pera," and the wild kind "peruggine" or "pero selvatico" (Lenz), in Greece "apithia," and the wild kind "ahlathia" (Fraas), in Egypt "kummitri" (Forsk.); and possibly among the foreign trees brought by the fleet and planted in Egypt —(see Birch): the fruit-tree figured in one of the tombs at Gurna (Rosselin. ii. pl. 68) seems to belong here: the "apiōs" is mentioned in the Hermetic iatromathem.; and P. communis was observed by Abd-allatif, Forskal, Delile, and Clot-Bey, in the gardens of Egypt, the fruit besides imported from mount Sinai, and from Tor on the Gulf of Akaba. Farther North, the image of Juno dedicated by Peirasus was made of "ahrathōs" wood (Paus. ii. 17. 5); the "apiōs" is mentioned by Theophrastus, Istrus, Dioscorides, Galen, and Athenaeus xiv. 63; P. communis was observed by Sibthorp, Chaubard, and Fraas, in the Peloponnesus and other parts of Greece, both wild and cultivated; and is known to grow wild about Caucasus (Ledeb.). Westward, the "pirum" cultivated in several varieties is mentioned by Cato vii. 4, Horace, Virgil, Celsus, Pliny, the "achras pirus" by Columella, and "pirus agrestis" by Palladius iii. 25. 1: P. communis was cultivated in Switzerland during the Stone Age, a small-fruited kind "var. achras" occurring in debris of the earliest villages (Heer and Troyon 278 and 443); is termed "p. sylvestris" by Tournefort inst. 632; was observed by Lenz wild in Italy; is known to grow wild in middle Europe, and is besides cultivated throughout as far as Lat. 64° (A. Dec.). Eastward from Caucasus, pears "from Bunder-Abbas" on the Persian Gulf were shown me at Muscat; and are sometimes carried to Hindustan, as appears from having a Hindustanee name "nashpati" (D'roz.), but the tree remains unknown there even in the North (Royle); though its cultivation has extended by the way of Central Asia to China and Japan (Bunge, and Thunb.). By European colonists, the tree was carried to Northeast America, where it continues successfully cultivated in our Northern States; and to St. Helena, where I found the fruit large but tasteless. (See Peirasus).

Beta vulgaris of the Mediterranean and Tauro-Caspian countries. Called in Britain *beet* (Prior), in France "bette" or "betterave" (A. Dec.), in Germany "mangold," in Italy "barba" or "betiola" (Lenz), in Greece "sĕskōula" or "phĕskōula" and the red-rooted variety "kōkkinōgōulia" (Fraas), in Egypt "sælk" and the red-rooted variety "bandsjar" (Forsk.), in Egyptian "lōgĕm" (Kirch.); and possibly brought to Egypt by the Expedition in question — (see Birch): agreeing with the tuft of large leaves on a root figured in the Asasif, and on subsequent monuments (Leps. d. iii. pl. 19 and 78): B. vulgaris was observed by Abd-allatif ii. 1, Forskal, and Delile, under cultivation in Egypt. Farther North, the "sĕutlōn" or "tĕutlōn" is mentioned in the Batrachomyomachia, also by Crates, Melanthius, Aristophanes pac. 1008, Eudemus, Diphilus, and Athenaeus ii. 57; the "tĕutlōn lĕukōn" and "mĕlan" are distinguished by Theophrastus vii. 4, and Dioscorides; B. vulgaris was observed by Forskal in gardens at Constantinople, and by Fraas under cultivation in Greece, the white-rooted variety for the leaves only, which are eaten as greens. Westward, the "beta" is mentioned by Plautus, and Pliny, the "pede candida beta" by Columella x. 251, "fatuae fabrorum prandia betae" by Martial, and "betizare" by Suetonius oct. 87; B. vulgaris is described by Fuchsius, Cæsalpinus, Olivier de Serres, and Parkinson; and is known to be cultivated in Italy and throughout middle Europe (Ait., and Pers.). Eastward from Egypt, is cultivated in Hindustan for its leaves only and

has no Sanscrit name (Roxb.), is called in Hindustanee "chuqandar" (D'roz.), in the environs of Bombay sometimes "paluk" or "palung," the red-rooted variety observed by Graham "commonly cultivated in gardens;" and farther East, B. vulgaris called "toodisia" was observed by Thunberg under cultivation in Japan. By European colonists, was carried prior to 1656 to New England (poem Bradf. in Hist. coll. iii, p. 77), where as well as throughout our Northern and Middle States it continues abundantly cultivated: the *mangel wurzel* variety, employed for feeding cattle, has also been introduced, and continues to some extent cultivated. (See B. maritima).

Myrtus communis of the borders of the Persian Gulf. Called in English gardens *myrtle*, in France and Germany "myrte" (Nugent, and Grieb), in Italy "mirto" or "mortella" (Lenz), in Greece "murtŏn" or "mursinē" (Sibth.), in Egypt "as" or "mersyn" (Del.); and possibly brought to Egypt by the Expedition in question — (see Birch): branches carried by women are figured on a monument of about this date (Rosselin. ii. 99), and according to Clot-Bey, branches are sold to the present day and used in festivals by the Jews: the "mursinē" was already in Egypt in the days of Theophrastus, and Pliny xv. 37; and M. communis was observed there in gardens by Forskal, and Delile. Farther North, its branches were strewn by Xerxes on his bridge across the Hellespont (Herodot. vii. 54); were carried in Greek sacrificial processions in the days of Aristophanes vesp. 869; the "mursinē" or "murtŏs" is mentioned also by Pherecrates, Euripides, Plato polit. ii. 372, Philonides, and the "mursinē ē ēmĕrŏs" by Dioscorides: M. communis was observed by Sibthorp, Chaubard, and Fraas, frequent and seemingly wild from the Peloponnesus throughout Greece and the Greek islands. Westward, the "myrtus" is regarded by Pliny xv. 36 as foreign to Italy, first seen on the tomb of Elpenor, but when Rome was founded growing already on its site; is mentioned also by Cato viii. 2, Catullus, Horace, Columella, and as sacred to Venus by Virgil: M. communis is described by Clusius hist. i. 67; is termed "m. communis italica" by Tournefort inst. 640; was observed by Lenz seemingly wild in Italy; and has become abundantly naturalized throughout the West Mediterranean countries (Chaubard), but its foliage and mode of flowering indicate Tropical origin. Eastward from the Mediterranean, was observed by Nearchus in a garden on the North shore of the Persian Gulf (Arr. ind. 27); has no Sanscrit name (A. Dec.), but is called in Hindustanee "murd" or "as" (D'roz.); in the environs of Bombay "belatee mendie" and observed by Graham "in gardens pretty common," but by myself only in a missionary garden on the Deccan. Farther East, by Mason, "exotic" in Burmah. By European colonists, was carried to Madeira (Lemann); and to Northeast America, where it has become frequent in conservatories.

Boswellia glabra of Tropical Hindustan. A small tree called in the environs of Bombay "salai" or "salphullie" and furnishing a portion of "the gum *olibanum* of commerce" (Graham); possibly therefore the "incense trees" or *frankincense* brought by the above Expedition to Egypt — (see Birch): the incense-burner is figured in the Asasif, and from this time becomes frequent on the monuments (Leps. d. iii, pl. 19, 58, 71, and Champoll.-Fijeac pl. 86). Eastward, the incense-bearing tree exuding its gum from branches snapped by elephants, is mentioned by the Sanscrit dramatist Bhavabhuti uttar. ii: B. glabra is described by Rumphius ii. pl. 50; was observed by Gibson, and Graham, "common on the bare rocky hills of the Deccan," as well as "in the Sautpoora jungles;" where the gum may be bought in quantities at a cheap rate; by Roxburgh, Royle, and Wight, in central Hindustan and as far as the Coromandel mountains; its fragrant resin called "koondricum" is much burnt as an incense in the religious ceremonies of the Hindoos, is collected largely by the Khoonds and Woodias in the extensive jungles in Goomsur and Cuttack provinces, and the same tribes in times of famine live on a soup made from the fruit (rep. Mad. exhib., and Drur.).

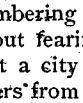
Boswellia thurifera of Tropical Hindustan. A tree called in Sanscrit "salaci," in Hindustanee "luban" (Lindl.), in the environs of Bombay "dup salai" and furnishing the remaining portion of "the gum *olibanum* of commerce" (Graham), from Bombay according to Royle the Indian olibanum is chiefly exported: B. thurifera may therefore have furnished the *frankincense* for the incense-burner figured in the Asasif, and that called in Egyptian "lavŏ" (Edw.) or "shĕllōōuz" — (ms. Par.): "lbnh" is mentioned by Moses levit. ii. to xxiv and num. v, 15. and according to Jeremiah vi 20 was brought by Arab merchants; "livanōs" brought by them, is mentioned by Herodotus iii. 107, Euripides, Theophrastus ix. 4. 7, Eratosthenes, Strabo, and Dioscorides; and the incense burned in Catholic churches according to Colebrooke res. as. ix. 317 to xi. 158 is from B. thurifera. Eastward, the tree was observed by Gibson, Law, Nimmo, and Graham, in the environs of Bombay and in the Southern Concan; by Roxburgh, and Wight, as far as the mountains of Coromandel; by Royle, common in central Hindustan, extending not as far North as the preceding; and according to Drury, is a large tree, affording good timber, and its gum-resin is called in Bengal "koondooroo" or "ghundurus" or "cundun."

Eighty-second generation. May 1st, 1567, mostly beyond youth: Ishmael, Anah (Gen. xxxvi. 24 and 1 Chron. i. 41): among the Greeks, Laodice mother of Apis and Niobe (Apollod. ii. 1).

1563 B. C. (= 2016 — "453 years" of both the Maneth. tables), a date possibly marking the

expulsion of the Hyksos from the Egyptian frontier. In the absence of monumental evidence that the kings of the Seventeenth dynasty carried war beyond the Northeastern frontier, the Hyksos are regarded by Lepsius as probably the obstacle in that direction. Confirmation is found in Manetho's detailed account in Jos. c. A. i. 14 and 15.

Compelled to quit the Egyptian frontier (Manetho in Jos. c. A.), the Hyksos carried along all their possessions, and the whole community numbering not less than two hundred and forty thousand, proceeded across the Desert towards Syria: but fearing the Assyrians, who now ruled Asia, they turned aside, and for their own protection built a city and called it Jĕrōsōluma. (That Jerusalem was built before the Exodus of the Jews, appears from Josh. x. 1, xviii. 28, and Judg. xix. 10).



The hieroglyphic character of the *onager* "iantōōu" and "ĕiantōōu" means "mountain ass," also "hill country," and therefore Pales tine; the animal in its wild state wandering no farther West. The character occurs in an inscription having reference to the Hyksos king "Apepi" or Apophis (Leps. k. pl. 15), but composed perhaps subsequently; — and with its modifications, continues in use until the reign of Ramessu VIII. of the Twentieth dynasty (Leps. d. iii. pl. 238, and k. pl. 30 to 40).

In a painting of about this date (now in the museum at London), I remarked the *onager*, Equus hemionus, domesticated and caparisoned. — The "white asses" of the Song of Deborah (Judg. v. 10) may therefore be compared.

Ambiguous figures at Benihassan on examination proving varieties of the dog, the above painting contains the earliest figure I have met with of the *cat* (copied in Wilkinson pl. . . . .), from the surroundings possibly in its wild state as Felis maniculata of the Upper Nile: — under the Twenty-second dynasty (Leps. k. pl. 46) the cat makes its appearance as a hieroglyphic character, and was doubtless at this time domesticated in Egypt; though unnoticed in the Hebrew Scriptures, Hesiod, Homer, and the Batrachomyomachia, until mentioned by Herodotus as a familiar domestic animal in both Egypt and Greece. Eastward, I looked in vain for figures in the cave-temples of Hindustan; but according to Deslongchamps transl., the cat is mentioned in the Institutes of Manu. By European colonists, the cat was carried to America and the islands of the Pacific; was met with by our Expedition on Taheiti and Tongatabu, relapsed into secondary wildness on the Hawaiian Group, and (according to Rich) on the Samoan.

"1562 B. C. = 1st year of Tchoung-ting, of the Chang" or Fourth dynasty (Chinese chron. table).

1561 B. C. = "1st of Mechir in the 15th year of Amun-u-hnumut," commencement in the quarry of work on the two Great obelisks — (Birch).

1560 B. C. = "last day of Mesore in the 16th year of Amun-u-hnumut," and after an interval of "seven months," the two Great obelisks finished — (Birch): they continue in place in the temple at Karnak. The "16th year" is the latest in the reign of Amun-u-hnumut found on the monuments (Leps. k. tab. p. 17).

"1557 B. C. = 6th year of Tchoung-ting" (Chinese chron. table), beginning of the Nineteenth cycle.

The same year (= 1527 + 30 years of Euseb. i. and ii., and Syncell.), accession of Mamythus as Assyrian emperor.

1554 B. C. (= 1532 y. 6 mo. + "21 y. 9 mo." of Manetho in Jos. c. A., the Afr.-Maneth. table giving 1417 + "37 + 31 + 9 + 26 + 13 + 22 years" = 1555), accession of Amĕssis, called "Amĕnsis" in the Afr.-Maneth. table. On the monuments, Tutmas III. head of the Eighteenth dynasty is next in order: — he immediately follows Tutmas II. in the series of kings at Abydos, and Gurna.

Nelumbium speciosum of Subtropical and Tropical Eastern Asia. The flower of the *great water-lily* has not been found on the Egyptian monuments, but certain representations, including the emblem designating Asiatic captives, appeared to me intended for the fruit; the plant is besides known to have furnished one form of capital of the Egyptian columns — (Athen. v. 9): a kind of "lōtōs" lily growing in the Nile is described by Herodotus ii. 92 as having fruit like a wasp's nest, containing seeds as large as olive-stones; the "kuamōs aiguptiōs" is mentioned also by Hippocrates, Theophrastus iv. 3 to 10, Diodorus, Strabo, and Dioscorides; the flower and fruit of N. speciosum occur on a medal of Vespasian, and a bust of Antinous (Del.), but the plant has since disappeared from Egypt. Eastward, continues in the Caspian as far as the mouths of the Volga (Ledeb., and A. Dec.), though perhaps not indigenous there: is figured in the cave-temples of Hindustan, both Budhist and Braminical, as ascertained by myself; was observed by Rheede xi. pl. 30 in Malabar; by Graham "in tanks throughout the Concan" (planted); and is called "nelumbo" on Ceylon (Lam.). Farther East, was observed by Mason indigenous in Burmah and called "pa-dung-ma;" by Loureiro p. 416 in Cochinchina; is called in China "lien-hoa," is mentioned in the Eulh-ya dictionary, and its spongy fruit by Li-chi-tchi as medicinal, was observed by Cibot mem. chin. iii. 437 multiplied by seeds and roots and requiring no further care in cultivation, its seeds eaten like filberts; by Kaempfer, and Thunberg, around temples in Japan and regarded as sacred, but its stems eaten.

1552 B. C. (= 1611 y. $239\frac{23}{86}$ d. — "60 years" of Gen. xxv. 26), Esau and Jacob born to Isaac and Rebekah.

1550 B. C. = "5th year of Tutmas III.," date of a contract, written on papyrus, — and now in the museum at Turin (Champ.-Figeac).

"1549 B. C. = 1st year of Wai-jen, of the Chang" or Fourth dynasty — (Chinese chron. table).

1539 B. C. = "16th year of the joint reign of Amun-u-hnumut and her brother Tutmas III.," in a tablet at Wady Maghara, re-opening of the mines there, abandoned since the Twelfth dynasty. — (Birch).

As early perhaps as this date (Graha Munjari tables, Puranas, and Bentley as. res. viii. p. 231), Viswamitra reigning in Hindustan.

Burmah at this time inhabited.*

1536 B. C. = "55th year of Phoroneus" (in Africanus, see also Philochor., Hellan., Thall., Tatian, and Clem. Alex.), the Deluge of Ogyges in Greece. Or (according to Castor) the city of Eleusis founded in this reign by Ogyges. Phoroneus and Ogyges are also made contemporary by Acusilaus: and "Ogygia" (according to Strabo, and Pausan. ix. 5. 1) was the ancient name of Boeotian Thebes.

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* *Dillenia tha-byu* of Burmah. Called there "tha byu," and from early times its fruit affording sustenance to man; — enumerated by Mason 450 and 532 as edible, the tree indigenous and not exactly agreeing with descriptions of D. speciosa.

Dillenia scabra of Burmah. From early times its fruit affording sustenance to man, — described by Mason v. 473 as large, "brought to bazar green and considered a favorite vegetable with the natives," the tree confined to "the borders of streams."

Uvaria grandiflora of Burmah. A scandent shrub called there "ta-bwot," its fruit from early times affording sustenance, — having according to Mason v. 452 and 740 "the taste and appearance of the North American pawpaw," and "abounding in the jungles."

Sterculia alata of the Siamese countries. Called by residents *Boodh's cocoa-nut*, and from early times the winged seeds of its large fruit affording sustenance, — sometimes according to Mason v. 448 eaten by the natives, the tree "handsome," growing in Tenasserim: described also by Roxburgh.

Pierardia sapota of Tropical Eastern Asia. A small tree called in Burmah "ka na-zo," its fruit from early times affording sustenance; — described by Mason v. 451 as "one of the best and most plentiful of the jungle fruits," the "bunches resembling large grapes," and not as yet cultivated. Farther South, was observed by Jack in the Straits of Malacca.

Sleichera kyet-mouk of Burmah. A tree called there "kyet-mouk," and from early times its fruit affording sustenance, — according to Mason v. 454 "rarely seen in market, but would be a valuable addition to the dessert;" indigenous "among the hills of Tavoy."

Bouca oppositifolia of Burmah. A tree called there "ma-yan," by residents *opposite-leaved mango*, and from early times its fruit affording nutriment: — indigenous according to Mason v. 448, and one variety "intensely sour," the other "as insipidly sweet." Described also by Roxburgh, i. 640: and farther West, introduced by Nimmo in 1833 into the environs of Bombay (Graham).

Bauhinia sheen-byat of Burmah. A small timber tree called "sheen-byat," and from early times affording nutriment; — according to Mason v. 531 "bearing a sour leaf," and its "pod containing sweet pulp."

Willughbeia Martabanica of Burmah. Called there "theet-kyouk-nway," its fruit from early times affording sustenance; — according to Mason v. 457 "large as an apple" and "of an agreeable acid taste but abounds in a milky juice," is termed by residents "a kind of fig," and is indigenous "in the forests:" is described also by Wallich.

Bignonia (*Spathodea*) *stipulata* of Burmah. Called there "bet-than," and its flowers from early times affording nutriment, — according to Mason v. 411 and 543 brought to market for food; the tree being "common at Maulmain," employed by the natives as "a cure for psora," and its wood (according to Berdmore) for "making furniture, paddles, etc.:" described also by Wallich.

Artocarpus echinatus of Burmah. A tree called there "toung-peing-nai," or by residents *mountain-jack*, and from early times its "echinated agreeably acid fruit" affording sustenance; — its timber according to Mason v. 462 and 541 considered valuable "by the natives especially for canoes:" described also by Roxburgh.

Artocarpus myouk-loke-ngay of Burmah. A tree called there "myouk-loke-ngay," and from early times its orange-colored fruit affording sustenance; — described by Mason v. 462 as resembling "in taste a custard apple and in appearance a fig," and "not scarce" in the forests.

Macrocladus . . . . of Burmah. A palm, its terminal cluster of unexpanded young fronds from early times affording sustenance, — having "the taste of cabbage" according to Mason v. 426, and growing indigenous in various districts.

"In the reign of Phoroneus" (Tat., and Clem. Alex.), Eurŏps succeeded by Tĕlhis, third king, of Sicyon: Crete being under the rule of Kretōs.

"1534 B. C. = 1st year of Ho-tan-kia, of the Chang" or Fourth dynasty (Chinese chron. table).

Vessels from Hindustan and Arabia visiting Burmah as early probably as this date.*

Eighty-third generation. Sept. 1st, 1534, mostly beyond youth: Niobe daughter of Phoroneus (Apollod. ii. 1).

1533 B. C. = the "month Pharmouthi in the twenty-second year of his reign" (inscribed on the walls of Karnak), Tutmas III. with an army leaving the Northeastern frontier of Egypt on his first military campaign.

1532 B. C. (= 1519 y. 9 mo. + "12 y. 9 mo." of Manetho in Jos. c. A., the Maneth. tables giving 1417 + "37 + 31 + 9 + 26 + 13" = "38 + 31 + 9 + 26 + 12 years" = 1533 = 1592 — "13 + 24 + 22" = "25 — 13 — 21 years"), accession of Mĕphrēs or Misaphris. Seemingly marking some event; the reign of Tutmas III. according to monumental evidence continuing without interruption.

The same year = the "month Pashons in the twenty-third year of his reign," Tutmas III. with his army arriving at Gaha or Gaza, on the "5th" he marched from the town to meet the enemy, and on the "22d" defeated them at Maketa or Megiddo — (Birch).

1531 B. C. = "24th year of Tutmas III." on the walls of Karnak, the Ruten and Assur or Assyrians continue to bring tribute — (Birch).

1530 B. C. (= 1590 — "60 years" of Castor in Euseb., see also Apollod. ii. 1, Hygin. 145, and Pausan.), in Greece Phoroneus succeeded by Apis, third king of the Peloponnesus, called after him "Apia:" as he extended his power throughout, he seems identical with the fourth king of Sicyon bearing the same name (compare Apollod. ii. 1.1 and Paus. ii. 5.5). Apis is spoken of as one of the earliest lawgivers among the Greeks (Theodoret. graec. affect. cur. iv. p. 927).

By Car, son of Phoroneus, the worship of Demeter established at Megara, and a citadel built there: probably the beginning of *Greek monumental history*. — The citadel retained the name of its founder in the days of Pausanias i. 39.5 to 44.6, to whom also the tomb of Car was pointed out. By the Romans, Demeter was called "Ceres;" possibly from Car.

The same year = "25th of Tutmas III.," in a tablet at Sarabit-el-Khadim in the Sinai peninsula — (Birch).

1527 B. C. (= 1497 + "30 years" of Euseb. i. and ii.), accession of Macchaleus as Assyrian emperor. "Twenty-eight" years only are assigned to his reign by Syncellus; who calls him Aschalius.

1526 B. C. = "29th year of Tutmas III.," his fifth military campaign — (Birch).

Among spoils obtained in this campaign, *lead* is enumerated — (Birch): the "ophrd" of Moses' Song (Ex. xv. 10), mentioned also in Job xix. 24; as used for purifying silver, in Jer. vi. 29, and Ezek. xxii. 18 to 22 (compare Pliny xxxii. 31), is admitted to be lead: and the "ank" of Amos vii. 7

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* *Casuarina muricata* of the seashore of Burmah. A leafless tree called "hten-roo," from its green feathery terminal branchlets attracting the attention of approaching strangers, — growing in "the loose sandy soil of the seaboard and never inland;" its timber according to Mason v. 422 and 541 very little used by the natives, but hard and heavy and exported under the name of *beefwood* to America. By European colonists, the living tree was carried to Hindustan, observed by Roxburgh planted in Bengal, and by Graham "pretty common about Bombay."

Cassia (*Cathartocarpus*) *nodosa* of Tropical Eastern Asia. A tree called in Bisaya "lombayong" or "balayong" or "ybabao" (Blanco), in Burmah "gnu-theing," tinting the forest in Tavoy with its "pink-colored" flowers, — and according to Mason v. 404 and 525 affording "good timber." Farther East, was observed by Blanco on the Philippines, its trunk as large as a man's body, flowers ornamental "blancas y encarnadas." By European colonists, was carried to the botanic garden at Calcutta, and is described by Voight.

Gordonia floribunda of Burmah. A conspicuous tree in Maulmain called "theet-ya" itch-wood, from the itching caused by contact with its chips or bark; — affording according to Mason v. 408 the "compact timber used for house posts and for rice mortars:" described also by Wallich.

Heritiera minor of the Tropical seashore from Hindustan to Tongatabu. A tree called in Tagalo "talote" (Blanco), in Burmah "ka-na-zo," growing within reach of occasional high tides, — its timber according to Mason v. 535 not very durable but "without a rival in strength:" observed in Burmah also by Buchanan, and farther West, is supposed to have imparted its name "soondree" to the Soonderbunds of the mouths of the Ganges; the "samandura" of Ceylon (Lin. fl. zeyl.) may also be compared. Eastward, was observed by Blanco along the seashore of the Philippines; by myself, a small tree at high-water mark around the Feejeean islands and Tongatabu.

Xylocarpus keannan of the seashore of Burmah. An accompanying tree in low lands near the sea, — and of which according to Mason v. 539 "canoes are occasionally made," its wood besides "much used for sandals," and of a red colour that "turns black on being anointed with petroleum."

continues among the Arabs the name of lead (Kitt. cycl. bibl. lit.). Under its Greek name "mōlivthōs" or "mōluvthōs," lead is mentioned by Herodotus iii. 56, Aristophanes, and Plato; and under its Latin name "plumbum," by Plautus, Terence, Lucretius, and Columella. "Ancient lead-mines" in the mountains between the Nile and Red Sea, have been discovered by Burton; and "lead is also said to exist at a place called Sheff, near Mount Sinai."

"1525 B. C. = 1st year of Ts-ou-y, of the Chang" or Fourth dynasty (Chinese chron. table).

Other nations than the Egyptians now begin to furnish monumental history, and certain *vases* manufactured under the Chang dynasty are regarded as the earliest *Chinese works of art* — extant (Pauth. 201).

There are also artificial works at Babylon, Nineveh, and in Syria and Greece, doubtless more ancient than the last-named date; — but none have been traced with certainty so far back. Throughout the vast variety of sculptures and inscriptions, Assyrian, Phoenician, Greek, and Italian, paintings on pottery being included, the amount of information afforded on the subject of animals and plants is surprisingly small.

Henceforward, our principal dependence is on *transmitted writings*: for the lifetime of individuals whose words are extant, is now reached; — and eye-witnesses in each succeeding generation can be consulted, down to the present day.

In this year = "30th of Tutmas III.," his sixth military campaign; directed as usual Northward and Eastward, but in the same year tribute was received from Ethiopia — (Birch).

1522 B. C. = "33d year of Tutmas III.," his eighth military campaign; in which he found a tablet of his father Tutmas I., and established a fleet on the Euphrates — (Birch).

Besides lapis lazuli, "an artificial imitation of blue colour" moulded into the form of the head of a ram was brought as tribute by the chief of Singara (and according to Birch various moulded "specimens exactly alike as to material have been found on the banks of the Euphrates and the Nile"). It is perhaps the *blue earth* resembling indigo, figured in baskets in the tribute-procession to Tutmas III., — and mines of which are known to be worked on the Euphrates to the present day.

1521 B. C. = "34th year of Tutmas III.," his ninth military campaign: and in the same year, tribute was sent from Ethiopia and other countries — (Birch).

1520 B. C. = "35th year of Tutmas III.," inscribed on the monuments, his tenth military campaign: and in the same year, other tribute came from Ethiopia — (C. Mull. fr. Man. p. 385, and Birch).

The same year (= 1493 y. 11 mo. + "25 y. 10 mo." of Manetho in Jos. c. A. = 1417 + "37 + 31 + 9 + 26 years" of the Afr.-Maneth. table, the Euseb.-Maneth. table giving + "38 + 31 + 9 + 26 years" = 1521), accession of Mēphramōuthōsis or Misphragmōuthōsis. Seemingly marking some event: the reign of Tutmas III. shown by the monuments to continue without interruption.

In the procession of foreign nations bearing tribute to Tutmas III., the head and neck of a bird prepared as a curiosity seems (from the copied figure in Champollion-Figeac pl. 61) that of the *domestic fowl*, Gallus Bankivus; and therefore from Burmah, — where according to Mason v. p. 229 the bird occurs in its wild state: the domesticated bird was brought "from the West" into China B. C. 1400 (Chin. encycl.), and a proverb of the men of antiquity, "The hen should not crow, if the hen crows the family is lost," is preserved in the Chou-King (Pauth. 77). Westward from Burmah, the domesticated bird is mentioned in the Institutes of Manu as well known in Hindustan; is figured on Babylonian cylinders "between the Sixth and Seventh centuries B. C.," and "on the Harpy tomb in Lycia about 600 B. C." (Layard); but with the above exception is not figured on the Egyptian monuments; is not mentioned in the early portion of the Hebrew Scriptures, nor by Hesiod, nor Homer, and seems unknown in Switzerland during the Stone Age (Troyon); at a later period, the "alĕktŏr" is mentioned by Theognis 862, the Batrachomyomachia, Epicharmus, Aeschylus, and Cratinus; the "gallina" by Plautus, and Varro, the "gallus gallinaceus" by Cicero, and was already in Britain when visited by Caesar. Eastward from China and the Malayan archipelago, the domestic fowl was carried throughout the Tropical islands of the Pacific by Polynesians, as verified by myself: but continued unknown in America, New Zealand, and Australia, until introduced by European colonists.

Heaps of precious stones are also figured, including (according to Champollion-Figeac p. . .) *garnets*, and *cornelian*.

The young elephant led in this Tribute-procession by men of the White race, was therefore not from the Upper Nile, but an *Indian elephant*, E. Indicus, brought overland by the Nabathean or a more Northern route. The delegates are Northerners as appears from their costume — and from the *bear* led by delegates of the same nation in a subsequent Tribute-procession.

The accompanying tusks in the hands of the same delegates, from the large size clearly belong to the *African elephant*, E. Africanus: procured therefore by the way of Hindustan and the Persian Gulf through intercourse by sea with Equatorial Africa.

A set of delegates, with difficulty identified with the White Race, come from the Southern extreme of Arabia; shown by their resemblance to many among the existing population, and by the checkered receptacle in which they are carrying a living exotic tree:

Gen. ignot. of Tropical Arabia. This very painting — may prove the origin of the tradition that the "pĕrsĕa" tree was planted by Perseus in Egypt; a tradition credited by Alexander (Plin. xv. 13): the "pĕrsĕa" was held sacred by the Egyptian priests (Plut. is. and osir. p. 548); is called in Egyptian "tshvĕ" (Kirch.) or "tshŏuĕ" (ms. Par.); is described by Theophrastus iv. 2 as a large handsome tree growing in Egypt, in habit and foliage resembling the pear, but the leaves evergreen, fruit greenish and having a smaller nucleus than the plum, and the wood solid and valuable; is mentioned also by Nicander, Diodorus, and Dioscorides; by Artemidorus (Strab. xvi. 4. 4) as wild in the country West of the entrance of the Red Sea; and is identified with the "lebakh" of Abu Hanifa, Firuzabadi, Avicenna, Abd-allatif, Ebn Baitar, Makrizi, and Soyouti, by the Copts, Arabs, and De Sacy. The "læbach" was seen by Forskal p. 196 at Melhan among the mountains of Yemen, a tree having leaves twice as long as the petiole, otherwise closely resembling those of the "sar" (described as lanceolate, entire, and smooth), but neither fruit nor flower were met with.

A third set of delegates are clad in the cincture of Tropical climates, yet seem to have come from either Palestine or Cyprus, for the vases in their hands manifest a taste for the fine arts suggestive of Greek nationality.

Crocus sativus of the East Mediterranean countries. Called in English gardens *saffron*, in Spain "azafran," in Arabic "al zahafaran" (Prior), in Germany "safran," in Italy "zafferano" (Lenz), in Greece "krōkŏs" (Fraas), in Egyptian "mĕthaiō" (Edw.); and the single large flowers projecting above the soil in these vases — may be compared: "krōkŏs" of Cilicia continued celebrated in the days of Dioscorides, and that of Cyrene is mentioned by him, and Theophrastus vi. 6; the "sahaferan" or "zafran" is mentioned by Arab writers; and the "fragrant" crocus was observed by Rauwolf in Syria. Farther North, the "krōkŏs" is mentioned by Homer, Aeschylus ag. 230, Euripides, Aristophanes, the Hippocratic writings, and the "krōkŏs ĕuōsmŏs" by Theophrastus ix. 7: C. sativus was observed by Sibthorp, and Fraas, on the mountains and rocky plains of Attica, and in fallow ground in other parts of Greece. Westward, Sicilian "krŏkŏs" is mentioned by Dioscorides; cultivating "crocus" in Italy is mentioned by Varro, Columella, and Pliny xxi. 17; Roman saloons and theatres were strewed with its "costly perfume," and "vinous tinctures retaining the scent were made" (Sen. ep. 90, Lucan ix. 808, Spartian., Lamprid., and Royle in Kitt. bibl. cycl.): C. sativus is described by Bauhin hist. ii. p. 637, and Tournefort inst. 350; was observed by Lenz seemingly wild in Italy; continues a favourite garden flower throughout middle Europe, escaping and springing up spontaneously for successive seasons as far even as England (Engl. bot. pl. 343, and Wats.); but according to A. Decandolle, its cultivation for commercial purposes is becoming rare. Eastward from Greece, is known to be cultivated in Asia Minor, Persia, and extensively in Cashmere; the product according to Royle exported and sold at a high price in Hindustan for colouring and flavouring dishes, and as a stimulant medicine. The dried stigmas according to Pereira, and Lindley, "are the *saffron* of the shops," among Europeans "little used except as a colouring ingredient," and "an agreeable stimulant in many culinary preparations and liqueurs:" the "singular substance called *polychroite* is obtained" from it.

In the same tribute-procession, the two men leading a *camelopard*, from the features and complexion examined by myself in the original painting at Thebes, seem (as suggested by Gliddon) to belong to the *Abyssinian Race* of man.

The same year (in or about the "four hundred and ninety-fifth ann. Abr. and seventh year of Marathius king of Sicyon," Euseb. . . .), the city of Corinth founded.

December (= 1551 .. $239\frac{28}{86}$ — "40 years" of ten lunations, Gen. xxvi. 34), marriage of Esau with Judith and Bashemath.

Balsamodendron opobalsamum of the African side of the entrance to the Red Sea. The *balsam tree* is called in Yemen "abu scham," and its imported product seems connected with the name of Bashemath; — "bshm" is enumerated by Moses (ex. xxx. 23 to xxxv. 28) among ingredients for the anointing oil, and to the days of Ezekiel xxvii. 22 continued to be imported by "merchants of Sheba and Raamah:" the living tree (according to Josephus) was brought by the queen of Sheba to Palestine; and seems mentioned in gardens there in Cant. iv. 16 to vi. 2; the "valsamŏn thĕnthrŏn" continued under cultivation in Palestine in the days of Theophrastus ix. 6, Diodorus, Dioscorides, Pliny, Tacitus, Justin, Galen, Pausanias, Nicolaus of Laodicea, Beda loc. sanct., and Willebald, after whose visit it disappeared from the country: two centuries later, trees were seen in Egypt by Ebn Samhun in a garden at Ain-Schems near Cairo, and continued flourishing when visited by Abd-allatif, Maun-

deville, Gulielmus de Baldensal, Peter Martyr, and Barthelemi de Salignac; "living stocks brought at great expense from Yemen" were seen by Belon in the same locality, also by Pellegrino Brocardi, Radzivil, and notwithstanding Alpinus' unsuccessful search by Brenning, but soon afterwards "in the early part of the Seventeenth century" they disappeared (Hartmann). Farther South, B. opobalsamum is described by Strabo xvi. 4. 19 as wild in the country of the Sabaeans; was observed by Bruce, and Salt, a small tree of stunted appearance "above fourteen feet high" growing especially in the vicinity of Azab (Saba) and thence as far as the entrance to the Red Sea. Was carried at an early period to Yemen (Bruce); was first observed by Forskal p. 80 at the Oude caravanserai near the end of his journey; was also carried to Hindustan (Roxb., and Wight); and afterwards by Wathen "in 1837 from Mecca" to the botanic garden at Bombay (Graham).

1518 B. C. (= 1273 + "245 years" of Berosus, in Alex. Polyhist. and Euseb. i. 4. p. 18), at Babylon, the accession of the Arabian dynasty: — a series of "nine" successive kings.

In this year = "37th of Tutmas III.," slaves and cattle brought as tribute by the Kharu and Kush — (Birch).

As early perhaps as this date (Graha Munjari tables, Puranas, and Bentley as. res. viii. p. 231), Jamadagni, nephew of Viswamitra, reigning in Hindustan.

1517 B. C. (= 1505 y. 332$\frac{2}{3}\frac{2}{3}$ d. + "7" + 7th year of ten lunations, Gen. xxx. 25 and xxxi. 41), departure of Jacob, to reside with Laban at Haran.

In this year = "38th of Tutmas III.," his thirteenth military campaign — (Birch).

1516 B. C. = "39th of Tutmas III.," his fourteenth military campaign — (Birch).

1515 B. C., in or about the "five hundredth ann. Abr. and third year of Ascatades king of Sicyon" (Euseb. . .).

1514 B. C. = "41st of Tutmas III.," the king in the field, warring and receiving tribute — (Birch).

A *papyrus* roll, enumerating Egyptian kings, and composed in part in the reign of Tuthmas III., is mentioned by Lepsius (Eg. and Sin. p. 395). Papyri written "from the Sixteenth — to the Thirteenth century B. C.," are also mentioned by Lepsius p. 381; containing, it is inferred, like those of later date, "laudatory songs upon kings or gods, historical annals, accounts of the temple, that which relates to the calendar, and many other things with reference to this life, contracts, law-suits." The papyri were "interred in tombs;" and from the time of the Greeks, were sometimes accompanied with a Greek translation.

1508 B. C. = "47th year of Tutmas III.," in a tablet at On or Heliopolis, recording that he had surrounded the temple with a wall. (Leps. k. tab. p. 17, and Birch).

In this year (= 508 + "1000 yrs." of Herodot. iv. 5), Targitaus the first Scythian colonist or ancestor of all the Scythians. (See Tanaus).

Cucumis dudaim of Equatorial Africa. Called in Egypt "schemmam" (Forsk.); the "thwthym" love-apples "in the days of wheat harvest" found by Reuben "in the field" — (gen. xxx. 14), occurring in vineyards and giving a smell (Cant. vii. 12), are according to Harris bibl. nat. hist. by "the generality of interpreters and commentators" regarded as "a species of melon:" the Egyptian word "vĕtukĕ" is translated by Edwards "melonis genus silvestris, pomum amoris, mandragora" (compare "batykh"): the "schammam" or "Syrian luffah" is described by Temimi, and Ebn Baitar; was observed by Forskal p. 169, and Delile, in Egypt, its fruit globose-ovate as large as a lemon and not edible, but cultivated for its strong and not unpleasant odour. Transported to Europe, is described by Dillenius hort. elth. pl. 77. (See Mandragora officinalis).

"1506 B. C. = 1st year of Tsou-sin, of the Chang" or Fourth dynasty — (Chinese chron. table).

The same year (= 1481 y. 239$\frac{2}{3}\frac{2}{3}$ d. + "30 years" of ten lunations of Gen. xli. 46), Joseph born to Jacob and Rachel.

Amygdalus communis of the Tauro-Caspian countries. Called in English gardens *almond*, in France "amande" (Nugent); in Germany "mandel," in Italy "mandolo" or "mandŏrlo" (Lenz), in Greece "amugthalĕa" (Fraas), in Egypt "louz" (Del.), in Egyptian "karia" (transl. Sept.) indicating the geographical route of introduction: rods of "lwz" were among those selected by Jacob — (gen. xxx. 37): A. communis was observed by Forskal, and Delile, in the gardens of Egypt, the fruit imported besides in quantities from Syria and Cyprus. The Greek word "karuōn" may have had the same derivation as the Egyptian; an ancient custom of eating bitter almonds to prevent intoxication is mentioned by Pliny, and Plutarch sympos. i. 6; the "amugthalē" is mentioned by Xenophon anab. iv. 4. 8, Tryphon, Pamphilus, Dioscorides, Athenaeus ii. 39, and a mode of rendering the nuts sweet, by Theophrastus ii. 7. 7: A. communis was observed by Sibthorp, Chaubard, and Fraas, from the Peloponnesus and Crete throughout Greece, springing up spontaneously, the branchlets spinescent and the kernel bitter; is known to grow to all appearance wild in the country South of Caucasus (Bieb., and Ledeb.). Westward, the "nux" is mentioned by Plautus, and from being termed "graeca" by Cato is regarded by Pliny xv. 24 as probably foreign to Italy; the "nux graeca" is

mentioned by Columella, and Macrobius ii. 14; the "nux" flowering in Spring, by Virgil geor. i. . . . ; "nuces amarae" by Celsus; and "amygdalae amarae" and "dulces," by Pliny xvii. 43: A. communis is described by Matthioli i. 247; is termed "a. amara" by Tournefort inst. 627; has become naturalized in Italy, Sicily, and Barbary, forming in Algeria groves or woods (Desf., Cosson, Guss., and A. Dec.). Eastward from Syria, is called in Persia "badam" (Roxb.), and the same word has been adopted in Hindustanee and Bengalee (D'roz.) for the imported nuts, the tree not succeeding in Hindustan even in the North (Royle, and Graham): was however observed by Loureiro, and Bunge, under cultivation in China, and called "him" or "hanh." By European colonists, was carried to America, where I have occasionally met with it in gardens in our Middle States.

Styrax officinale of the East Mediterranean countries. The *storax* tree is called in Italy "storace" (Lenz), in Greece "stouraki" (Sibth.) or "agria kuthŏnia" (Fraas), and its imported product in Egyptian "aminakōu" or "suētōs" (Edw.): the green "lbnh" selected for rods by Jacob — (gen. xxx. 37), mentioned as a tree on the mountains of Palestine by Hosea iv. 13, is referred here in the Septuagint and Arabic translations: "samgh leban Schami" or "olibanum Syriacum" is enumerated by Forskal mat. med. as imported from Greece into Egypt; and at Mocha I was informed that "lubanum" is a general term, including in the Somali country all gum-like articles of commerce. Northward from Egypt, the "sturaka" is mentioned as indigenous in Asia Minor and Greece by Herodotus iii. 107, Theophrastus, Strabo, and Dioscorides; and S. officinale was observed by Sibthorp, Gittard, and Fraas, from the Peloponnesus and Crete to Smyrna and Cyprus. Westward, the "styrax" seems known to Pliny xii. 40 to 55 only from the imported product; but the tree has since been introduced and become naturalized in Italy and Southern France (Cæsalp. ii. p. 71, Bertolon., and A. Dec.). As cultivated in England according to Lindley does not form *storax*, and this "fragrant resinous balsamic substance is obtained in Asia Minor."

The long reign of Tutmas III. is remarkable for an astonishing amount of building, throughout Egypt and Nubia. At Thebes, the temple in the Asasif was completed, and additions made to those at Karnak and Medinet Abu. Temples were also constructed, continued, or commenced at Esneh, El Kab, Edfu, Ombos, Elephantine, Amada, Eguisse, Semneh, Ibrim, and Wadi Halfa. Two obelisks ninety feet or so in height, were placed in Karnak; other obelisks were erected by Tutmas III. (but have been removed, two of them to Alexandria, one to Constantinople, and one to Rome. See also Leps. eg. and sin. p. 20, 25, and 42).

But above all we are indebted to Tutmas III. for an important historical document: the series of successive kings in the chamber at Karnak — (now removed to Paris).

1501 B. C. = "30th Phamenoth in the 54th year of his reign," death of Tutmas III. — (Birch).

The accession therefore of Amunhotep II., second king of the Eighteenth dynasty, not earlier than this date. His name is next in order on the monuments; both contemporaneous, — and in the series of kings at Abydos and Gurna.

Amunhotep II. continued the temple at Karnak, and others in Nubia, and built new temples at Bigeh and Kalabsheh. His name occurs also in a cave-temple at Ibrim, and in the Sinai peninsula at Sarbut-el-Khadem. A colossal statue of this king — (is now in the museum at Turin).

In this year (= 1517 — "20 years" of ten lunations, of Gen. xxxi. 41), treaty at the parting of Laban and Jacob; the heap of stones called by the former "ygr shĕthwda" being perhaps the earliest specimen known of the Aramaic or *Chaldee language*. — This language is called "army" in 2 K. xviii. 26, Dan. ii. 4, and Ezr. iv. 7; and forms the text of the following portions of the scriptures: Jer. x. 11, Dan. ii. 4 to vii. 28, Ezr. iv. 8 to vi. 18 and vii. 12 to 26. The Syriac, regarded as only a dialect or somewhat later form, is to the present day spoken by the Christian Syrians on the Tigris near Mosul. (See J. Nicholson in Kitt. cycl. bibl.).

Eighty-fourth generation. Jan. 1st, 1500, mostly beyond youth:

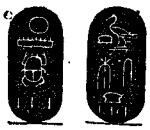
1498 B. C. = "4th year of Amunhotep II.," in a tablet at Sarabit-el-Khadim in the Sinai peninsula — (Leps. k. tab. p. 17, and Birch).

"1497 B. C. = 10th year of Tsou-sin" (Chinese chron. table), beginning of the Twentieth cycle.

The same year (= 1477 + "20 years" of Euseb. ii.), accession of Sphaerus as Assyrian emperor. "Twenty-two" years are however assigned to his reign i. p. 44, and by Syncellus.

1495 B. C. (= 1530 — "35 years" of Castor and Euseb. i. p. 129 to 131, see also Pherecyd., Apollod., and Hygin.), Apis succeeded by his nephew Argus, son of Niobe and now fourth king of the Peloponnesus or fourth Argive king; the name of his kingdom having been changed to Argos (Hygin. fab. 145, and Paus. ii. 16. 1).

The same year = "7th of Amunhotep II.," in a tablet at Sarabit-el-Khadim in the Sinai peninsula — (Birch).



1494 B. C. (= 1484 y. 3 mo. + "9 y. 8 mo." of Manetho in Jos. c. A. = 1417 + "37 + 31 + 9 years" of the Afr.-Maneth table, the Euseb.-Maneth. table giving + "38 + 31 + 9" = 1495), accession of Thmŏsis or Tōuthmŏsis, as king of Egypt. Tutmas IV., third king of the Eighteenth dynasty, is next on the monuments: both contemporaneous, — and in the series of kings at Abydos and Gurna.

In this year = "1st of his reign," Tutmas IV. set up a votive tablet fourteen feet high between the fore paws of the Great Sphinx at Gizeh — (Leps. d. iii. pl. 68, and Birch). He also completed the temple at Amada, built additions to others at Wadi Halfa and Thebes, and set up obelisks (one of which is now in Rome).

1492 B. C. (= 1505 y. 332$\frac{2}{3}$ d. — "17 years" of ten lunations of Gen. xxxvii. 2 and 28), Joseph sold to Ishmeelite or Midianite merchants, and carried by them into Egypt.

The *balm of Gilead* "tzry" on the camels of the Ishmeelites and Midianite merchants — (gen. xxxvii. 25), included among the productions of Palestine in gen. xliii. 11, healing and produced in Gilead according to Jeremiah viii. 22 and xlvi. 11, brought by merchants of Judah and Israel to Tyre in the days of Ezekiel xxvii. 17, is probably the "balsamum Hierosolymitanum" seen by Forskal mat. med. in the drug-shops of Egypt: the plant from which it is procured remains unknown.

Cistus Creticus of the East Mediterranean countries. The plant producing gum *ladanum* is called in Greece "lathanō" (Sibth.) or "ēmĕrō kistari" or "ēmĕra kōunōuklia" (Fraas), while in Egypt its imported product is called "laden" (Forsk.): the "lt" or "lwt" on the camels of the Ishmeelites — (gen. xxxvii. 25), included among the productions of Palestine in gen. xliii. 11, is referred here by Celsius, and Gesenius; the "lēthanōn" is said by Herodotus iii. 107, and Rufus Ephesius, to be procured by the Arabians, by Pliny xii. 37 to be produced in Nabathaean (Northern) Arabia and Cyprus; Arabian, Cyprian, and Libyan "lathanōn" procured from a kind of "kistōu" are mentioned by Dioscorides: gum "laden" was found by Forskal mat. med. imported into Egypt from Crete; and the process of procuring it was witnessed in Crete by Tournefort, and Sieber (Spreng.). C. Creticus is termed "c. ladanifera cretica flore purpureo" by Tournefort cor. 19, was observed by him, Sibthorp, and Fraas, from Crete and Corinth throughout the Greek islands to Cyprus; is known to grow also in Syria (Buxb. iii. pl. 64, and Pers.). Ladanum according to Lindley is a gum-resin "produced principally by this species," and "has been much esteemed as a stimulant and emmenagogue." (See C. Monspeliensis).

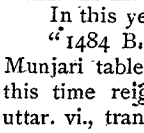
Astragalus gummifer of the mountains of Syria and Kurdistan. Gum *tragacanth* is called in Arabic "nakaoton" (Greenfield), and the "nkad" on the camels of the Ishmeelites — (gen. xxxvii. 25), enumerated among the productions of Palestine in gen. xliii. 11, is referred here by Gesenius: "katad" or "katira" is mentioned by Rhazes; and as procured on Lebanon, by Ebn Baitar; A. gummifer was observed by Labillardiere on Lebanon, yielding gum tragacanth; by Dickson, yielding the same in Kurdistan (Royle in Kitt. bibl. cycl.). A white kind according to Lindley, "more transparent than that of commerce, neither does it dissolve so well in water, and therefore is inferior in quality." (See A. verus).

Scorzonera tuberosa of Syria and the Tauro-Caspian countries. The "nkwd" brought from Gilead on the camels of the Ishmeelites — (gen. xxxvii. 25) is referred by Sprengel to the gum exuded by this root, well known in the country East of the Jordan: S. tuberosa is known to grow around Damascus, was observed in Syria by Rauwolf 117; and by Pallas trav. iii. app. 134, in arid situations along the Lower Volga (Pers.)

1491 B. C. (= "five hundred and twenty-fifth ann. Abr." of Euseb., "five hundredth" being given in another place), in Greece, the temple at Delphi built by Erysichthon. The oracle at first belonged to Ge and Neptune (Paus. x. 5. 6, see Aeschyl. eum. 2).

"1490 B. C. = 1st year of Wou-kia, of the Chang" or Fourth dynasty — (Chinese chron. table).

1488 B. C. = "7th year of Tutmas IV.," in a tablet on Konosso recording a victory over Negro tribes; the latest date in his reign found on the monuments — (Birch).



1485 B. C. (= 1417 + "36 y. 5 mo." + 30 y. 10 mo." of Manetho in Jos. c. A., = "37 + 31" in the Afr.-Maneth. table, the Euseb.-Maneth. table giving + "38 + 31" = 1486), accession of Amĕnŏphis as king of Egypt. Amunhotep III., fourth king of the Eighteenth dynasty, is next on the monuments: both contemporaneous, — and in the series of kings at Abydos and Gurna.

In this year = "1st of his reign." The quarries at Tourah re-opened by Amunhotep III. (Birch.)

"1484 B. C. = beginning of the Dwapar Yug or Brazen Age" among the Hindus (Graha Munjari tables). Parasurama son of Jamadagni (Bentley as. res. viii. 231) may have been at this time reigning. He is said to have destroyed the Kshattriya or military caste (Bhavabhuti uttar. vi., transl. H. H. Wils.). Rama, a son of Jumudugni, — is mentioned in the Ramayana i. 61 to ii. 18.

In this year = "2d of Amunhotep III.," on the rocks at the quarries at Tourah — (Birch).

Uredo segetum of Europe and Northern Asia. A minute fungus developed in the blasting of grain-crops, and called in Britain *rust* or *blight* (Ainsw.) or *mildew*, in Anglo-Saxon "mele-deaw," in the Ortus Sanitatis "mel roris" (Prior), in Germany "mehlthau" (Grieb), in France "nielle" (Nugent), and the blasted ears "shdphwn" of Pharaoh's dream — (gen. xli. 6 to 27), Deut. xxviii. 22, Amos iv. 9, and 1 K. viii. 37, are referred here by Gesenius. Farther North, the "ĕrusivēs" is mentioned by Democritus (Cass. geopon. v. 5), Theophrastus viii. 10 and caus. iii. 27.; the "uredo," by Cicero, and Pliny; the "sterilem rubiginem" by Horace; "rorem inustum sole acri frugibus rubiginis causam esse" by Pliny xviii. 68; and the "ustilago rustica" by Apuleius d. h. 63. 109 (Billerb., and others).

1482 B. C. (= 1484 — "2 full years" of Gen. xli. 1 = 1002 y. $116\frac{4}{6}$ d. + "480th year" of 1 Kings vi. 1 = 1611 y. $239\frac{3}{6}$ d. — "130 years" of Gen. xlvii. 9; 1587 y. $239\frac{3}{6}$ d. — "130 years" of ten lunations = end of September 1483), Joseph released from prison and appointed governor over Egypt. Israel or the Israelitish nation being "an hundred and thirty years" old.

The "Coptic" or *Egyptian language* at this time the spoken language of Egypt: as appears from Gen. xlii. 23, and from the quotations preserved in xli. 43 to 45: "abrk" apĕ-rĕk, head incline; and "tsphnd phinh" tshŏf-nōud fai-nĕh, in God's Desert-making bringing deliverance. The words being pure Coptic, the non-existence of any different hieroglyphic language is demonstrated. — Words however were clearly invented before *grammar*; and at what period the latter modification was made in the Egyptian language, does not appear.

1480 B. C. = "5th year of Amunhotep III.," on the rocks near Philæ in a tablet recording victories over Negro tribes: a tablet at Semneh mentioning the rapid passage of the king — (Birch).

1477 B. C. (= 1447 — "30 years" of Euseb. i. and ii., and Syncell.), accession of Mamylus as Assyrian emperor.

1474 B. C. (= 1481 y. $239\frac{3}{6}$ d. — 1 — "7 years" of Gen. xli. 53), arrival of Joseph's brethren in Egypt.

Joseph's cup was for *divining* as well as drinking (Gen. xliv. 1 to 5). — Divining-cups are figured on the Assyrian monuments at Nimroud; and to the present day, drinking-cups inscribed with some mystic sentence are in use throughout the East (Bonom. nin. iv. 2).

In this year = "10th of Amunhotep III.," on scarabæi recording that the king had slain "110 lions" with his own arrows — (Birch).

1473 B. C. (= 1481 y. $239\frac{3}{6}$ d. — "7 — 2 years" of Gen. xli. 53, xlv. 6 to xlvi. 27, and Ex. i. 5), removal into Egypt of Jacob and his household: the Israelitish nation now numbering "seventy" souls, "besides Jacob's sons' wives." The date is confirmed by the Biblical genealogies; no Israelite being named after an Egyptian king more ancient than Hur or Horus and Amminadab.

In this year = "16th Athyr in the 11th year of his reign" on scarabæi, Amunhotep III. having married Tii, a foreign woman whose father's name was "Iuaa" (compare Iuda) and her mother's "Tuaa," now holding a novel religious festival, introducing upon an artificial lake the boat of the responsive-aid-according solar disk Aten-nefru or nōfri — (compare the Hebrew Adonai, and revealed religion).

"In the same year of his reign," Amunhotep III. bestowed endowments on the temple at Karnak — (Birch).

1471 B. C. (Gen. xlvii. 18 to 26), the land of the Egyptians bought for bread by Joseph: who "made it a law," that "Pharaoh should have the fifth:" except only, that the priests having already an assignment of food, "sold not their lands." This change in the agrarian condition of Egypt and introduction of a ground-tax, is mentioned by Herodotus, and Diodorus, but is attributed by them to Sesostris (Leps. trav. Eg. and Sin. p. 480).

Eighty-fifth generation. May 1st, 1467, mostly beyond youth: Eliphaz and Ruel, sons of Esau (Gen. xxxvi. 4 to 17, and 1 Chron. i. 35).

"1465 B. C. = 1st year of Tsou-ting, of the Chang" or Fourth dynasty — (Chinese chron. table).

1456 B. C. (= 1481 y. $239\frac{3}{6}$ d. — "7 — 2 — 17 years" of Gen. xli. 53, xlv. 6, and xlvii. 28), death of Jacob; in the reign of the king who ruled Egypt "two full years" before Joseph's release — (a severe chronological test).

The same year = "30th of Amunhotep III.," on a monument representing him receiving the account of a great harvest from the store-keepers of Upper and Lower Egypt — (Birch).

1451 B. C. = "35th of Amunhotep III.," at Sarbit-el-Khadim in the Sinai peninsula — (Birch).

Amunhotep III. warred in foreign countries, and the names of some sixty conquered tribes and nations are recorded on the monuments. He built the great temple at Luxor, another at Elephantine, founded that at Soleb in Nubia, and set up obelisks — (Leps. eg. and sin. 19 to 236, and Birch).

The two colossi sitting on the plain at Thebes and so conspicuous in the distance, are statues of Amunhotep III.: behind them, an immense temple has been destroyed to the foundation-stones, the lines of which are barely traceable.

1450 B. C. = "36th year of Amunhotep III.," at Sarbit-el-Khadim; the latest date in his reign found on the monuments — (Leps. k. tab. p. 17).

In this year (= 1413 + "36 y. 5 mo." of Manetho in Jos. c. A. = "37" in Afr. Maneth. table, the Euseb.-Maneth. table giving + "38" = 1451), end of the reign of Amunhotep III., and accession of Amunhotep IV., fifth king of the Eighteenth dynasty. His name occurs on contemporaneous monuments: — but not in the series of kings at Abydos, Gurna, Medinet Abu, nor is he mentioned by Manetho.

Amunhotep IV. completed the great temple at Soleb in Nubia; but adopted the religion of his mother Tii, and in all the inscriptions composed during his reign "not one Egyptian god is mentioned except Sun" (Leps. eg. and sin. 19 to 27, and Birch. See below, Sherah).

1447 B. C. (= 1408 + "39 years" of Euseb. ii.), accession of Sparaethus as Assyrian emperor. "Forty" years are however assigned to his reign i. p. 44, and "forty-two" years by Syncellus, who calls him "Spartheus."

1445 B. C. = "6th year of Amunhotep IV." at Alabastron or Tel-el-Amarna, recording his homage to a solar disk whose rays have hands — (Immortality reaching down to man, or revealed religion). Amunhotep IV. was called Khuenaten in the latter part of his reign, and had two daughters whom he associated with him in the empire in order to succeed him (Birch).

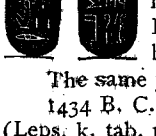
"In the sixth generation before Deucalion's conquest" (Dionys. i. p. 45, see also Hellan., and Clint. i. p. 16), a colony from the Peloponnesus led by Pelasgus son of Larissa, accompanied by Phthius, and Achaeus, into Haemonia (Thessaly). After expelling barbarous tribes, the country was divided into three districts which received the names of Pelasgiotis, Phthiotis, and Achaea.

1439 B. C. = "12th year of Khuenaten or Amunhotep IV.;" the latest date in his reign found on the monuments — (Leps. k. tab. p. 17).

In his reign, the usual tributes came from the people of the East, North, the isles of the Mediterranean, and Ethiopia, while Asiatic and Negro soldiers filled the ranks of his army (Birch). That he preceded Horus, appears from his name on stone blocks employed by Horus in building (C. Mull. fr. Man. p. 586).

1438 B. C. (= 1449 y. 5 mo. — "12 y. 1 mo." of Manetho in Jos. c. A., Manetho also giving "5th + 12 y. 5 mo. + 9 = 12 y. 3 mo. + 12 y. 5 mo. + 0 y. 9 mo." = 25 y. 5 mo, this added to 1413 = 1439), Akĕghrēs succeeded by her brother Rathŏtis. On the monuments, Rasaakakkherperu is the sixth king of the Eighteenth dynasty. He married a queen named Atenmerit, but his name — does not occur in the series of kings at Abydos, Gurna, nor at Medinet-Abu (see Leps. k. pl. 29, Poole hor. eg. 255, and Birch).

"1437 B. C. = 29th year of Tsou-ting" (Chinese chron. table), beginning of the Twenty-first cycle.



In this year (= 1437 y. 4 mo. — 9 mo., Manetho also giving "12 y. 3 mo. + 12 y. 5 mo." + 1413 = 1438), Rathŏtis succeeded by Akĕghērēs. On the monuments, Ai or Aui is the seventh king of the Eighteenth dynasty. He had held office under Amunhotep IV.; and that he preceded Horus, is shown by his name on stone blocks — employed by Horus in building the fourth pylon at Karnak (Prisse, and Birch).

The same year = "1st of Ai," in a tablet — (Birch).

1434 B. C. = "4th year of Ai," in a tablet; the latest date in his reign found on the monuments (Leps. k. tab. p. 17, and Birch).

Eighty-sixth generation. Sept. 1st, 1434, mostly beyond youth: Pharez and Zarah (Gen. xxxviii. 29, Num. xxvi. 20, Ruth iv. 18, and 1 Chron. ii. 4); Machir "the first born of Manasseh" (Gen. l. 23, Num. xxvi. 29, xxvii. 1, and Josh. xvii. 3); Teman, Amalek, Zerah of Bosrah, and Bela king of Edom (Gen. xxxvi. 11 to 33, and 1 Chron. i. 36 to 44).

"1433 B. C. = 1st year of Nan-keng, of the Chang" or Fourth dynasty — (Chinese chron. table).

"1432 B. C." (. . . . Parian marble, and Troyon p. 175), *iron* discovered by the Dactyli of Ida in Phrygia. — Smiths working iron, are figured on Egyptian monuments hardly later than this date (see Rosselini ii. pl. 50). The triangular bow was observed by myself figured on the Ramesseum or great temple built by Ramessu II. at Thebes; also on the temple at Medinet Abu, under Ramessu III.; and the "bow of steel," is mentioned in Job xx. 24, and 2 Sam. xxii. 35. The "brzl" of Gen. iv. 22, Josh. viii. 31, Deut. xxvii. 5, Psalm cv. 18, and Isaiah xlviii. 4, is admitted to be iron. Hesiod op. 151 speaks of a traditional period when iron was unknown; and "sithērŏs", or iron, is also mentioned by Homer, and Greek writers generally. The process of manufacturing *steel* is besides described by Aristotle.

The tomb of Ai is the most ancient one in the valley of Bab-el-meluk, — his name having been "erased purposely" in all instances (Glid. analect.). This valley now became the royal cemetery of Thebes, devoted solely to subterranean tombs of Egyptian kings; and according to Lepsius eg. and sin. 264 the paintings on the walls "almost exclusively refer to *life after death*."

These paintings — remain uninjured by the slightest infiltration of moisture, notwithstanding the prodigy mentioned by Herodotus of a fall of *rain* at Thebes. That the climate is not absolutely rainless, is shown by Lepsius eg. and sin. 119 having experienced a "heavy rain and violent thunder-storm at Assuan," though his "guards never remembered such a spectacle;" on my own visit there several months afterwards, the people continued to speak of this rain-storm.

1425 B. C. (= 1436 + 7 — "12 y. 5 mo." of Manetho in Jos. c. A., Manetho also giving "12 y. 3 mo." + 1413 = 1426), Akĕghērēs succeeded by another Akĕghērēs. On the monuments, Tutankhamun Hiktenres is the eighth king of the Eighteenth dynasty, but his name — does not occur in the series of kings at Abydos, Gurna, nor at Medinet-Abu.

Amunhotep and Hui, governors of Ethiopia under Amunhotep III., continued in power, and Hui sent tribute; recorded together with tribute from the Syrians in a tomb at Thebes. The name of Tutankhamum Hiktenres occurs also on blocks of stone — employed by Horus in building (C. Mull. fr. Man. p. 586, Leps. k. pl. 30, and Birch).

In this year (= 1495 — "70 years" of Castor in Euseb. i. p. 129, see also Pherecyd., Apollod., Hygin., and Pausan.), in the Peloponnesus, Argus succeeded by his son Criasus, fifth Argive king.

Tiryns another son of Argus founding the city bearing his own name; his brother Peirasus dedicating there an image of Juno. This image, made of wood of the "ahrathōs" — or *wild pear*, was on the capture of the city by the Argives removed to the temple near Mycenae, where it continued extant in the days of Pausanias ii. 17. 5 and 25.7. (See Pyrus communis).

Cratægus oxyacantha of Europe and the adjoining portion of Asia. Called in Britain *hawthorn* or *white thorn* or *hedge thorn*; in Anglo-Saxon "hagathorn" or "hegethorn," in Germany "hagedorn" (Prior) or "weissdorn" (Grieb), in France "aubépine" (Nugent), in Italy "spina bianca" (Lenz), in Greece "mōruntza" or "trikōkkia" or "ahlatha" (Sibth.), in which we recognize the "ahras" fruit on which the inhabitants of Tiryntha at first lived — (Aelian and Ruel i. 115), also the "ahĕrthō" thorny hedge on Ithaca (Hom. od. xiv. 10), and "ahĕrthōs" plant of Sophocles oed. 1596, and Theocritus xxiv. 89, yielding according to Pherecrates the fruit called "ahras" (Steph. th. ed. Hase): C. oxyacantha was observed by Forskal, Sibthorp, Chaubard, and Fraas, a frequent tree from the Peloponnesus to Tenedos, and planted in hedges on Crete. Westward, the "spina alba" is mentioned by Columella vii. 7, 2 to 9. 6; C. oxyacantha was observed by Forskal near Marseilles; is known to grow wild in Italy and throughout middle Europe, where also it has long been employed for hedges (fl. Dan. pl. 634, Jacq. austr., Pers., and Prior). By European colonists, was carried to Northeast America, where it continues planted for ornament, and I have observed trees to all appearance spontaneously seeded and more than thirty feet high in the environs of Salem in New England. (See C. monogyna).

Pyrus salicifolia of the East Mediterranean countries and Siberia. Called in Greece "gōritzia" or "gouritzia" or "ahlathia" (Fraas), and possibly the "ahras" in question: — the "ahras" is mentioned as edible by Homer, by Aristotle viii. 9 as food for swine, by Dioscorides as a kind of "agrias apiōu," is mentioned also by Theophrastus ii. 3, and in the Hermetic iatromathematica, and is referred here by Fraas: P. salicifolia is termed "p. sylvestris orientalis folio oblongo incano" by Tournefort cor. 43; and was observed by Sibthorp on mount Hæmus, by Fraas, abounding in Greece and continuing a favourite food of swine; is known to grow also in Armenia and Siberia (Pall. fl. ross. i. pl. 9, and Pers.).

1417 B. C. (= 1505 y. 332$\frac{29}{36}$ d. — "110 years" of ten lunations of Gen. l. 22 to 26), after bringing up upon his knees the children "of Machir the son of Manasseh," and seeing "Ephraim's children of the third" generation, death of Joseph.

The same year (= 1413 + "5th year of Kōgharis" of Manetho in Syncell. p. 103), accession of Akĕghrēs or Ahĕrrēs, as queen of Egypt. She is identified by Lepsius (C. Mull. fr. Man. p. 586) with "Bech-n-aten ra (Bechra)" widow of Amunhotep IV.; and is represented in the sculptures at Amarna with all the emblems of royalty; but whether she died in the lifetime of her brother-in-law king Horemheb, remains unascertained. The account of "Nitōkris" (given by Herodotus ...), coincides in some remarkable particulars with that of "Sherah," 1 Chron. vii. 21 to 24; and in Manetho, we find even identity in name (for the sound "sh" cannot be expressed in Greek letters, the nearest approach being the phonetic change that has converted the Spanish "Xeres" or Heres into the English "Sherry").

Convolvulus scammonia of the East Mediterranean countries. The *scammony* plant is called in Egyptian "sakamōnia" (Edw.), and the trailing sagittate-leaved Convolvulus figured at Amarna — (Leps. d. iii. pl. 98), and more or less distinctly on subsequent monuments (Champ. pl. 5 and 273, and Rosselin. i. pl. 19 and iii. pl. 5), may be compared: C. scammonia was observed by Hasselquist near Damietta on the Mediterranean border, and the imported drug has doubtless been long known in Egypt. Farther North, the "skamōnias" is mentioned by Antiphanes, 1 Mul. morb. 597, Theophrastus, Nicander, and Athenaeus, the plant according to Rufus Ephesius fr. 21 growing on the Asiatic

Olympus and around Colophon: C. scammonia was received from Asia Minor by Matthioli; is termed "scammonia syriaca" by C. Bauhin pin. 294, "c. syriacus" by Tournefort inst. 83; was observed by Sibthorp in the hedges of Rhodes, and he further ascertained that it yields Aleppo scammony. Westward, the imported drug "scammonea" or "scammonium" is mentioned by Cato, Cicero, Celsus, Scribonius Largus, and Vegetius; and the kind called by the Romans "kōlōphŏniōn," in Syn. Diosc., and by Pliny xxvi. 38. The drug scammony according to Lindley is a resin obtained "from the roots," but is "extremely uncertain," the difference in quality due in part to "manipulations of the Jews."

The same year (= 317 + "1100 yrs" of Puranas, Lassen, and C. O. Mull. note to Arrian ind. 9), in Hindustan, accession of Somapi son of Sahadeva as first king of Magadha under the Kali Period. — "Forty-four or forty-five" kings follow, down to Sandracottus, an average reign of more than twenty-four years.

1414, June (= 1413 y. 302$\frac{1}{8}$ d. = 1240 + half of the "430 years" of ten lunations of Ex xiii. 40, a division sanctioned by immemorial usage among the Jews), "Beth-horon the nether, and the upper, and Uzzen Sherah," cities in Palestine, founded by Sherah (1 Chron. vii. 24): an undertaking that could only be carried out with the aid and assent of the Egyptian government. The two cities first mentioned bear the name of king Orōs or Horemheb, — were certainly in existence prior to the Hebrew conquest of Palestine (Josh. x. 10, xvi. 5, xviii. 13, and xxi. 22); were repaired by Solomon (2 Chron. viii 5); and to the present day are recognized in the two neighbouring villages called "Beit-ûr" (see Robinson topog. Palest. iii. 59 to 62).

1413, July 20th (= 753 + a phœnix of 660 years = 128 A. D. + 1540 years = 351 + "18 + 39" + erased 6 + "124 + 177 + 44 + 44 + 19 + 48 + 121 + 228 + 194 years" of the Egyptian Chronicle = "5th year of Kogharis" of Manetho in Syncell., the Afr.-Maneth. table giving 339 + "4 + 3 + 2 + 38 + 20 y. 4 mo. + 6 + 124 y. 4 mo. + 150 y. 6 mo. + 40 + 6 + 89 + 42 + 13 + 25 + 15 + 21 + 130 + 135 + 209 years" = 1412 y. 2 mo., and the Euseb.-Maneth. table giving + "6 + 4 + 6 + 20 + 21 y. 4 mo. + 6 + 120 y. 4 mo. + 42 + 25 + 17 + 6 + 45 + 8 + 6 + 7 + 12 + 44 + 44 + 44 + 49 + 130 + 178 + 194 + 40 years" = 1413 y. 8 mo., or in the Armenian version 522 y. 8 mo. + "167 + 44 + 44 + 44 + 49 + 130 + 178 + 194 + 40 years" = 1412 y. 8 mo., Theon's account agreeing, for the reign of Menophre or Seti Mienptah is conventionally extended in the Afr.-Maneth. table beyond this date), end of the second *Great Year:* fairly counted by the calendar used in Egypt.

The phœnix, is figured at Amarna, and so far as I have been able to discover, for the first time on the Egyptian monuments. — Subsequently, the hieroglyphic character of the phœnix is by no means rare, and continues in use until the end of hieroglyphic writing (Leps. d. iii. pl. 109, 226, and iv. pl. 74. See butterfly, and Horapollo i. 32, 33, and ii. 54).

The sculptures at Amarna have been already mentioned as remarkable for the absence of the Egyptian gods and the substitution of the sun's disk with rays extending downward, each terminating in a hand, expressing in hieroglyphic writing a new idea, revealed religion: but Horus also "saw the gods," — and a later king Amenophis desired the same privilege (Maneth.), and on each occasion the Israelites are found implicated.

The accession therefore of Orōs or Horus or Horemheb, ninth king of the Eighteenth dynasty, not earlier than the last-named date. His name is next to that of Amunhotep III. — in the series of kings at Abydos, Gurna, Medinet-Abu, and in Manetho's lists.

Horemheb restored the ancient religion, demolished the temples erected by his immediate predecessors and with the stones built the fourth pylon at Karnak (Birch): and figures of the Egyptian gods again make their appearance on the monuments.

He made a successful military campaign against the Ethiopians, recorded in grottoes at Silsilis (Birch); built additions to the temples at Luxor and in the Asasif; his name occurs also in Nubia, at Gebel Addah; and perhaps at Sedeinga or Sai, where sculptures of the time of the "Eighteenth — and Nineteenth" dynasties were found by Lepsius eg. and sin. 19.

"1408 B. C. = 1st year of Yang-kia, of the Chang." or Fourth dynasty — (Chinese chron. table).

The same year (= 1368 + "40 years" of Euseb. i. and ii.), accession of Ascatades as Assyrian emperor. "Thirty-eight" years are however assigned to his reign by Syncellus.

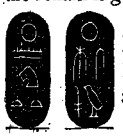
1407 B. C. = "7th year of Horemheb," the latest date in his reign found on the monuments (Leps. k. tab. p. 17, and Birch). Finely-executed statues of this king, — now in the museum at Turin, are mentioned by Champollion-Figeac.

On two stela under the "Eighteenth dynasty," a sort of secret or cypher writing was remarked by De Rougé: and in the royal tombs at Bab-el-meluk, something of the kind was noticed by Champollion. — the art of *writing in cipher* or occult characters, seems mentioned by Homer il. vi. 168; and is known to have been long practised in the East.

A *mummy* possibly belonging to the reign of Horemheb, is mentioned by Birch: who further ascertained, that the dead were already provided with *funeral papyri* (inscribed doubtless as in after

times with portions of the Egyptian Ritual). Bodies of persons who lived as early as this reign being rare, I may mention seeing at Thebes an unopened inner mummy-case, in the style of workmanship belonging to the Eighteenth and Nineteenth dynasties, and highly finished.

"1401 B. C. = 1st year of Pan-keng, of the Chang" or Fourth dynasty (Chinese chron. table). He changed his family name of Chang to "Yn:" — and the new name is by some writers applied to the remaining emperors of the dynasty.



The same year (= 1417 — "12 y. 3 mo. — 4 y. 1 mo." of Jos. c. A., = "16 y." in the Euseb.-Maneth. table, the Afr.-Maneth. table giving — "12—5" = 1400), accession of Ramessu, head of the Nineteenth dynasty. On the monuments — he is placed next after Horemheb in the series of kings at Abydos, Gurna, and Medinet Abu.

Eighty-seventh generation. Jan. 1st, 1400, mostly beyond youth: Hezron (Gen. xlvi. 12., Num. xxvi. 21, Ruth iv. 18, and 1 Chron. ii. 5 to 24); Rephah, Resheph, and Telah (1 Chron. vii. 25).

Ramessu completed some of the columns of the temple at Luxor; and set up a large stela at Wady Halfa in Nubia.

The same year = "2d year of Ramessu" at Wady Halfa, the latest date in his reign found on the monuments (C. Mull. fr. Man. p. 583).

Ramessu engaged also in a military campaign against Syria (Birch): and his tomb, only partially finished, has been found at Bab-el-meluk near Thebes:

1399 B. C. (= 1417 — "12 — 5 — 1" in the Afr.-Maneth. table, Manetho in Jos. c. A. giving — "12 y. 3 mo. — 4 y. 1 mo. — 1 y. 4 mo." = 1400, the Euseb.-Maneth. table — "12 — 5 — 1" = 1397, and the Afr.-Maneth. table in another place 1366 + "32 y." = 1398), accession of Sĕthŏs or Seti Mienptah, second king of the Nineteenth dynasty. — He is next after Ramessu in the series of kings at Abydos, Gurna, and Medinet Abu.

The same year = "1st of his reign" on the monuments, Seti Mienptah carrying on war in Syria, as far as Kanana or the "Canaanites" (Leps. eg. and sin. 450, and Birch): farther North, he reached Lebanon, or at least a wooded country, as shown by tufts of *fern* and the forest of *spruce* figured on the temple at Karnak (Rosselin. i. pl. 46).

The felling of some of these spruce trees, taken in connexion with flag-staff receptacles projecting from the walls of the temple, demonstrate the existence of *navigation* upon the Mediterranean.

Abies picea of the mountains of middle and Southern Europe, and as far as Caucasus. Called in Britain *silver fir* from its white trunk (Prior), in Germany "weisstanne," in Italy "abezzo" or "abeto" or "abeto bianco" or "abeto comune," or in Lombardy "pezza" or "pescia" or "peccia" (Lenz), in Greece "ĕlatē" or "ĕlatōs" (Sibth.), and clearly the species in question: — spars of surprising length, said to have come from Syria, were observed by myself floating in the harbour of Alexandria. Farther North, the "ĕlatē" growing on the mountains is termed "ŏuranŏmēkēs" tall as the heavens by Homer il. xiv. 287 and od. v. 239, is mentioned also by Euripedes cycl. 385, Theophrastus, and its resin by Dioscorides i. 91 and 92: A. picea was observed by Sibthorp, and Chaubard, on all the high mountains of Greece; is known to grow also on the mountains of Asia Minor as far as Caucasus (Bieb.). Westward, the "picea" is mentioned by Virgil as forming dark groves; by Pliny xvi, 18 to 28, as having leaves like a comb and growing on mountains: A. picea is termed "a. taxi folio fructu sursum spectante" by Tournefort inst. 585; is known to grow on Sicily, and throughout the Apennines (Guss.), and Schouw), Alps, Pyrenees, and Carpathians to "Lat. 51° 15′" in Silesia (A. Dec.); perhaps in ancient times farther North, for the relics in the peat-bogs of Britain and the Shetland Islands (Edmonst. ann. nat. ii. p. 71) may in part be derived from ocean-currents. The tree according to Sprengel, and Lindley, yields "Argentoratensis" or *Strasburgh turpentine.*

Aspidium filix-mas of Europe and the adjoining portion of Asia. Called in Britain *male fern* (Prior), in Germany "wurmfarn," in Italy "felce maschia" (Lenz), in Greece with other kinds "ptĕris" (Fraas); agreeing with the tufted fern in the spruce forest figured on the walls of Karnac: — the "thĕluptĕris" is described by Theophrastus ix. 18 as useful against both round worm and tape-worm; by Dioscorides, as taller than the "ptĕrithi" with many sprouts, which are eaten while young, and in the added Synonyms is identified with the "numphaian ptĕrin:" A. filix-mas was observed by Sibthorp in woods on Crete and Zacynthus. Westward, the "thelypterin" or "nymphaeam pterin" is identified by Pliny xxvii. 55 with one of the two kinds of "filicis:" A. filix-mas is termed "f. non ramosa dentata" by Tournefort inst. 536; was observed by Lenz frequent in Italy; is known to grow as far as Britain, and "all over the North of Europe" (Engl. bot. pl. 1458, and Lindl.). The rhizoma according to Lindley is "used as an anthelmintic; the *oil of fern*, extracted by ether, is the most efficacious."

1391 B. C. = "9th year of Seti Mienptah," in an inscription at Assouan enumerating the monuments he had constructed — (Birch).

In this year (Davis, Colebrooke as. res. v. 288 to viii. 489, and Elphinst. iii. 1 to 3, compare the adoption of the kali-yug referred in the Braminical books to "about 1400 B. C.," Buns. iv. 7. 1), the date indicated by the position of the solstitial points at the time of the division of the ecliptic into twenty-seven lunar mansions, and instituting "a cycle of five years of lunar months;" — an arrangement containing "the rudiments of the calendar" in use throughout Hindustan.*

Bela succeeded by Jobab or Job, second king of Edom (Gen. xxxvi. 33, 1 Chron. i. 44, and Jul. Afr. xix).

"1379 B. C. = the Eighth manwantara" among the Hindus — (Graha Munjari tables, and Bentley as. res. viii. 244).

1378 B. C. = "22d year of Seti Mienptah," in an excavated chapel at Silsilis; the latest date in his reign found on the monuments.

A *library* in Thebes in the "Fourteenth" century B. C. (Leps. eg. and sin. 391 to 397), and there is "reason for considering it neither the most ancient nor the only one in Egypt." — Several "hieratic papyri" are "dated from the Rameseion;" and the "tombs of two librarians of this time" have been discovered.

"1377 B. C. = 25th year of Pan-keng" (Chinese chron. table), beginning of the Twenty-second cycle.

Besides building at Karnac the great hall of columns (regarded as the most imposing work ever constructed by human hands) Seti Mienptah set up obelisks (one of which is now in Rome); and his name occurs on other monuments throughout Egypt and in Nubia; in the cave-temple near Beni-hassan; in the Theban Desert at Wadi-el-Moyeh towards the Red Sea; at Sesebi or Sese in Nubia, but not farther South (Leps. eg. and sin. p. 235); and at Sarbut-el-Khadem, Elephantine, and Silsilis. He also commenced the temple at Gurna, in the Western quarter of Thebes.

Trifolium Alexandrinum of the East Mediterranean countries. A kind of *clover* called in Egypt "bersun" or "bersim" (Forsk.), and seemingly corresponding with the plant held by an Asiatic captive on the walls of the temple at Gurna — (Champ. pl. 167): T. Alexandrinum was observed by Forskal p. 139, and Delile, abundantly cultivated in Egypt for feeding cattle; also according to Clot-Bey ii. 39 in Syria, and the seeds exported to Egypt. Farther North, the cultivated "ĕrusimŏn" of Theophrastus and others, may be compared: T. Alexandrinum was observed by Chaubard in wild situations in the Peloponnesus; and farther West, "T. Latinum" of Sebastiani is regarded by him as possibly identical.

"1373 B. C. = 1st year of Siao-sin, of the Chang" or Fourth dynasty (Chinese chron. table).

1371 B. C. (= 1425 — "54 years" of Castor in Euseb. i. p. 129, see also Pherecyd. . . .), in the Peloponnesus, Criasus succeeded by his son Phorbas, sixth Argive king.

A portion of the walls of the tomb of Seti Mienptah, is devoted to *Ethnography;* the inhabitants of the four quarters of the world being represented in their respective costumes; including Egypt as the Western quarter.

The people of the North (probably from the Euxine) are fair-complexioned, and wear *egret-plumes* and skin-cloaks, in one instance clearly an ox-hide: there is perhaps no evidence that they were acquainted with the art of weaving cloth.

The cloaks are bordered and ornamented with down or *fur* (very distinct in the original painting examined by myself at Thebes), and if fur, of the *ermine* Mustela erminea: — this animal inhabited Switzerland during the Stone Age (Rütim., and Troyon); "pontici mures albi" are mentioned by Pliny viii. 55, and the "mustela alpina" or "alba" and "muris pontici pellicula" were known to the Romans (Ainsw.); "ermin" is enumerated by Marco Polo 71 among the furs brought from the country North of the Altai.

Quercus infectoria of the East Mediterranean countries. The black lines on the skin of these people of the North — (Champ.-Fig. pl. 1) seem made with *nut-galls;* a custom I found extant at

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* *Trapa bicornis* of Southern China. Called in Hindustan "singhara" (W. Jones), in the environs of Bombay "shingaree" (Graham), in Sanscrit "sringata" from its horned nut which is placed among the lunar constellations — (W. Jones as. res. iv. p. 253): the "sringata" is mentioned also by Susrutas sutr. 46: T. bicornis was observed in Hindustan by Rheede xi. pl. 33, Roxburgh cor. iii. pl. 234, Wight; by Graham, "in tanks throughout the Concans," preserved from extirpation by "the Bhoie or Hamal caste of fishermen" by transplanting in the dry season, the fruit employed "in making a dye of a red colour" for "the Hooly festival," also "eaten by the natives on fast days," and in Goozerat "an important article of food to certain classes." Farther East, was observed by Loureiro in Southern China; and the "pi-tsi" or "chataigne d'eau" is enumerated by Cibot (mem. Chin. iii. p. 451) as long cultivated in China, a superior kind occurring in the South. (See T. natans, and T. incisa.)

Mocha, the pigment being of course imported: nut-galls are called in Egypt "afs" (possibly from the Egyptian "apĕ" or "aphĕ" signifying head), and were further ascertained by Forskal mat. med. to be imported "from Syria and Greece." The "kēkis" is mentioned by Aeschylus ag. 934, Demosthenes 816. 20, and Dioscorides; "gallae" by Virgil, the best according to Pliny xvi. 9 and xxiv. 5 brought from "Commagena," the district yielding the *Aleppo galls* of the present day: Q. infectoria, a shrub oak, was observed by Olivier ii. pl. 14 and 15 in Asia Minor, by Sibthorp, and Chaubard, in Greece.

A hieroglyphic character occurring (according to Bunsen and Birch) on the walls of this tomb: (beaver signifying author of his own distress Horap. ii. 61); "nŏĕik" or "nŏik" adulterer, also unbeliever; "pŏrk" or "pōrk" or "phŏrk" or "phōrk," to pluck out. Non-conformists to established religion being included, — we have an explanation of the Scriptural application of the term "adulterous" to whole nations. Compare in Hebrew, "nkr" foreigner, "nkryĕ" strange woman, and in vulgar English "nocker."

The drug *castoreum* probably the means through which the *beaver* became known to the Egyptians: for the living animal occurs only in the distant North: inhabiting among other countries Switzerland during the Stone period, as appears from debris of the earliest villages (Riitimeyer, in Troyon habit. lac. p. 442). — The "kastŏr" or beaver is mentioned by Herodotus iv. 9, Nicander ther. 565, Dioscorides; and its product castoreum, by Lucretius, Strabo, Celsus, Pliny, Juvenal, Galen, and by the Arab writers Rhazes, Avicenna, and Serapion. The importation into Egypt of "castoreum, djild menaster," is enumerated by Forskal mat. med.

1368 B. C. (= 1323 + "45 years" of Euseb. i. and ii., and Syncell.), accession of Amyntas as Assyrian emperor.

Eighty-eighth generation. May 1st, 1367, mostly beyond youth: Chelubai or Caleb, son of Hezron (1 Chron. ii. 9 and 18), Tahan (num. xxvi. 35, and 1 Chron. vii. 25): and among Greeks, Oceanus father of Clymene (Dionys. i. p. 45).

Jobab succeeded by "Husham of the land of Temani," now third king of Edom (Gen. xxxvi. 35, and 1 Chron. i. 45).

Among moveable articles in the tomb of Seti Mienptah (discovered and opened by Belzoni) were "wooden statues coated with *bitumen;*" the earliest instance known of the employment of this material — (Birch): its use for embalming soon became general; quantities being imported overland as is alleged from the country on the Euphrates.

1366 B. C. (= 1417 — "12 y. 1 mo. — 9 — 12 y. 5 mo. — 12 y. 3 mo. — 4 y. 1 mo. — 1 y. 4 mo." of Manetho in Jos. c. A. = 51 y. 2 mo = "51 years of Sĕthŏs" in the Afr.-Maneth. table, giving in another place "32 + 6 + 12 y." = 50), accession of Armĕsēs Miammōu. Ramessu II., third king of the Nineteenth dynasty, corresponds on the monuments: and he is placed next after Seti Mienptah in the series of kings at Abydos, Gurna, — and at Medinet Abu.

1365 B. C. = "2d year of Ramessu II.," in an inscription at Nahr-el-Kelb in Syria — (Leps. eg. and sin. 23).

1364 B. C. = "3d year of Ramessu II.," excavation of a well at Redisieh or Contra Pselcis — (Birch).

1363 B. C. = "4th year of Ramessu II.," in a second inscription at Nahr-el-Kelb in Syria — (Leps. l. c.).

1362 B. C. = "the month Epiphi in the 5th year of Ramessu," commencement of his campaign against the Khita of Syria — (Birch).

1359 B. C. = "8th year of Ramessu II.," capture of "Shaluma" or Jerusalem, also of "Tapura" or Dabir at the foot of mount Tabor, and of "Askaluna" or Ascalon — (Birch).

1358 B. C. = "9th year of Ramessu II." — in the poetical account of his campaigns called the "Sallier papyrus," supposed to have been written not long after his death. (See Seti-Mienptah II., and Leps. eg. and sin. 394).

Besides campaigns in the North, Ramessu II. extended his conquests up the Nile to Gebel Barkal; farther than any of his predecessors, and the limit of all subsequent Egyptian conquests (the granite rams inscribed with the name of Amunhotep III. being regarded by Lepsius as probably brought "from Soleb"). At Gebel Barkal, Ramessu II. built a great temple; evidently by Egyptian workmen, — and like all monumental remains in Nubia down to the Twenty-fifth dynasty, in the Egyptian style of art. Moveable articles have been found farther up the Nile: as an Egyptian statue of Osiris in "black granite" at Soba, in company with a "bronze vase" and "small Venus of Greek workmanship;" but of fixed Greek inscriptions, the "most Southern" were at Gebel Barkal (Leps. eg. and sin. p. 17, 162, and 189 to 222); and this continued the limit of Egyptian and European influence throughout the Roman and Early Christian periods.

Borassus Aethiopicus of the Upper Nile. The *deleb palm* is by the Negroes called "m'voomo"

(Grant), and seems the flabellate-leaved kind figured in a campaign of Ramessu II., in which the Equatorial forest has been reached — (. . . .): the "dileb" palm was first met with by Lepsius eg. and sin. 172 in about Lat. 14° at Wad Negudi, its "slender naked stem" bearing leaves large enough for one to be "set up in the boat as an umbrella," the "leaf-stalk serrated," and the round fruit "larger" than that of the doum; was observed by Grant, "plentiful in Shillook country 11° N., where natives make beautiful strong white baskets and mats for the markets on the Nile," the leaves also furnishing thatch, rope, sieves, fences, firewood, and flageolet reeds among more distant tribes, and the boiled roots eaten in famines by the Wanyamuezi, but very few about the Equator.

Hyphaene nov. sp. of Abyssinia. A palm called "mizanza" (Grant), and possibly the kind figured: — observed by Grant in desolate valleys "21° N." on the Nile, thirty feet high and never branching, its green leaves collected to make shackles for camels; had been seen by one of his men "growing in Wambweh, 8° or 9° S. Lat."

1354 B. C. (in the ninth or tenth generation or about "283 years" before the fall of Troy, Clint. i. p. 73 and 88), Pelasgus establishing himself as king in Arcadia, the central mountainous portion of the Peloponnesus.

Quercus esculus of the wooded portion of the Mediterranean countries. An oak called in Italy "rovere" or "querce esculo" (Lenz), in Greece "agria vĕlanithia" (Fraas), in which we recognise the "phēgōs" whose acorns found edible by Pelasgus were the only kind permitted by him to the Arcadians — (Paus. viii. 2, 6), the oracular tree at Dodona according to a Hesiodic poem (quoted by Sophocles trach. 1167, and Strabo vii. 7. 10), and another solitary tree on the tomb of Ilus outside the walls of Troy (Homer il. vi. 237 to xxiv. 349, and Theophrastus iv. 13): the "phēgōs" is described as having "stroggulas" rounded acorns by Theophrastus iii. 10, and as a kind of oak by Dioscorides: Q. esculus was observed by Sibthorp, and Fraas, in Greece and Asia Minor as far as Constantinople. Westward, the "esculos" sacred to Jove is mentioned by Horace, Virgil, Vitruvius, and Ovid, by Pliny xvi. 5 to xvii. 34 as cultivated and bearing esculent acorns: Q. esculus is described by Dalechamp pl. 5; is termed "q. parva sive phagus Græcorum et esculus Plinii" by Tournefort inst. 583; was observed by Lenz in Italy, its acorns according to Daubeny "so sweet as to be much eaten by the peasantry" in Tuscany; and is known to occur in other parts of Southern Europe (Pers.).

"1352 B. C. = 1st year of Siao-y, of the Chang" or Fourth dynasty — (Chinese chron. table).

"In the reign of Phorbas" (Tat., and Clem. Alex., see also Strab. ix. 1. 18), Actaios governing the district of "Aktaia," so-called after his own name; — but in later times, known as Attica.

Sambucus nigra of Europe and Northern Asia. Called in Britain *elaer*, in Piers Plowman "eller," in Anglo-Saxon "ellen" or "ellarn" from its hollow branches used to blow a fire (Prior), in France "sureau" (Nugent), in Germany "holunder," in Italy "sambuco" or "s. montano" (Lenz), in Greece "kŏuphŏxulia" (Sibth.); the "aktĕa" or "aktē," named from Aktē on the Gulf of Argolis — (see Strab. ix. 1. 1), mentioned also by Euryphon 2 morb. 19, Theophrastus i. 7 to iv. 4, by Dioscorides as arborescent with reedlike hollow branches and juicy purplish-black fruit, is referred here by writers: S. nigra was observed by Sibthorp, and Fraas, in Greece, but chiefly or altogether in the vicinity of dwellings; is enumerated by Clot-Bey as long known in the gardens of Egypt. Westward, the "ēmĕrōn" kind or "thĕnthrōn arktōu" is identified in Syn. Dioscr with the "sĕva" of the Dacians, "skōviēn" of the Gauls, and "samvōukŏum" of the Romans: the "sambucus" is described by Pliny xvi. 71 and xvii. 34 as both wild and cultivated, having "abundant pith" and "small black edible" berries; seeds of S. nigra occur in debris of the earliest villages of Switzerland (Troyon p. 465); the living tree was observed by Lenz in wild situations in Italy; and is known to occur around dwellings as far as Sweden (Linn., Wahl., and A. Dec.). Eastward from Greece, is known to grow about Caucasus, and throughout Siberia as far as Japan (Pers., and Lindl.). "The inspissated juice of the fruit" and "the inner bark" according to Lindley are used medicinally; and the flowers "in French pharmacy are commonly employed as expectorants."

1346 B. C. = "21st year of Ramessu II.," treaty at the fortress of Pa-ramessu — (Birch).

Temples and other structures by Ramessu II. occur throughout Nubia and Egypt; are more numerous than those of any other king; and historical documents of great importance, as the Abydos series of successive kings, have been preserved by being inscribed on the walls. His name is often accompanied by his portrait, which is sufficiently striking to be at once recognized: of these portraits, the finest I have seen is one in polished sienite — (now in the possession of Francis C. Lowell of Boston).

Amid the costliness and imposing dimensions of the structures by Ramessu II., there is yet manifest a falling off in taste, a *Decline of the arts*; — strikingly parallel to that in a later period of history, under the Romans.

1344 B. C. = "23d year of Ramessu II.," peace concluded between him and the Khita — (Mariette 88).

The "new king over Egypt which knew not Joseph," alarmed at the increasing number of Israel-

ites, lest "when there falleth out any war they join also unto our enemies," employed them under "taskmasters" in building, and from the name, "Raamses" one of the "treasure cities" (Ex. i. 7 to 11), could hardly have been earlier than Ramessu II.: ovals of Ramessu II. are cut in a block of granite at Abu Kesheb on the ancient Red Sea canal and this is regarded by Lepsius (eg. and sin. 438) as the site of "Raamses." The "Patoumos" described as an Arabian town by Herodotus, and called "Thoum" in the Itinerarium Antonini, is not far distant on the same canal, and is regarded by Lepsius as the "Pithom" of the Israelites.

The *art of levelling* having been long practised in Egypt, the canal in question was carried by Ramessu II. from Bubastis to Heroonpolis — (Leps. p. 445). In B. C. "600," the canal appears to have been extended by Nekau II. as far as the Bitter Lakes; in "500," was carried to the Red Sea and the connexion completed by Darius; whose name and statue occur with cuneiform inscriptions in Persian ruins near Suez; but the canal was narrow, not intended for large ships, and in "350," in the days of Aristotle, appears to have fallen into disuse: in "250," a wide canal was carried by Ptolemy II. Philadelphus from the Bitter Lakes to the Red Sea, where he founded the city of Arsinoe: in "100 A. D.," a new canal was opened by Trajan from Babylon on the Nile to Heroonpolis: in "643" to "644," the connexion was re-opened by khalif Omar: and in "762 to 767," on the occasion of the revolt of Mohammed ben Abdallah at Medina, the canal was filled by khalif El Mansur.

1336 B. C. (= 1371 — "35 years" of Castor in Euseb. i. p. 129, see also Pausan. . . . .), in the Peloponnesus, Phorbas succeeded by his son Triopas, of the "seventh generation from Inachus" (Clem. Alex.) and now seventh Argive king.

Contemporary with Triopas (Paus. iv. 1, and Clint. i. p. 33, see also Homer il. κ 429 and φ 86), Lelex ruling a district in the Peloponnesus named after him Lelegia — (but in later times Laconia). Besides Aones, Temmices, and Hyantes, Leleges are enumerated as original inhabitants of Bœotia (by Strabo ix. p. 401); and holding the islands as far as the coast of Asia Minor, are identified with the Carians (by Herodotus i. 171), and with the fabulous centaurs (by Suidas, and schol. Pind. pyth. ii. 78).

Eighty-ninth generation Sept. 1st, 1334, mostly beyond youth: Paapis father of the Egyptian prophet Amenophis (Maneth. in Jos. c. A.): Laadan (1 Chron. vii. 26), Gilead (Num xxvi. 29, Josh. xvii. 3, and 1 Chron. vii. 17), Hur the firstborn of Ephratah (Ex. xxxi. to xxxviii., and 1 Chron. ii. 19 and iv. 4): and among Greeks, Agenor son of Triopas (Hellan., and Pausan. ii. 16. 1).

Husham succeeded by Hadad, son of Bedad and now fourth king of Edom (Gen. xxxvi. 35, and 1 Chron. i. 46).

"1325 B. C." (argum. Chi-King iv. 5. 5), beginning of the reign of Kao-tsong of the Chang.*

"1324 B. C. = 1st year of Wou-ting II., of the Chang" or Fourth dynasty (Chinese chron. table).

"In the reign of Triopas" (Hes. theogon. 507, Dionys. i. p. 45, Tat., and Clem. Alex.), the three brothers Prometheus, Epimetheus, and Atlas, living. The date is important, Prometheus and Clymene being the parents of Deucalion.

Ferula communis of the East Mediterranean countries. Called in Italy "ferula" (Lenz), in Greece "kalami" (Fraas) or "anartkēkas" (Sibth.), in which we recognize the "nartheca" or "ferula" employed to preserve fire struck from the rock; an art taught by Prometheus, — and continuing in Egypt in the days of Pliny vii. 57 and xiii. 43, who further speaks of staffs made of the stem: the "narthex" is mentioned by Aeschylus prom., 109, Euripides bacch. 695, Xenophon cyr. ii. 3. 7, and Theophrastus i. 9; its medicinal uses, by Dioscorides; and F. communis was observed by Sibthorp, and Fraas, from Attica to Cyprus. Westward, the "ferula" is enumerated by Pliny as foreign to Italy; F. communis, described by Dodoens pl. 321, was observed by Lenz seemingly wild in Italy, and by Desfontaines i. p. 251 in Barbary.

Clematis cirrhosa of the Mediterranean countries. Called in Greece "hēlithrōnaki" (Fraas); and the "athragēnēs" whose wood was preferred for rubbing fire, with a laurel borer, — further described by Theophrastus v. 9. 6 and ign. 64 as a woody vine climbing around trees, is referred here by writers: C. cirrhosa was observed by Sibthorp, and Fraas, frequent in Attica, and by Bory on Milo.

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* *Pinus Massoniana* of China. The "pin" cut for building purposes on the King mountain according to the ode to Kao-tsong, — furnishing planks for ships according to an ode to the queen of Hui (Chi-King i. 5. 5 to iv. 5. 5), growing according to the Chou-King in the province of Tsing (Gaubil), may be compared: P. Massoniana, having very long geminate leaves, was received by Lambert pl. 12 from China (Pers.).

Cupressus Japonica of Japan. The "cypres" also cut for building purposes on the King mountain according to the ode to Kao-tsong — (Chi-King iv. 5. 5), growing in the province of King according to the Chou-King ii. 1. 13, not shedding its leaves in winter according to Confucius lun-yu ix. 27, and unknown in Cambodia when visited by a Chinese official in A. D. 1296, may be compared: C. Japonica, "arbor altissima" very lofty, was observed by Thunberg 265 in Japan (Pers.).

Westward, is termed "c. peregrina foliis pyri incisis" by Tournefort inst. 293; was observed by Desfontaines i. 433 in Barbary; is known to grow also on Corsica and in Spain (Pers., and Viv.).

1323 B. C. (= 1298 + "25 years" of Euseb. ii., and Syncell.), accession of Belochus II. as Assyrian Emperor. "Forty-five" years are however assigned to his reign in Euseb. i. p. 44.

Triopas succeeded by his son Iasus, eighth Argive king; his dominions (those of "the father of Io," Acusil., Herodot. i. 1 and ii. 26, see also Apollod., and Paus.) including under the name of Pelasgia all continental Greece.

Xanthus another son of Triopas led a colony of Pelasgian Greeks to Lycia; — and afterwards occupied Lesbos, an island close to the main shore of the Troad.

"1317 B. C. = 8th year of Wou-ting II." (Chinese chron. table), beginning of the Twenty-third cycle. By the emperor Wou-ting II., ambassadors received from kings of foreign nations whose language differed from the Chinese.

In this year (= 8th of Wou-ting," hist. Cor., and Klapr.), the Corean seat of government removed from Pĕ-yŏ to the A-szu-ta (Asstak) mountain.

1316 B. C. (= 1266 + "50 years" of Castor in Euseb. i. p. 134, see also Paus. i. 2. 6., Tat., and Clem. Alex.), Actaeus succeeded by his son-in-law Cecrops, second (or according to Apollodorus iii. 14. 1 first) Attic king; his dominions including Boeotia. — The tomb of Cecrops on the acropolis at Athens continued extant in the days of the historian Antiochus (Strab. ix p. 407, and Clem. Alex. pr. p. 29).

The worship of *Jupiter* supreme over the gods, not earlier than Cecrops, who inaugurated it (Paus. viii. 2. 3, Euseb. chron. ii., and Constantin. Diac. 13). Io daughter of Iasus is connected with this worship, and (according to Aeschylus prom. 705) she visited the neighborhood of Dodona. The *Oracle* at Dodona probably at this time founded (see Ammon, and Deucalion).

Lycaon son of Pelasgus and second king of Arcadia contemporary with Cecrops (Paus. viii. 2. 2). On mount Lycaeus, Lycaon built the city of Lycosura, instituted games there, and adopted the worship of *Jupiter*, but offered a human sacrifice. (See Menptah).

Images of gods among the Early Greeks (as ascertained by Pausanias viii. 17. 2) were made either of "ĕbĕnŏs" *ebony*, "lōtŏs" (see *Zizyphus lotus* and *Celtis Australis*), "thruina" *oak* (Q. robur and Q. pubescens), or of the four following kinds of wood:

Cupressus sempervirens of the East Mediterranean and Tauro-Caspian countries. The *cypress* is called in France "cyprès" (Nugent), in Italy "cipresso" (Lenz), in Greece "kuparissia" (Sibth.); in Egypt "saru" (Forsk.), in which we recognize the "kuparissŏs" of which some of these images were made — (Paus.), employed also for door-posts according to Homer od. v. 54 and xvii. 340, and mentioned by Herodotus, Thucydides ii. 34, and Theophrastus; one of the gates of the temple at Jerusalem was called the "swr" gate (2 K. xi. 6 and 2 Chron. xxiii. 5): C. sempervirens was observed by Forskal, and Delile, planted in Egypt, and by myself in the Muslim cemeteries; by Sibthorp, and Fraas, wild on the mountains of Crete and Greece, but its abundance in the Peloponnesus, remarked by Bory, is doubtless due to human interference. Westward, the "cupressus" is mentioned as foreign to Italy by Cato, and Pliny xvi. 60, introduced with difficulty and sacred to Pluto; is further described by Pliny as sheared to the density of a wall and thus rendered unnaturally slender and pointed; is termed "cupressus funebris" by Horace epod. v. 16, and Ovid met. x 106; and C. sempervirens continues to be associated with mourning in France (Nugent), is besides planted for ornament throughout middle and Western Europe as far as Spain (Pers., Targ.-Tozz, and Lenz). Eastward from Palestine, the "kuparissŏs" was found by Alexander abounding in Adiabene in Babylonia, furnishing timber for a whole fleet (Arr. vii. p. 161): C. sempervirens is called in Hindustanee "saro" or "sarv" (D'roz.), was observed by Graham "in gardens" in the environs of Bombay, thriving "best above the Ghauts;" by myself, in Muslim cemeteries on the Deccan. By European colonists, was carried to Northeast America, where it continues in gardens, the stocks I have met with small in size.

Juniperus oxycedrus of the wooded portion of the Mediterranean countries. The *berried cedar* is a small tree called in Greece "agriŏphitha" (Forsk.) or "kĕthrŏs" (Sibth.), and a kind of timber imported into Egypt "gutran" (Forsk.); in which we recognize one of the "kĕthrōi" of which images of the gods were made — (Paus.), referred here by Hawkins: the "kĕthrŏs" is termed "ĕukĕatōiōs" easily split by Homer od. ii. 6 and v. 60, growing on Calypso's isle (Malta), is mentioned also by Herodotus . . ., Satyrus, by Theophrastus iii. 12. 3 as sometimes called "ōxukĕthrōn," its berries "xanthŏs" ruddy and edible, and wood odorous and sound to the centre; its berries, by Nicander ther. 80 to 583, and the "kĕthrōs mikra" by Dioscorides: the "kĕthrŏs" is further described by Theophrastus iii. 2, 6 and iv. 5. 5 as abounding in Syria and used for ship-building; by Pliny as used in Egypt for this purpose, the galley of Ptolemy IV. was in part built of "kĕthrŏs" (Callixen., and Athen. v, 38) according with the use made at present of the imported "gutran" timber (Forsk. p. lvi.): J. oxycedrus was observed by Forskal, and Sibthorp, everywhere in Greece and on

the Greek islands, and trunks eight to ten inches in diameter were found by Bory, its berries largely exported. Westward, the "odorata cedrus" of which images of gods and ancestors were made in the days of Latinus is mentioned by Horace, Virgil aen. vii. 13 to 178, Persius, and Pliny; J. oxycedrus is described by Matthioli i. 115; is termed "j. major bacca rufescente" by Tournefort inst. 589; but from Italy along both sides of the Mediterranean to Gibraltar, hardly exceeds the dimensions of a shrub six feet high (Pers., and Lenz).

Juniperus Phœnicia of the wooded portion of the Mediterranean countries. Called in Greece "kĕathrōs" (Sibth.), and a kind of timber imported into Egypt "schærbīn" (Forsk.): one of the "kĕthrōi" of which images were made — (Paus.) may be compared: the "kĕthrōn phōinikēn" is distinguished by Theophrastus iii. 12. 3 and ix. 2. 3; the "kĕthrōn" becoming a great tree "thĕnthrōn mĕga" by Dioscorides, "thĕnthrōn ou mikrōn" according to Galen simpl. vii. 8; and the largest "cedrus" on record, "one hundred and thirty feet high" with three men required to encircle its trunk, was cut for Demetrius on Cyprus (Plin. xxvi. 76): the "brwsh" growing on Lebanon (Psalm civ. 17, Hos. xiv. 3, Isaiah xiv. 8 to lx. 13, and Zech. xi. 2), of which David's musical instruments were made (2 Sam. vi. 5), employed in the construction of houses (1 K. v. 8 to ix 11, and 2 Chron. ii. 8 to iii. 5), is mentioned by Ezekiel xxvii. 5 as also employed in ship-building, the purpose for which "schærbin" timber is imported into Egypt (Forsk. p. lvi): J. Phœnicia was observed by Pococke in Palestine; by Sibthorp, Bory, and Fraas, frequent and of large size from the Peloponnesus throughout Greece and the Greek islands. Westward, is described by Matthioli 122, and Lobel ii. pl. 221; is termed "cedrus folio cupressi major fructu flavescente" by Tournefort inst. 588; and is known to grow from Italy throughout Southern France and Spain as far as Cadiz (Pers., Bory, and Lenz). "J. Lycia," though described by Matthioli, Lobel, and Tournefort, is regarded by Sibthorp as perhaps not distinct, as seen by him on Crete.

Taxus baccata of Europe and Northern Asia. Called in Britain *yew*, by Chaucer "ewe," by Galfridus pr. pm. "u," in Anglo-Saxon "iw," in Welsh "yw," in Old High German "iwa," in current German "eibe," in France "if," in Spain and Portugal "iva," in mediæval Latin "ivus" or "iva" or "iua" (Prior), in Italy "libo" or "tasso" or albero della morte" (Lenz), in Greece "maurĕlatōs" (Fraas): the "milax" of which some of these images were made — (Paus.) is mentioned also by Pherecrates, Euripides bacch. 108, and Aristophanes nub. 1003; the "milōs" by Theophrastus iii. 10. 2 as resembling "ĕlatē" even in its foliage but bearing a red edible berry, its leaves poisonous to "lophōura" equine animals, and its wood which seems to be all heart-wood fraudulently sold for cedar; the deadly "smilōn" by Andreas, Nicander alex. 624, and Plutarch symp. iii. p. 634: T. baccata was observed by Hawkins, and Fraas, on high mountains of the Peloponnesus and other parts of Greece. Westward, the "smilax" tree according to the received text of Dioscorides iv. 80 grows in Italy and Narbonia bordering on Spain, its berries fatal to "ornithia;" is identified in the added Synonyms, and by Sextius, and Galen simpl. med. viii. 29 with the "taxōn" of the Romans; Cativolcus king of the Eburi according to Cæsar vi. 31 killed himself with "taxo;" noxious and harmless kinds are distinguished by Virgil; the "taxus" is also mentioned by Columella, Lucan, Statius, Silius Italicus, and as the only berry-bearing tree of the spruce kind by Pliny xvi. 20: T. baccata is described by Dodoens, Lobel (Spreng.), and Tournefort inst. 589; is known to grow in mountainous situations in Italy and throughout middle Europe as far as Britain (Pers., and Lenz). Eastward from the Black Sea, was observed by Thunberg in Japan, is known to grow throughout Siberia (Pers.), or according to A. Decandolle two-thirds around the Subarctic circuit of the Globe. The leaves according to an Italian physician "have a power similar to that of Digitalis," in too large doses "certainly fatal" (Lindl.).

1315 B. C. (= 1304 y. 248$\frac{1}{36}$d. + "at least ten years" of Clint. i. p. 301, see Ex. ii. 4 to 8, and Num. xxvi. 59), Miriam born to Amram and Jochebed.

Articles apparently of green *gauze* worn by women on Egyptian monuments of about this date (. . . .). The earliest Greek settlers on the island of Cos, according to the traditionary account (Pausan. iii. 23. 4), came from Epidaurus near Argos: and the art of unravelling cocoons and weaving the thread, was discovered on Cos by Pamphila daughter of Plateo — (Aristot. animal. v. 19). Cos was "thickly peopled" in the days of Homer . . .; and continued to be celebrated in after times for its manufacture of "woven wind." The name of the island, written in Greek "kŏs," is continued in our English word "gauze."

Lilium candidum of middle Asia. Called in English gardens *lily*, in Spain "lirio" (Prior), in Germany "lilie," in Italy "giglio" (Lenz), in Greece "krinō" (Sibth.), at Constantinople "samvahi," on the mountains of Yemen "zambak" (Forsk.), in Egyptian "sumphaiphōu" or "tialōs," by the prophets "āima arĕōs" (Syn. Diosc.), and a plant corresponding in stem and leaves and terminal large flower is figured at Abousimbel: — L. candidum was observed by Clot-Bey confined in Egypt almost exclusively to the pasha's garden; by Forskal, under cultivation among the mountains of Yemen. Northward, the "krinōn vasilikōn" or "lĕirion" or "kallĕirion" is identified in Syn. Diosc.

with the "sasa" of the Syrians, and "aura krōkōthĕilōu" of Osthanes: "lĕiriŏĕssan" is a word used by Homer il. iii. 152, and the "lĕiriōn" is mentioned in the Hesiodic theogon. 41, the Hymn to Ceres 427, Pindar nem. 2. 7, by Dioscorides as coronary and employed medicinally, affording an ointment called "sōusinōn:" L. candidum was observed by Forskal, Sibthorp, and Fraas, frequent in the gardens of Greece; by Hawkins, and Chaubard, in some instances seemingly wild. Westward, the "krinōn vasilikōn" or "lĕiriōn" is identified in Syn. Diosc. with the "avivlavōn" of the Numidians, and "rōsa iōunōnis" or "liliōum" of the Romans; "candĭda lĭlia" and "grandia lĭlia" are mentioned by Virgil; the "lilium" by Horace, Propertius iv. 4, Columella, by Pliny xxi. 11 as one of the tallest flowers, sometimes three cubits high, its neck always bending under a head distinguished for whiteness, the narrow base expanding gradually with lips around turned backwards from central saffron borne on a slender thread; "oleum liliaceum" is also mentioned by Palladius: L. candidum was known to Walafridus Strabus (F. Adams), and Macer Floridus 22; is figured "somewhere about 1480" in an engraving by Martin Schongauer (Lindl. gardn. chron. ii. p. 744); is described by Lobel pl. 183, is termed "l. album vulgare" by Tournefort inst. 369; is a well known garden-flower throughout Europe, and has been found seemingly wild in Switzerland and near Cadiz (Pers.). By European colonists, was carried prior to 1657 to New England (poem Bradf. in hist. coll. iii.), where as well as throughout our Northern and Middle States it continues a favourite in gardens. (See Pancratium Illyricum, and Iris sambucina).

1312 B. C. = "55th year of Ramessu II.," death of one of his sons Shæmuas, who for a long time was governor of Memphis. His mummy — has been found there in the Serapeum, "in one of the chambers of the mummies of the hill Apis" (Birch).

1307 B. C. (= 1240 + "83 years" of ten lunations of Ex. vii. 7), Aaron born to Amram and Jochebed.

Clearly after the birth of Aaron, the Ordinance of the king of Egypt respecting the Israelites: "Every son that is born ye shall cast into the river, and every daughter ye shall save alive" (Ex. i. 22).

As early possibly as this date (Graha Munjari tables, Puranas, and Bentley as. res. viii. p. 232), Galava reigning in Hindustan.

1305 B. C. (= 1304 y. $246\frac{14}{38}$ d. = 1240 + "80 years" of ten lunations of Ex. vii. 7), Moses born to Amram and Jochebed.

Cyperus dives of Tropical marshes from the Red Sea to Hindustan. The flags "swph" among which the infant Moses was placed (ex. ii. 3 to 5), growing along "the brooks of defence" according to Isaiah xix. 6, gave the name "ym swph" (Psalm cvi. 7 to 22 and cxxxvi. 13) to the Red Sea, in Egyptian "phiōm ntshari" (transl. Sept. ex. x. 19), and therefore correspond to the Egyptian "saris" — rendered "calamus" or "juncus" in ms: Borg. (compare also R. Salomo, Forskal p. 24, and C. Mull. geogr. min. i. p. 112): the "sari" is described by Theophrastus iv. 8. 2 to 5 as growing in water in the marshes and flat land of Egypt, its stems thick as the thumb and two cubits high, triangular as in the papyrus with a similar top, and in like manner chewed for the juice: C. dives, four to five feet high with radical leaves three feet long and rough with small prickles, was observed by Lippi, and Clot-Bey, in Egypt, by Delile pl. 4 under cultivation in the wet plains of the Delta, its stems split for making mats. Eastward, was observed by Fresnel at the extremity of the Sinai peninsula near Tor; and is known to grow in Hindustan (confounded according to Delile in herbaria with the next species).

Cyperus alopecuroides of Tropical marshes from the Red Sea to Hindustan. Probably included in the "swph" in question; — observed by Delile intermingled in cultivation with C. dives, and used for the same purpose. Eastward, is known to grow in Tropical Arabia (Pers.); was observed by Graham in the environs of Bombay, by Roxburgh i. 208 in other parts of Hindustan. From transported specimens, is described by Rottboell xxxviii. pl. 8, and Willdenow (Steud.).

The same year = "62d year of Ramessu II.," on a stela — now in Florence; the latest date in his reign found on the monuments.

The same year (= 1365 y. 10 mo. — "61 yrs." in the Afr. Maneth. table), the accession of Mienptah, thirteenth son of Ramessu II. and now fourth king of the Nineteenth dynasty, not earlier than this date. He is next on the monuments, — and immediately follows Ramessu II. in the series of kings at Medinet Abu.

The same year = "1st of Mienptah," in a tablet at Silsilis, recording offerings to the gods Amon-Ra and Hapi — (Birch); the earliest instance known of the worship of Amon, which could not be traced by Lepsius beyond the Twentieth dynasty (Buns. v. 4. 4, see Jupiter).

About three miles beyond Girgeh and on the Eastern margin of the river-flat where some mounds of rubbish mark the site of an ancient city (possibly the lost "Lepidotum"), one of the chambers or tombs excavated in the face of the cliff contains ovals of king Mienptah, — observed by myself.

Nineteenth generation. Jan. 1st, 1300, mostly beyond youth: the Egyptian prophet Amenophis (Maneth. in Jos. c. A. i. 26): Ammihud (Num. i. 10, ii. 18, vii. 48, x. 22, and 1 Chron. vii. 26), Am-

minadab (Ex. vi. 23, Num. i. 7, vii. 12, and Ruth iv. 20), Hepher (Num. xxvi. 33, xxvii. 1, and Josh. xvii. 3), Uri son of Hur (Ex. xxxv. 30): and among Greeks.

The same year (= 1365 y. 10 mo. — "66 y. 2 mo" of Manetho in Jos. c. A. = 1412 y. 2 mo. — "51—61 years" of the Afr.-Maneth. table), Aměnŏphis or Aměnŏphath or Ammĕnĕpthēs, a date possibly marking the great victory gained by Mienptah over the Libyans and their allies invading from the West, the Shakalusha or Sicilians, Tursha or Etruscans, Akaiusha or Greeks, and Luka or Lycians: the number of the enemy slain is set down at "12,535" — on the temple at Medinet Abu. (The date at least is one of the three regarded as established by De Rougé with absolute certainty, De Saulcy acad. inscript. Apr. 7th 1876 in Boston Transcript of May 5th 1876).

Hadad succeeded by Samlah of Masrekah, now fifth king of Edom (Gen. xxxvi. 36, and 1 Chron. i. 47).

1298 B. C. (= 1268 + "30 years" of Euseb. i. and ii., and Syncell.) accession of Balatores or Beletaras as Assyrian emperor; (according to Bion, Alex. Polyhist., and Agath. ii. 25 p. 119) head of a new or Second dynasty.

The same year = "8th year of Mienptah," in private letters — (Birch).

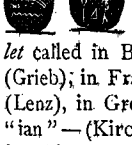
The name of king Mienptah occurs also at San or Zoan, and in his own tomb at Bab-el-meluk (Glid. analect.).

The accession of Seti Mienptah II., a king of the Nineteenth dynasty, not earlier than this date. — He immediately follows Mienptah in the series of kings at Medinet Abu.

The same year = "1st year of Seti Mienptah II.," latest date in the Sallier and similar papyri on the campaigns of Ramessu II. — (Leps. eg. and sin. 394).

1297 B. C. = "2d year of Seti Mienptah II.," on a pillar at Silsilis — (Birch).

On a tablet at Abusimbel, Seti Mienptah II. is represented as a conqueror; his name occurs also at Karnak and Luxor in Thebes, on various stelæ, and in his own tomb at Bab-el-meluk; a fine statue of him found at Thebes — is now in the British museum, the anciently-erased name "Set" showing that the attempted substitution of the god Set for Osiris was subsequent to his reign (Birch, and Glid. analect.).



The name of Amunmessu, a king of the Nineteenth dynasty, occurs in his own tomb at Bab-el-meluk. The name of his wife is also known, but whether he preceded or followed Seti Mienptah II., has not been ascertained — (Birch). He is omitted in the series of kings at Medinet Abu.

Viola odorata of Europe and the adjoining portion of Asia. The *sweet-scented violet* called in Britain *March violet* from the season of flowering (Prior), in Germany "veilchen" (Grieb); in France "violette" (Nugent), in Italy "viola" or "viola mammola" or "mammoletta" (Lenz), in Greece "viŏlĕta" (Sibth.) or "mĕnĕxĕ," in Egypt "benæfsidj" (Forsk), in Egyptian "ian" — (Kirch.): observed in the gardens of Egypt by Abd-allatif, Forskal, Delile, Clot-bey, and found by myself a general favourite. Northward, the "iŏn" or "iŏn" is mentioned by Homer od. v. 73, Pindar, Aristophanes, Plato conv. 212, and Theophrastus; the "iōn pōrphurōun" is described by Dioscorides as having a fragrant flower, its purple portion given as medicine to children; V. odorata was observed by Forskal in gardens at Constantinople; by Sibthorp, and Fraas, in moist shady places on the mountains of Greece. Westward, the "ia" is identified by Pliny xxi. 14 to 76 with the purple-flowered "viola" cultivated as well as growing wild; the "viola" and "violarium" bed of violets, are mentioned by Cicero, Varro, Horace, Virgil, and Columella, the Romans having "a wine made of violet flowers, and it is said they are still used in the preparations of the Grand Signior's sherbet" (Pereira, and Lindl.): V. odorata is described by C. Bauhin pin. 199; is termed "v. martia purpurea flore simplici odoro" by Tournefort inst. 419; was observed by Lenz wild in Italy, is known to grow in shaded situations as far as Denmark (fl. Dan. pl. 309, Pers., and A. Dec.), and is besides cultivated. Eastward from the Mediterranean, is called in Hindustanee "banafsna" or "nafarman" (D'roz.), and was observed by Law cultivated near Bombay (Graham); by Mason, "exotic" in Burmah; by Kaempfer, and Thunberg, in Japan and called "kotjo" or "kotjo so," also "kinsai" or "simire." By European colonists, was carried to Northeast America, where it continues in gardens, and according to A. Gray "sometimes grows spontaneously near dwellings." Its petals according to Lindley are "used as a laxative for children."

1295 B. C. = "1st year of Setnekht Merera Miamun," in a papyrus (Leps. eg. and sin.). His accession not later than this date; and he immediately follows Seti Mienptah II. — in the series of kings at Medinet Abu.

His name occurs at Sarabit-el-Khadim in the Sinai peninsula, in the Queens valley at Thebes, and on a column — now in the British museum (Glid. analect., and Birch).

King Aměnŏphis (according to Manetho) wished the privilege accorded to his predecessor Horus of "seeing the gods:" and under advice from the prophet Aměnŏphis to clear Egypt of lepers

and "other unclean people," assembled all persons labouring under bodily infirmity in the quarries East of the Nile; some "learned priests" being included. The deserted city of Auaris was next granted: when Osarsiph, one of the priests was elected ruler with absolute power. He prohibited marriage outside of the community, and worship of the Egyptian gods; rebuilt the city wall, called Hyksos from Jerusalem, and seizing the granaries gained possession of Egypt (Jos. c. A. i. 26 to 29. Other particulars are given by Manetho, who admits, that the account is not taken from Egyptian records, but from "unascertained writers").

1294 B. C. (= 1280 y. 2 mo. + "13 years" of Manetho in Jos. c. A.), withdrawal of king Amĕnŏphis and the Egyptian army into Ethiopia. Mienptah II. Siptah, regarded by Rosellini as leader of this Second Hyksos invasion, holds the place on the monuments of the seventh king of the Nineteenth dynasty. — He is however omitted in the series of kings at Medinet Abu.

He was placed on the throne by Bai, who with prince Seti of Ethiopia is represented on the monuments as offering homage — (Birch).

Callisto daughter of Lycaon was slain by *Diana;* whose worship and that of her twin brother *Apollo* inaugurated hardly later than this date. — Callisto is alluded to by Pamphos, and her tomb, a mound surmounted with a temple to Diana, was shown in Arcadia to Pausanias viii. 3. 6 and 35. 8.

Some centuries "seculis aliquot" before the Trojan war, building of the most memorable of the Greek temples, that to Diana at Aulis. — All knowledge of the material employed, was lost before the days of Pliny xvi. 79.

Phemonoe, first priestess of Apollo at Delphi, invented or first employed hexameter verse (Strab., Plin., Clem. Alex., and Pausanias x. 5. 7, who however in another place quotes a hexameter distich ascribed to the anterior Peleiads). In augury, Phemonoe used principally the "triorchem," — identified by Pliny x. 9 with the "buteonem" of the Romans (the *buzzard*, Buteo vulgaris).

1290 B. C. (= 1336 — "46 years" of Castor in Euseb. i. p. 129, see also Pausan. ii. 16. 1), in Greece, Iasus succeeded by Crotopus, son of Agenor, and now ninth king at Argos.

Lycaon succeeded by his son Nyctimus, third king of Arcadia (Eumel., Asius, and Paus. viii. 3).

Aided by Nyctimus, his younger brothers Oenotrus and Peucetius led a colony into Italy; the earliest Greek colony, and so far as known to the Greeks, the earliest of all foreign settlers (Pherecyd., Antioch., Apollod. iii. 8. 1, and Paus.). Italy was found to be inhabited by the *Umbrians*, "a very ancient people" dispersed over many parts of the country; and the Greek settlers — with their descendants became the people called "Aborigines," who are known to have subsequently welcomed a body of Pelasgians, and at a later date the companions of Evander (Cato, C. Sempron., and Dionys. i. p. 27).

"In the reign of Crotopus" (Tat., and Clem. Alex.), and "five generations" after their first settlement (Hellan., and Dionys. i. p. 45), the Pelasgians expelled from Haemonia or Thessaly by Curetes, Leleges (Laconians), and others, led by Deucalion. The event is sometimes termed "the Deluge of Deucalion," and is regarded as the beginning of *Hellenic ascendancy;* the name being derived from Deucalion's son Hellen, who now became ruler of the "Dorians" in Phthiotis (Herodot. i. 56).

Of the expelled Pelasgians, a band proceeded by the way of Dodona into Italy, and producing an *oracle* were received in a friendly manner by the "Aborigines" (prior Greek settlers), and were allowed to reside in Velia. The reinforced Aborigines, now able to repel the Sicels, seized Croton a town of the Umbrians, occupied Caere or Agylla, — Pisa, Saturnia, Alsium, and other towns which they gradually took from the Tuscans, and penetrated into the Campania, where they founded among other towns Larissa, so named from a Larissa of their own in the Peloponnesus (Diodor. xiv. 118, Strab. v. p. 220, and Dionys. i. p. 45).

Other expelled Pelasgians joined the Expedition to Lesbos under Macar son of Crinacus, and helped form a second settlement on that island — (Diodor. v. 81, Dionys. i. p. 47, see also Hesiod, and Homer).

The name of Siptah occurs at Silsilis, also on the Ramesseum at Thebes, — and with that of his wife queen Tasesurt in his tomb at Bab-el meluk (Glid. analect.).

At the end of "thirteen years exile" (Maneth.), Merera-Miamun recovered his kingdom, — and was buried in the appropriated tomb of Siptah at Bab-el-meluk.

1281 B. C. (= 1299 y. 8 mo. — "19 y. 6 mo." of Manetho in Jos. c. A. = 1412 y. 2 mo. — "51 — 61 — 20 years," 1071 + "209 years" of the Afr.-Maneth. table = 1280), accession of "Sĕthŏsis and Ramĕssĕs:" or Merera Miamum succeeded by his son Ramessu III., second king of the Twentieth dynasty. — He immediately follows Merera in the series of kings at Medinet Abu.

1277 B. C. = "5th year of Ramessu III.," the Libyans and their confederates defeated with great slaughter — (Birch).

1274 B. C. = "8th year of Ramessu III.," a fleet having been prepared, the enemy defeated in the earliest *naval combat* on record; represented on the main hall of the great temple at Medinet Abu; and (on comparing the historical account in Manetho and the statement of the Egyptian priests to Germanicus, Tacit. ii. 60) the two foreign nations fighting the Egyptians should be the Phoenicians, and people of Cyprus. The foreign ships were probably built of timber from Syria and the neighbouring portion of Asia Minor. The Egyptian ships are similar in form; and one of them, — a few years later may have brought Danaus into Greece; the celebrated "pĕntēkōntōrŏs" or first large galley seen by the Greeks.

1273 B. C. (= 747 + "526 years" of Berosus in Alex. Polyhist., and Euseb. i. 4. p. 18, Berosus using the Era of Nabonassar and placing Phul and Sennecherib afterwards), accession over Babylon of the Assyrians: — a series of "forty-five" successive kings. (See below Sosares.)

"In the reign of Crotopus" (Tat., and Clem. Alex.), the conflagration through Phaethon; a historical person — (according to Hellanicus, and Apollodorus).

As the sisters of Phaethon were transformed into poplars, whose tears along the "Eridanum by us called Padum" become *amber* (Apollon. Rhod. iv. 506, Diodor. v. 23, and Pliny xxxvii. 11), this fossil gum of the shores of the Baltic may now have first reached the Mediterranean countries: the transfer to the Po of the name of the Rhine "ērīthanōn" (see Choerilus) indicates the route across Switzerland through the Greek or St. Gothard pass; and bits of amber have been found among debris of Swiss lake-villages of the Stone age: — also, in prehistoric tombs in Italy between Albano and San Marino (see Troyon p. 254 and 288); the palace of Menelaus (according to Homer) was ornamented with amber; "ēlĕktrōn" or amber is mentioned by Hesiod (Hygin. 154), Herodotus iii. 115, and Timaeus (Plin. iv. 27); and the amber district on the Baltic, was visited by sea by Pytheas from Massilia. Among the Orientals, I found amber in request in Egypt, highly prized to the present day.

Of other foreign articles brought into Switzerland in connexion possibly with the amber traffic, Oriental *nephrite* from Turkestan in Asia, white *coral* from the Mediterranean, and *serpentine* and *flint* chiefly from France, have been found among debris of early lake-villages (Troyon p. 288).

Trapa natans of Eastern Asia. Called in Britain *water-nut* or *saligot*, in France "saligot" (Prior, and Nugent), in Germany "wassernuss," in Italy "castagna acquatica" or "tribolo acquatica" (Lenz), in China "lin-kio" (Cibot): possibly introduced into Switzerland as early as this date, for remnants occur in the debris of lake-villages, — and the plant no longer grows in that country (Haller 527, and Troyon p. 279); since the days of Lyte 536, has also disappeared from Britain, and when once transported to a new locality is known to maintain itself for a long series of years (A. Dec. g. b. 634 and soc. vaud. 1859): the "trīvōlōs ĕnuthrōs" was eaten as bread by the Thracians (Dioscor., and Plin. xxii. 12); is described by Theophrastus iv. 9. 1 as growing not in all waters but in the deep pools of rivers: T. natans is termed "castaneas ferrarienses" by Hermolaus Barbarus (Spreng.), "tribuloides vulgare aquis innascens" by Tournefort inst. 655; is described by Lobel hist. 324, and Camerarius pl. 715; is known to occur in Italy and middle Europe as far as Denmark (Pers., and Fries); and was observed by Sibthorp in Greece. Farther East, is known to grow around Caucasus and in Siberia (A. Dec.); was observed by Royle abounding in the lakes of Cashmere (Graham); by Cibot, under cultivation in China (mem. Chin. iii. 451); and by Thunberg in Japan, the roots cooked and eaten. Was observed by Grant at "2° N. in the Nile," also around the margin of Lake Victoria N'yanza, the nuts eaten by wild boars, gathered also by the Waganda, but the name "singara" indicates introduction from Hindustan (see T. bicornis).

The above Greek legend seems to imply that the basin of the Po was already dyked out and planted with poplars; — a very conspicuous feature in the landscape to the present day, *P. nigra* being rendered unnaturally tall by pruning, preventing the growth of large branches: an art known perhaps in the days of Homer od. vii. 106, who speaks of the "makĕthnēs" high-tapering "aigĕirōiō," clearly implied in "procerissimas populos" of Cicero, and "populus" devoid of shade of Pliny xvii. 18: the "populus fluviali consita ripa" planted on the river-bank, is mentioned by Ovid.

Populus tremula of Europe and Northern Asia. Called in Britain *aspen*, by Chaucer "aspe," in Anglo-Saxon "æsp" or "æpse," in Germany "aspe," in Old High German "aspa," in Old Norse "espi" (Prior), in France "tremble" (Nugent), in Italy "tremolo" or "tremula" or "populo montano" (Lenz); used occasionally for piles or posts of the early lake-villages of Switzerland (Troyon p. 16), and perhaps already planted along the Po, — where I found the tree rendered tall with the preceding, so as to be distinguished only on near inspection: the industrious ever-moving leaves of the "makĕthnēs aigĕirōiō" of Homer od. vii. 106 seem to belong here, as well as the leaf-stalk "tremulo populis et iisdem solis inter se crepitantia" of Pliny xvi. 38: P. tremula is known to grow from Italy throughout middle and Northern Europe (Engl. bot. pl. 1909, and Lenz); was observed by Sibthorp from Boeotia to mount Athos, by him and Belon, in the environs of Constantinople; by Clot-Bey and Figari, in the gardens of Egypt; is known to grow wild throughout Northern Asia, or according to A. Decandolle two-thirds around the Subarctic circuit of the Globe.

A trade-route from the Po along the Rhine to the Baltic implies the existence of population more or less scattered; and the following fruits, seeds, and roots, growing wild and affording sustenance, occur in debris of the earliest lake-villages of Switzerland (Heer and Troyon 445 to 465): *beech-nuts*, Fagus sylvatica; *filberts*, Corylus avellana; *wild apples; bird cherries*, Cerasus padus; *blackberries*, Rubus fruticosus; *elder berries*, Sambucus nigra; *yew berries*, Taxus baccata; and

Prunus spinosa of Europe and the adjoining portion of Asia. A rigid spinescent bush called in Britain *blackthorn* or *sloe*, in Lancashire "slaigh" or "sleawgh," in Old English "sle," in Anglo-Saxon "sla-" or "slag-" or "slah-thorn," in Danish "slaaen," in Swedish "sla," in Dutch "slee," in German "schlehe," words connected with slaying or striking (Prior), in France "prunellier" (Nugent), in Italy "prugnolo" or "susino selvatico" (Lenz), in Greece "tzapōurnia" or "mámōusia" (Sibth.); and its fruit found in debris of the earliest lake-villages of Switzerland (Heer): the "spōthias" as if an "agria kōkkumēlĕa" is mentioned by Theophrastus iii. 6. 4, Dioscorides i. 174, and Athenaeus ii. . .; the "prunus silvestris" by Columella ii. 2. 20, "silvestrium prunorum baccae" by Pliny xv. 13 and xxiii. 68, and the "spinifera prunus" by Palladius xiv. 81: P. spinosa is termed "p. sylvestris" by Tournefort inst. 623; is known to grow from Italy throughout middle Europe as far as Britain (Pers., Engl. bot. pl. 842, and Lenz); was observed by Sibthorp, and Fraas, frequent in thickets in Greece and hedges around Constantinople; and farther East, was observed by Thunberg in Japan. By European colonists, was carried to Northeast America, "road-sides and waste places, E. New England, Penn., etc." (Pursh, and A. Gray). The juice according to Lindley "is a substitute for catechu," and "is said to be used in factitious or adulterated Port wine."

Rubus Idaeus of Europe and Northern Asia. Called in Britain *raspberry*, in France "framboise" (Nugent), in Germany "himbeere" (Grieb), in Italy "lampone" or "lampione" or "ampomelle" (Lenz), in Greece "ămĕra vata" (Fraas); and its fruit found in debris of the same lake-villages (Heer): the "vatōs ōrthōphuēs" of Theophrastus iii. 18. 4, and "vatōs ithaia" abounding according to Dioscorides on mount Ida, are referred here by writers; the "idaeus rubus" seeming known to Pliny xvi. 71 and xxiv. 75 chiefly from Dioscorides: R. Idaeus was cultivated in middle Europe in the medieval period (A. Dec.); is described by Ruellius, and Turner; is termed in its wild state "r. idæus spinosus" by Tournefort inst. 614; is known to grow wild from the mountains of Northern Italy to Lapland (fl. Dan. pl. 788, Pers., Wats., and Lenz); was observed by Sibthorp, Chaubard, and Fraas, on high mountains from the Peloponnesus to the Bithynian Olympus; by Forskal, in the gardens of Constantinople; is known to grow on the subalpine portion of Caucasus (Bieb.); and farther East, was observed by Thunberg in Japan and called "itsingo." By European colonists, was carried to Northeast America, where in our Northern and Middle States it continues sparingly cultivated.

Cornus sanguinea of Europe and Northern Asia. A shrub called in Britain *cornel* or *dogwood* (Prior), in Germany "rother hartriegel," in Italy "verga sanguigna" or "sanguinello" (Lenz), in Greece "maurōvĕrgia" (Sibth.); its berries found in debris of the same lake-villages (Heer): the "thēlukranĕia" of Theophrastus i. 8. 2 to iii. 12. 1, and "femina cornus" and "sanguinei frutices" of Pliny xvi. 30 to 43, are referred here by writers: C. sanguinea is termed "c. fœmina" by Tournefort inst. 641; was observed by Lenz frequent in Italy; is known to grow throughout middle Europe as far as Sweden (Engl. bot. pl. 249, and Wats.); was observed by Sibthorp, and Fraas, from the Peloponnesus to the Bithynian Olympus; and according to Clot-Bey and Figari has been recently introduced into the gardens of Egypt. Eastward, is known to grow throughout Siberia (Pers., Dec., and Wats.); and was observed by Thunberg in Japan.

Betula alba of Europe and Northern Asia. Called in Britain *birch*, in Anglo-Saxon "birce" or "byrc" or "beorc," in Icelandic and Swedish "biork," in Danish "birk," in Dutch "berke," in Low German "barke," in Old High German "piricha," in Russian "bereza," names giving rise to the Latin "barca" and English "bark" in its double signification of tree-rind and vessel, birch-bark being used for boat-building to the present day in Northern Europe (Prior), in France "bouleau" (Nugent), in Italy "bedollo" or "betula" (Lenz). Furnishing some of the piles of posts on which the earliest lake-villages of Switzerland were built (Troyon p. 16); buried also in the submarine forests along the coast of France and Britain, and in peat-bogs on the Faroe Islands — where it no longer grows (Beudant, and Martins): the "betulla" is described by Pliny xvi. 30 as growing in Gaul, a tree of cold climates and marvellous whiteness, "terribilis magistratuum virgis;" B. alba was observed by Lenz on the mountains of North Italy, is known to grow on Etna and throughout middle and Northern Europe as far as Lat. 70° 40′ in Lapland, and in rare instances in Interior Iceland (Wats., and A. Dec.). Eastward, was observed by Clot-Bey in the gardens of Egypt; is known to grow on Caucasus, and from Lat. 37° on the East side of the Caspian to the Altaian mountains, Lat. 68° on the Jenisei, 58° in Kamtschatka, Daouria (Wats.), and Japan (Thunb.).

The remaining piles or posts are mostly of "pommier sauvage," *Malus sylvestris;* "chêne" or *oak*, Quercus robur; "hêtre" or *beech*, Fagus sylvatica; "ormeau" or young *elm;* and "sapin," *Abies excelsa* — (Troyon p. 16 to 40).

Nymphæa alba of Europe and the adjoining portion of Asia. Called in Britain *white water-lily* (Prior), in France "nuphar blanc" (Fée), in Germany "weisse seerose," in Italy "ninfea" or "ninfea bianca" or "carfano femina" (Lenz), in Greece "nĕrōkōlōkuthia" (Sibth.); and remnants found in debris of the same lake-villages — (Heer): the "sithē" with leaves and rose-like flower floating upon the Orchomenian lake and seeds eaten according to Theophrastus iv. 10. 1 to 7, known in the same locality to Nicander ther. 887, mentioned also by Athenaeus xiv. 53, and the white-flowered "numphaia" of Dioscorides growing in rivers of the Peloponnesus, are referred here by writers: the "nymphaea" with a flower "lilio simili" is identified by Pliny xxv. 37 with the "heracleon" or "rhopalon;" and according to Marcellus Burdigalensis its clavate root is called by the Gauls "baditin" (Spreng.): N. alba is termed "n. alba major" by Tournefort inst. 260; was observed by Lenz in Italy; is known to grow also in Sicily, Sardinia, Algeria, Spain, and throughout middle and Northern Europe as far as the Shetland Islands and Lapland (Munby, Guss., Wats., Fries, and A. Dec.); was observed by Sibthorp, and Fraas, from Zacynthus and the Peloponnesus to Thessaly and Bithynia. Its root-stock according to Lindley is "astringent," and "is occasionally chewed by singers to relieve the relaxation of the uvula."

Nuphar lutea of Europe and the adjoining portion of Asia. Called in Britain *yellow water-lily* (Prior), in France "nenuphar jaune" (Fée), in Germany "gelbe seerose," in Italy "ninfea gialla" or "nannunfero" or "carfano maschio" (Lenz), in Greece "nupharŏn" or "nōunōupharōn," or by the Turks "pufer ciceghi" (Sibth.), and remnants found in debris of the same lake-villages — (Heer): the sweet-rooted "numphaia" growing according to Theophrastus ix. 13 in lakes and marshes from Crete to the Orchomenian district, and called "mathŏnia" by the Boeotians who eat its fruit, is referred here by writers: the "allē numphaia" is described by Dioscorides as having yellow flowers and growing about the river Peneus in Thessaly; is identified in the added Synonyms with the "numphŏna" whose flower is called "nōuphar;" but seems known to Pliny xxv. 37 only from Dioscorides: N. lutea is termed "n. lutea major" by Tournefort inst. 261; was observed by Sibthorp from Thessaly to Constantinople, and a refrigerating drink made from the flowers by the Turks; was observed by Lenz frequent in North Italy; is known to grow also in Sicily, Sardinia, and throughout Europe as far as Finland (fl. Dan. pl. 603, and Pers.), its roots and leaf-stalks eaten by the Finns and Russians (Linder venen. p. 651, and Spreng.). Eastward from Russia, has been observed only in the neighbouring portion of Siberia (Ledeb.), its presence in Japan alleged by Thunberg, requiring confirmation (A. Dec.). The root-stock according to Lindley "has been reputed sedative and anti-aphrodisiac."*

Of quadrupeds inhabiting Switzerland during the Stone age, the main sustenance of the inhabitants, and found in debris of the earliest lake-villages, the following are enumerated by Rütimeyer (Troyon p. 271 and 442):

The *elk*, Cervus alces. — A "peculiar" animal, having the form of the stag with the neck and hair of a boar "kaprŏ," and under the chin a hairy appendage a span long and as thick as a colt's tail, is attributed to the Alps by Polybius (Strab. iv. 6. 10). The "alcem" is also mentioned by Pliny viii. 16, and as not unlike the reported "achlin" of Scandinavia. At the present day, the elk is confined to the Scandinavian peninsula, and Russia as far as Poland (see Heer):

The *urus*, Bos urus. — "Vōēs agriōi" are mentioned by Herodotus vii. 126; and are attributed to the Alps by Polybius (Strab. iv. 6. 10). The "urus" is described by Caesar as resembling a bull, but larger and very swift: according to Pliny xi. 45, "urorum cornibus barbari septemtrionales potant," the barbarians of the North use horns of the urus for drinking-cups; the "ōurŏs" is also described by Epiphanius expos. iii.: and from this animal (according to Heer), the Swiss canton of Uri derives its name, the head being figured to the present day on the escutcheon. The urus, after long continuing frequent throughout middle and Northern Europe, gradually became rare, and in the "Seventeenth" century disappeared. The name however is retained in French dictionaries; and we have a relic in the English phrase "to take a horn;" explicable by Pliny's account of the habits of our ancestors living on continental Europe:

The *bison*, Bos bison. — The "vōnasōs" by the Paeonians called "mōnapōn," described by Aristotle anim. ix. 45 as inhabiting the country North of Macedonia, is clearly the bison: the brazen head of a "visŏnōs" or Paeonian bull was sent by Dropion Deontis king of the Paeonians to Delphi (Paus. x. 13. 1); and Pliny viii. 15 and 16 speaks of the "iubatos bisontes" of Germany. The bison, once known throughout middle and Northern Europe, is described by Heer as a fierce animal, now restricted to a forest in Lithuania and to Caucasus:

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* *Nuphar pumilum* of middle and Northern Europe. Remnants of the dwarf *yellow water-lily* are found in debris of the same lake-villages — (Heer), at the present day growing in but one of the lakes of Switzerland (Troyon p. 445): known however to grow in Germany and Sweden (Timm, Willd., and Wahlenberg).

The *brown bear*, Ursus arctos; *badger*, Melēs vulgaris; *martin*, Mustela martes; *pine martin*, M. foina; *polecat*, M. putorius; *otter*, Lutra vulgaris; *fox*, Vulpes vulgaris; *European wildcat*, Felis catus; *hedgehog*, Erinaceus Europæus; *squirrel*, Sciurus Europæus; *wild boar*, Sus scrofa, and a race inhabiting the marshes, smaller with short tusks; and the *roebuck*, Cervus capreolus:

Of birds, the *kite*, Falco milvus; *falcon*, F. palumbarius; *sparrow-hawk*, F. nisus; *pigeon* in the wild state, Columba palumbus; mallard or *duck* in the wild state, Anas boschas; *teal*, "A. querquedula?;" and the *heron*, Ardea cinerea:

Of reptiles, the *box-tortoise*, Cistudo Europæa; and the *frog*, Rana esculenta: and of fishes, the *pike*, Esox lucius; *carp*, Cyprinus carpio; and *bleak*, C. leuciscus.

1271 B. C. = (1238 + "40 years" of ten lunations of Josh. xiv. 7), Caleb born to Jephunneh.

The same year (= "200 years before the fall of Troy" of Bocchus), Saguntum in Spain founded, and a temple built there to Diana. — The temple was spared by Hannibal from religious motives, and with the original rafters continued extant in the days of Pliny xvi. 79.

Juniperus communis of Europe and Northern Asia. Called in Britain *juniper*, in France "genevrier" (Nugent), in Germany "wachholder," in Italy "ginepro" (Lenz), on mount Athos "kĕthrōs" (Sibth.), in which we recognize the "juniperi" rafters of this temple, — the tree according to Pliny xvi. 30 to 78 growing very large in Spain, growing also on the mountains of Italy, and its timber incorruptible and equalling "cedro:" "juniperi gravis umbra" is mentioned by Virgil, and the "iōuniperōum" of the Romans is identified in Syn. Diosc. i. 103 with the "iōupikĕllōusōn" of the Gauls: J. communis is termed "j. vulgaris fruticosa" by C. Bauhin pin. 488, and Tournefort inst. 588; was observed by Lenz frequent on the hills and mountains of North Italy; by Forskal, near Marseilles; is known to grow throughout middle Europe, and in a dwarfed form as far as the Shetland Islands, Sweden, Lapland, and Iceland (Hook., Wats., and A. Dec.). Eastward, was observed by Sibthorp on mount Athos and the Bithynian Olympus; and is known to grow throughout Siberia as far as the mountains of Daouria (Gmel., and Pall.). By European colonists, was carried to Northeast America, where I have observed it occasionally planted for ornament in our Middle States. Its berries are employed medicinally, and the oil is said to be "the most powerful of all diuretics" (Alexand., and Lindl.).

Death of Linus, infant son of Psamathē the daughter of Crotopus. On this occasion (according to Conon, Ovid, Statius, and others), the "linōs" was composed: a *poem* however claimed as an imitation or translation from the Egyptian — (see Herodot. ii. 79). The "linōs" is mentioned by Homer il. xviii. 570; and some fragments are extant. The village of Psamathon ("psamathēithas" Nic. ther. 887) near the Orchomenian lake seems to have been named from Psamathē.

The same year = "11th year of Ramessu III.," his victory over the Mashuasha and Tahennu — (Birch).

1269 B. C. (= 1290 — "21 years" of Castor in Euseb. i. p. 129, Pausan. ii. 16. 1 . . . .), in Greece, Crotopus succeeded by his son Sthenelas, tenth king at Argos.

After subduing the Assyrians and Medes, and overthrowing the cities and kingdoms of the East, Ramessu III. recalled with his army by a *letter* from the chief-priest, giving information of the misconduct of his brother at home (Manetho in Jos. c. A. i. 15).

1268 B. C. (= 1236 + "32 years" of Euseb. i. and ii.), accession of Lamprides as Assyrian emperor. "Thirty" years only, are assigned to his reign by Syncellus.

"The same year" (= 1258 + "10 years" of Isocr. . . . , Apollod., Pausan., and others), arrival of Danaus at Lindus in Rhodes. Being (according to Manetho in Jos. c. A. i. 15) no other than Armais the expelled brother of Ramessu III. Among other inventions brought by him to Greece, are enumerated: "uthrĕia" wells, or perhaps *pumps* for raising water (Strab. i. 2. 15 . . . . and Blair).

The upper portion of the temple at Medinet Abu bears representations of Ramessu III. playing games, like draughts or chequers, with his daughters: the origin apparently of the Greek legend of the "fifty daughters of Danaus."

The main hall at Medinet Abu exhibits the battles of Ramessu III., and notwithstanding the vast expanse of wall, seems barely to afford room: nations not previously figured make their appearance in his campaigns.

The *domestic pigeon*, Columba palumbus, has been already noticed as a hieroglyphic character: but at Medinet Abu, a bird bearing little outward resemblance, is from the attendant circumstances referred by Wilkinson to the *carrier pigeon*. — The "aggĕlōnta pĕristĕran" or messenger pigeon, is mentioned by Pherecrates, Athenæus, the pseudo-Anacreon, and Maundeville x.

Ninety-first generation. May 1st, 1267, mostly beyond youth: Elishama (num. i. 10, vii. 48, and 1 Chron. vii. 26), Nahshon (ex. vi. 23, num. i. 7, vii. 12, Ruth iv. 20, and 1 Chron. ii. 10), Zelophehad (num. xxvii. 1 to 3, Josh. xvii. 3, and 1 Chron. vii. 5), Korah (ex. vi. 21, num. xvi., and 1 Chron. vi. 22), the artisans Bezaleel and Aholiab (ex. xxxi. to xxxviii, and 1 Chron. ii. 20): and among Greeks, Electra mother of Dardanus (Apollod. iii. 12. 1).

Samlah succeeded by Shaul or Saul of Rehoboth, sixth king of Edom (Gen. xxxvi. 37, and 1 Chron. ii. 10).

The same year = "15th year of Ramessu III.," on the monuments — (C. Mull. fr. Man. p. 589).

Ships of war first employed on the Red Sea by ("Sesostris," according to Herodotus ii. 101, meaning probably) Ramessu III.

The same year (= 1257 + "9 years" of Castor in Euseb. i. p. 134), Cecrops succeeded by Cranaus, third Attic king (reigning however according to some authorities as early as Deucalion's conquest, Apollod. iii. 14, 15).

"1265 B. C. = 1st year of Tsou-keng, of the Chang" or Fourth dynasty — (Chinese chron. table).

In the "sixth generation" before the fall of Troy (Clint. i. p. 45 to 56), first appearance of Aeolus or Aeolic Greeks in Thessaly.

Nyctimus succeeded by Arcas (of the "sixth" generation before the fall of Troy, Clint.), son of Callisto and now fourth king of Arcadia (Paus. viii. 4. 1).

1259 B. C. (= 1247 + "12 years" of Apollod. iii. 14. 15, Castor giving only "10 years"), and "in the reign of Sthenelas" (Tat., and Clem. Alex.), Cranaus expelled by his son-in-law Amphictyon, now fourth Attic king: a "son of Deucalion," and therefore Hellenic in opposition to the Pelasgians. — The tomb of Cranaus in the demos of Lamprae continued extant in the days of Pausanias i. 31. 3.

"1258 B. C. = 1st year of Tsou-kia, of the Chang" or Fourth dynasty — (Chinese chron. table).

The same year (= 1269 — "11 years" = 991 + "105 + 162 years" of Castor in Euseb. i. p. 129 to 131, see also Apollod. ii. 1. 4, and Pausan. ii. 16. 1 and 19. 3), in Greece, by consent of the people and of Gelanor son of Sthenelas, Danaus made eleventh king at Argos.

The acropolis at Argos (according to some authorities, Strab. viii. p. 371) built by Danaus, received the name of "larissa;" and from this spot, the migrations of the Pelasgian Greeks can be traced by a city of this name founded in each new settlement. Seventeen Larissas are enumerated: including one, only "thirty-five" miles from Nineveh; one in Lydia; one mentioned by Homer under the name of "Argissa," in Thessaly; one in Mitylene; two in Crete; one in Attica; and one in Italy (Xenoph., Dionys., Strab., Pausan., Stephan. Byz., and Clint. i. p. 25).

The same year = "24th year of Ramessu III.," on the monuments (Champ.-Fig. p. 347). His name is also inscribed on an older obelisk, — the one removed to and now standing at Alexandria (Leps. eg. and sin. p. 42).

"1257 B. C. = 2d year of Tsou-kia" (Chinese chron. table), beginning of the Twenty-fourth cycle.

As early perhaps as this date (Graha Munjari tables, Puranas, and Bentley as. res. viii. p. 232), Causica reigning in Hindustan.

1256 B. C. = "26th year of Ramessu III.;" the latest date in his reign found on the monuments — (Leps. k. tab. p. 19).

 (two heads, a man looking inward, and a woman looking outward, signifying "phulaktēriōn" safeguard or amulet, Horap. i. 24); "nahvi." head; "natsh" protection; "natshpēri" charm, amulet; "vǭn" amulet, evil eye, "vōōnē" hurt, damage, (the superstition of the *evil eye* being at least as ancient as this date). — The character occurs under the Seventh Ptolemy (Leps. d. iv. pl. 25).

Strings of a great variety of small articles in pottery or carved in stone are found on Egyptian mummies, — and one of these strings carried by myself to Zanzibar was recognized by a native as an *amulet:* those tied around the head of Zanzibar infants differing merely as I soon perceived in the selection of natural objects. Northward from Egypt, the amulet "pĕriaptōn" is mentioned by Plato polit. iv. 426; "vaskania" witchcraft and the envious eye, by Plato phaed. 100, and Demosthenes coron. 291. 21: and in Italy we find "fascia" and "fascinum," the god "Fascinus," and "amuleti" tied on infants (Plin. xxviii. 7 and xxxvii. 12. See phylactery).

In the reign of Ramessu III., ornamental wood-work carried to great perfection at Thebes. In his tomb at Bab-el-meluk, cushioned chairs are figured; with other *cabinet furniture*, richly carved, and in some instances presenting unexpected coincidence with the most approved patterns of the present day.

Lagenaria vulgaris of Eastern Hindustan.. The *gourd* is called in France "gourde" or "calebasse" (Nugent), by the Turks "tatli-chappach," in Yemen "dubba dybbe" (Forsk.) and one variety in Egypt "qara debbeh" (Del.), in Egyptian "shlō" (ms Par.) or "fĕnt-shlōt" (transl. Sept. Jonah iv. 6), and the Cucurbitaceous plant without flowers or fruit figured in this tomb — and that of a later king of the same dynasty, seems to correspond: the "kara" is mentioned by Ebn Baitar; and L. vulgaris was observed in Egypt by Abd-allatif, Forskal, Delile, and by Rauwolf in Syria. Farther North, the "kōlōkuntē" is mentioned by Hermippus, Aristophanes, Theophrastus, its "lily-like" flower by Diphilus, and Zenobius, and the "kōlōkuntha" by Dioscorides as edible and holding wine; the "cucurbita" is mentioned by Cato, by Varro as curved in shape, by Propertius as swollen at one

end "tumido cucurbita ventre," by Pliny xix. 24 as used to hold water as well as wine and sometimes "novem pedum longitudinis" nine feet long: "calabazas" are enumerated by Herrara in 1513 as cultivated in Spain; L. vulgaris is described by Ruellius, Brunfels iii. 189, and Lobel; was observed by Forskal in gardens at Constantinople, by Bory under cultivation in several varieties in the Peloponnesus, and by myself its cooked fruit in Mediterranean steamships. Southward from Egypt, was observed by Forskal under cultivation in Yemen; by myself, at Muscat, and ascertained at Zanzibar to be cultivated by Negro tribes as far inland as N'Yasa lake. Eastward, is mentioned in the Institutes of Manu (transl. Deslongch.); is called in Sanscrit "ulava" or "ulavoo" (Roxb., and Pidd.), in Bengalee "lau" or "kadu," in Hindustanee "petha" or "kumdha" or "lauki" or "kadu" (D'roz.), in the environs of Bombay "hurrea kuddoo" the fruit "of great importance to the natives as an article of food" (Graham); was observed by Rheede viii. pl. 1 in Malabar, cultivated and growing spontaneously; and a bitter kind called in Sanscrit "kutoo-toombee," growing in the humid forest near Deyra Doon in Eastern Hindustan, is regarded as indigenous by Roxburgh, and Royle him. p. 218. Farther East, was observed by Mason "exotic" in Burmah and called "boo-hsen-sway;" by Loureiro p. 728 in Cochinchina; by Van Braam in China (A. Dec.); by Kaempfer, and Thunberg, in Japan and called "feo" or usually "nari finango;" by Blanco on the Philippines, and called in Tagalo "tabayag" and one variety "opo;" by Rumphius v. pl. 144 under cultivation on the Moluccas; by myself, from the Malayan archipelago to New Zealand and throughout the Feejeean, Tongan, Taheitian, and Hawaiian islands, aboriginally introduced and cultivated; but the variety with giant fruit, the shell substituted for casks and trunks, confined to the last-named locality. Eastward from the Polynesian Groups, a peculiar variety with small yellow depressed fruit was observed by myself in debris of the Ancient Peruvian cemetery at Pachiçamac, also recent in the Lima market; L. vulgaris was already in the West Indies when first visited by Columbus (F. Columb. 24), and "calabaças" of all the forms known in Spain were cultivated in the West Indies and Nicaragua in the days of Oviedo nat. hyst. 8o and gen. hist. vii. 8.

1248 B. C. (= 1281 — "33 yrs." of Diodorus i, 58), end of the reign of Ramessu III. He appears to have been the "king of Egypt" who "sought to slay Moses" (ex. ii. 15 and 23 to iv. 19).

Armais the expelled brother was called by the Greeks Danaus, and Egypt derived its name from Ramĕssēs (Manetho in Jos. c. A. i, 15, meaning of course its Oriental name "Mussera"). Confirmation is found in Gen. xlvii. 11, and in the Greek traditionary account of the hero Aiguptōs. Ramĕssēs therefore limits the antiquity of the Mizraim of the Hebrews, and Ermes or Hermes of the Greeks.

Allium Dioscoridis of the East Mediterranean countries. The "mŏlu" with milk-white flowers and black root indicated by Ermes for protection against enchantments — (Hom. od. x. 305, and Plin. xxv. 8), described by Theophrastus ix. 15. 7 as growing about Pheneum and Cyllene with scilla-like leaves and a round onion-like root, by Dioscorides as having grass-like leaves spreading on the ground from a small bulbous root and a slender stem four cubits high and garlic-like at the summit, is referred here by Sibthorp: A. Dioscoridis was observed by him in shaded bushy places from Mysia in Asia Minor to Cyprus, its stem sometimes three to four cubits high, flowers white somewhat resembling those of Peganum harmala, in accordance with the statement of Dioscorides iii. 46, but there are no specimens for verification.

Peganum harmala of the Desert and its Northern border from the Atlantic to Hindustan. Called in Greece "vrŏmōsōuĕrkōs" (Fraas) or "vrōmōhōrtarō," or by the Turks "yserlich," in Egypt "ghalget ed dib" or "harmal" (Forsk.), in which we recognize the "armala" identified in Syn. Diosc. with the "ĕpnōuvōu" of the Egyptians, "vēsasa" of the Syrians, "mŏlu" of the Cappadocians and Galatians, — and "pēganōn agriŏn" having according to Dioscorides many stems from one root, strong-scented leaves, and white flowers: the "vēsasa" according to Galen comp. med. loc. ix. p. 257 is seed of the "agriŏu pēganōu" growing in Syria and called there "armala:" P. harmala was observed by Forskal, and Delile, in the Desert from Alexandria as far as Cairo, and Belon found its seeds used continually by the Arabs as a safeguard against evil Spirits; was observed by Forskal, Sibthorp, Chaubard, and Fraas, from Crete and the Peloponnesus as far as Tenedos. Westward, the "pēganōn agriŏn" is identified in Syn. Diosc. with the "hōurma" of the Numidians; P. harmala is termed "harmala" by Tournefort inst. 257; is known to grow in Italy, Sardinia, Algeria, and Spain (Pers., and A. Dec.). Eastward from Syria, is known to grow around the Caspian, and from the Crimea to the Ural mountains near Lat. 51°, and the Alatau mountains in Tartary (Ledeb.); to Northern Hindustan (Royle), and within the Tropics "in considerable abundance on the ruins of Beejapoor," regarded by Graham as possibly "introduced by the Muselmen?".

Mercurialis annua of the Mediterranean countries. Called in Britain *French mercury*, in Germany "bingelkraut" or "kuwartz," in Old French "cagarelle" (A. Dec.), in Italy "mercorella" or

"mercuriale" (Lenz), in Greece "skarōlahanōn" or "skullōlahanōn" (Sibth.), in which we recognize the "ĕrva mĕrkōurialis" identified in Syn. Diosc. with the "aphlōphō" of the Egyptians, said to have been discovered by Mercury or Ermes — and hence sometimes called "hermupoan" by the Greeks (Plin. xxv. 18): the "linōzōstis" is mentioned by Euryphon 2 morb. 12 to 77; by Dioscorides as a span or more high with twin rounded fruit and laxative when eaten as a potherb; is identified in the added Synonyms with the "ĕrmōu vōtanīōn" or "parthĕnīōn;" and by Ebn Baitar with the "halbub:" M. annua is mentioned also by Averrhoes, and Moses Charras (F. Adams); was observed by Delile at Alexandria on the Mediterranean border of Egypt; by Hasselquist in Palestine; and by Forskal, Sibthorp, Chaubard, and Fraas, in waste places and cultivated ground from Cyprus and the Peloponnesus to Marmora. Westward, the "linōzōstis" is identified in Syn. Diosc. with the "asōumĕs" of the Numidians; and the "herba mercurialis" is enumerated by Cato as both medicinal and esculent: M. annua is mentioned by Turner as seen by him in Germany and beginning to be cultivated in Britain, where it has since become naturalized (Hill, and Bromfield phytol. for 1850); is described also by Valerius Cordus, Dalechamp (Spreng.), Bauhin hist., and Tournefort inst 534; was observed by Lenz frequent in Italy; and is known to occur in waste places and cultivated ground throughout middle Europe (Pers.).

In this year therefore Ramessu III. succeeded by his son Ramessu IV. Hikma. A portrait of Ramessu IV. is sculptured on the walls of Karnak. His name occurs also on other temples at Medinet Abu and Elephantine, and on moveable articles — now in the museums of Europe.

1247 B. C. = "2d year of Ramessu IV.," at Hammamat — (Birch).

In this year (= 1197 + "50 years" of Castor in Euseb. i. p. 134, the three displaced or duplicated reigns "+ 40 + 50 + 40" being omitted, see also Isocr. panath. p. 258 d., and Apollod. iii. 14. 1), Amphictyon succeeded by Erichthonius, fifth Attic king. The Panathenæa were instituted by Erichthonius (Hellan., and Androt.).

1244 B. C. = "5th year of Ramessu IV.," on the monuments — (Leps. k. tab. p. 19).

1243 B. C. (= "240 years before the building of Solomon's temple" of Josephus a. J. viii. 3. 1), the city of Tsor or Tyre founded. Being a seaport, merchant ships sailing thence and commerce upon the Mediterranean are implied. — The city of Tyre in existence at the time of the Israelitish conquest of Palestine, and mentioned in Josh. xix. 29. Tyre is also mentioned by Ezekiel, and Herodotus ii. 43; was captured by Alexander, an event followed by the establishment of a rival emporium Alexandria, yet continued "the first commercial city of the East" in the time of Hieronymus, and in a flourishing condition until the discovery of America and of the route around Africa into the Indian Ocean. A town continues in existence on the site; but there is shelter for small vessels only (see Sm. geogr. dict.).

Cassia senna of the Tropical portion of the Desert from the Atlantic to Hindustan. Called in Egypt "sena gebely" of the Desert, or "s. beledy" or "s. baharaouy" (Del.) or "s. Hedjazi" or "s. Meeki" (Forsk.), in which we recognize the burning "snĕ" seen on mount Horeb by Moses — (ex. iii. 2, and deut. xxxiii. 6): C. senna was observed by Forskal in the Desert Eastward from Cairo; by myself, just beyond the tide-flow at the Northern extreme of the Red Sea. Southward and Westward, by Delile in Upper Egypt; by Oudney in Central Africa; and is known to grow from Nubia to the Cape Verd Islands (Lindl.). Eastward from Sinai, was observed by Burn growing "abundantly in various localities in Goozerat" and called "mendie awl" (Graham); is known to grow also as far as the "high dry uncultivated lands of Mysore" (Roxb., Wall., and Wight). The dried leaves are imported into France under the names of "séné de Tripoli" or "s. de Barbarie" (Del.); are "the inferior senna known by the name of Aleppo and Italian," and Lindley further states that the living plant has been introduced into the West Indies.

In reference to the account in ex. ix. 23 to 34, it may be observed, that *thunder* and *hail* are not entirely unknown in Egypt. — A "hailstorm" was experienced by Lepsius (eg. and sin. p. 53 and 119) in Lower Egypt, at the pyramids at Gizeh; and a "violent thunder-storm," even at the Southern extreme of Egypt "at Assuan" (see Ai II.).

At this time, "rhĕ" *hand-mills* in use for grinding corn: mentioned by Moses ex. xi. 5 — and num. xi. 8; also by Isaiah xlvii. 2, and Matthew xxiv. 41, and to the present day I found them in use in Yemen and farther East.

Capparis spinosa of Tropical and Subtropical Arabia. The *caper* bush is called in Italy "cappero" (Lenz), in Greece "kapparia" (Sibth.) or "rimōniaria," in Egypt "kabbar," in Yemen "lasaf" (Forsk.), around mount Sinai "alsef" (Burkhardt); and the "azwb" for striking blood on the door posts in the night appointed for the Passover, — further met with by Moses lev. xiv. 4 to 52 and num. xix. 6 to 18 in the Sinai peninsula, and of which Solomon spoke as springing "out of the wall" at Jerusalem (1 K. iv. 33), also the "ussōpōs" that furnished a stick at the Crucifixion (John xix. 29), are referred here by Royle (Kitt. bibl. cycl. ii. p. 976): C. spinosa was observed by Forskal p. 99 on

the wall of Taæs in Yemen, and abounding in the district around Hammam Faraun in the Sinai peninsula; by him, and Delile, at Alexandria in Egypt; and by Hasselquist, at Jerusalem. Northward and Westward, the "kapparis" is mentioned by Antiphanes, Aristophon, Zeno the Stoic, Timocles, Demetrius, Clearchus Solensis, Dioscorides, and Athenaeus; the "capparis," by Plautus, Pliny, and Martial: C. spinosa is described by Lobel pl. 635; is termed "c. s. fructu minore folio rotundo" by Tournefort inst. 261; was observed by Forskal, Sibthorp, Chaubard, and Fraas, frequent from Rhodes and Tenedos to the Peloponnesus; by Lenz, seemingly wild in Italy; by myself, conspicuously projecting from crevices in walls of buildings on Malta; by Forskal, on Malta, and in arid situations around Marseilles; by Desfontaines i. 404, in Barbary; is known to occur also in Sicily and Spain, is besides cultivated (Pers.), and its berry-like flower-buds largely exported have become generally known as a condiment. (See Satureja juliana).

Centaurea calcitrapa of the Mediterranean countries. Called in Britain *caltrops*, in Anglo-Saxon "coltræppe," in the romance of K. Alisander "calketrappen," in medieval Latin "calcitrapa" (Prior), in Greece "kala anthē" (Sibth.) or "katrinaggathō," in Egypt "schok" or "morreyr" (Forsk., and Del.), in which we recognize the "mrrym" eaten in the night appointed for the Passover, — further met with Moses ex. xii. 8 and num. ix. 11 in the Sinai peninsula on the anniversary of the Passover (translated "trivōlōs" by Hermas iii. 9. 20 and the "trivōlōs phullakanthōs" of Theophrastus vi. 5. 3 seems to correspond); associated with wormwood in Lam. iii. 15: leaves and young stems of C. calcitrapa were found by Forskal p. 152 eaten crude in Egypt, the plant abounding there, as observed also by Delile, Clot-Bey, and myself. Northward and Westward, C. calcitrapa is described by Columna phyt. pl. 24; is termed "carduus stellatus sive calcitrapa" by Tournefort inst. 440; was observed by Forskal, Sibthorp, Chaubard, and Fraas, from Constantinople to the Peloponnesus; by Forskal, on Malta and around Marseilles; and is known to occur along waysides and in cultivated ground as far as Britain (Engl. bot. pl. 125, Lam. fl. fr., and Pers.). By European colonists, was carried to Madeira (Lindl.); to Northeast America, where it continues in Carolina and Eastern Virginia springing up spontaneously (A. Gray, and Chapm.). The plant according to Lindley "has been used as a febrifuge, and has even been preferred to gentian."

Picris hieracioides of the Mediterranean countries. Called in Greece "hĕirōvōtanŏn" (Sibth.), in Egypt "murreyr" (Del.), and possibly the plant in question, "mrrym" — being translated "pikrithēs" in the Septuagint: P. hieraciodes is termed "hieracium ægyptium gigas" by Lippi, as seen by him in Egypt; was observed by Forskal, and Delile (Steud.), on the margin of cultivated land about Cairo, and was received from Egypt by Vaillant act. paris. for 1721. Northward and Westward, is termed "hieracium asperum majori flore in limitibus agrorum" by Tournefort inst. 469; was observed by Forskal, and Sibthorp, from the Dardanelles to Athens and Zacynthus; and is known to occur, always as above indicated on the margin of cultivated ground, as far as France and Britain (Lam. fl. fr., Pers., and Engl. bot. pl. 196; see Helminthia echioides).

1240, April (ex. ix. 31, xii. 1 to 12, and xiii. 4; see Introd. p. . . . , the moon's place remaining unascertained), after the revelation of the name "Jehovah," Exodus of the Israelites (see Ramessu VI.).

The eleventh Egyptian month being now made the first Hebrew month, a year of ten months was established: as is further shown, by the "30 years" of Ex. xii. 40 corresponding to the "100 — 75 years" of Gen. xii. 4, xv. 13, and xxi. 5 ($30 \times 10 \div 12 = 25$); by the Hebrew generation of "40 years" ($\times 10 \div 12$) equalling the Greek generation of "$33\frac{1}{3}$;" by the use among the early Romans of a calendar year of "ten months;" and by usage among the Jews to the present day. In further confirmation that Moses was the author of the calendar year of ten lunations; — the new moons were observed by the Israelites (. . . . Num. ix. 5); and such a calendar continues in use on the Tarawan or Kingsmill Islands (see Hale ethn. Expl. Ex.). Both modes of reckoning were in use in the time of Clemens Alexandrinus, who gives the interval between the Exodus and Solomon as by some estimated "595," and by others "576 years" ($\times 10 \div 12 =$ "480" of 1 K. vi. 1, and "595" years of ten lunations $=$ 481 y. $21\frac{20}{36}$ d. In Gen. vii. 11 to viii. 13, there is a reckoning in ten Egyptian months of thirty days each: "17th of Seventh month" — "17th of Second month" $=$ 5 months $=$ "150 days," and "10th" $\times$ 30 $+$ "40 $+$ 7 $+$ 7" $=$ 354 days $=$ lunar year).

Wearing an inscribed sentence "twtphwd" bound on the forehead and around the wrist enjoined by Moses ex. xiii. 9 to 16: — *phylacteries* "phulaktēria" are mentioned in Matthew xxiii. 5. Instead of writings "grammata," the Egyptians of the time of Horapollo i. 24 protected themselves against demons by the representation of two human heads (see amulet).

The reality of the sojourn of the Israelites in Egypt is proved by some of them bearing the name of Egyptian kings: as Amminadab (from Amunhotep, in Greek Amĕnŏphis); Hur (from Horemheb, in Greek Orōs); and Ram (from Ramessu, in Greek Ramĕssēs). Moses is mentioned by Manetho; and among Greek writers, yet earlier by Hellanicus; also by Philochorus, Polemon the archæologist, Castor, and Ptolemaeus of Mendes (see Just. Mart. ad Graec. p. 10, and Cyrill. a Jul. i. p. 15).

The "mixed multitude" accompanying the Israelites (Ex. xii. 38), may perhaps derive some illustration from Manetho's account of the Exodus: that among those departing, were persons afflicted with *leprosy*, may be inferred from the treatise on this disease in Levit. xiii.

Ceratonia siliqua of Western Africa. The *carob tree* or *St. John's bread* is called in France "caroubier" (Fée), in Italy "carrubio" or "carrubo" (Lenz), in Greece "xulōkĕratia" (Sibth.), in Egypt "kharroub" (Del.), in Egyptian "kōntratēs" (lex. Oxon.) or "jiri" (lex. Oxon., and Kirch., perhaps from "jir" a small kind of salted fish): is regarded by Sprengel as the tree with which Moses ex. xv. 25 sweetened the bitter water at Marah, — the "khrub" according to Avicenna p. 205 having the property of sweetening salt and bitter water: the "kĕrōnian" of the Ionians according to Theophrastus iv. 2. 4 is improperly called "aiguptiōn sukōn," growing not in Egypt, but in Syria and Ionia and about Cnidus and Rhodes, and bearing pods on its trunk and branches; is identified by Galen with the "kĕratia;" said by Strabo xvii. 2. 2 to grow beyond Meroe; mentioned also in Luke xv. 16; and its edible pods, by Dioscorides i. 158: C. siliqua was observed by Alpinus, Forskal, Delile, and Clot-Bey, in the gardens of Egypt, but continues rare, and was not met with by myself; was observed by Sibthorp, Chaubard, and Fraas, frequent from the Peloponnesus and Attica throughout the Greek islands. Westward, "siliquis" are mentioned by Horace epist. ii. 1. 123; "siliquae graecae" and their cultivation, by Columella; and "siliquas syriacas" by Pliny as very sweet, a finger in length by an inch broad, and sometimes falcate: C. siliqua is termed "s. edulis" by Tournefort inst. 578; was observed by Forskal, and myself, on Malta; continues according to Lenz under cultivation in Southern Italy; appeared to me discordant in the Mediterranean countries, exotic and having a Tropical aspect, was in fact seen by Denham and Clapperton in Bornou in Central Africa (Hogg in Hook. j. bot. 1834). By European colonists, was recently carried to Hindustan (Graham p. 254), observed by myself in the Botanic garden at Bombay.

Nigella sativa of the East Mediterranean and Tauro-Caspian countries. Called in Britain *Roman coriander*, in Germany "schwarzkummel" (Grieb), in Italy "nigella" or "cominella" or "melanzio domestico" (Lenz), in Greece "mavrōkōukathĕis" (Sibth.) or "maurōkōukki" (Fraas), in Egypt "kammoun asouad" black cummin or "habbah soudeh" black grain (Del.), in Egyptian "stikmmĕ" (transl. Sept. Is.); in which we recognize the "melanthion" identified with the "gith" by Pliny, and the "gth" resembling the grains of manna sent through Moses ex. xvi. 14 to 31 and num. xi. 7: — the "mĕlanthiōn" is mentioned in the Septuagint translation of Isai. xxviii. 25 as cultivated in Palestine: and the black seeds of N. sativa scattered over the thin wafer-like bread made throughout Egypt were observed by Belon, and myself. Farther North, "makōnithōn artŏn" is mentioned by Alcman (Athen. iii. 75); the "mĕlanthiōn" is mentioned in the treatise Steril. 675, and Nicander ther. 43; its seeds are described by Dioscorides as black pungent odorous and "kataplassōmĕnōn ĕis artous" plastered on bread; and the "mēkōna agriōn mĕlana" is identified in the added Synonyms: N. sativa was observed by Sibthorp, and Fraas, frequent from the Peloponnesus to Cyprus; is known to grow also about the Taurian mountains and Caucasus (Pall., and Bieb.). Westward, the "melanthium" is mentioned by Cato 102, and Columella x. 245; the seed called "git," by Columella vi. 34. 1; the "gith ex Graecis" or "melanspermon" by Pliny xx. 71 "gratissime panes etiam condiat;" and the "gith" by Palladius x. 13. 3 as cultivated: N. sativa is termed "n. flore minore simplici candido" by Tournefort inst. 258; and is known to be cultivated in France and Germany (Pers.). Eastward from the Caspian, is called in Goozerat "kala jeera" (Graham), has been long cultivated in other parts of Hindustan "both as a condiment and as a medicine" (Roxb., and Royle in Kitt. bibl. cycl.): was observed by Mason v. 495 "exotic" and called "sa-mung-net" in Burmah, where it is sometimes cultivated. Its seeds are described by Lindley as "aromatic, subacrid," "formerly employed instead of pepper, and have also been used as carminatives."

Coriandrum sativum of Central Asia. Called in Britain *coriander*, in France "coriandre" (Nugent), in Germany "koriander," in Italy "coriandro" or "coriandolo" (Lenz), in Greece "kōrianthrōn" or "kōusvaras" (Sibth.), in Egypt "kousbarah" (Del.), in Egyptian "vĕrĕtshĕ" or "vĕrĕtshĕu" (ms. Par.) or "vĕrtshĕu" (Kirch.) or "vĕrtshēōu" or "vĕrsēōu" (transl. Sept.) or "ōhiōn" (compare ōhiōnōn" granum herbescens of Kirch.), by the Numidians "gōith" (Syn. Dioscor.), and agreeing better with the implied white or bdellium-coloured "gth," — translated "kōriōn" in the Septuagint ex. xvi. 31 and num. xi. 7: the best "coriandrum" in the days of Pliny xx. 82 came from Egypt; and C. sativum was observed under cultivation there by Abd-allatif, Forskal, Delile, and Clot-Bey. Farther North, the "kōriōn" or "kōriannōn" or "kōriannētōn" is mentioned by Anacreon, the comic poet Alcaeus, Anaxandrides, Antiphanes, Zeno, Theophrastus, Xenocrates, Pollux vi. 107, and Athenaeus ii. 77 and iv. 47: C. sativum was observed by Sibthorp in cultivated ground from Cyprus to the Peloponnesus, but is regarded by Chaubard as not indigenous. Westward, the "coriandrum" is mentioned by Varro, is termed "famosa" by Columella . .; is not wild in Italy according to Pliny, who gives directions about its cultivation; is mentioned also by Apicius, Apuleius 102, and Macer Floridus . .: C. sativum is termed "c. majus" by Tournefort inst. 316; is known to be

cultivated from Italy throughout middle Europe, and has besides become naturalized in certain localities in France and England (Engl. bot. pl. 67, Pers., Wats., and A. Dec.). Eastward from the Black Sea, was observed by Szovitz "in the corn fields of Tartary" (Lindl.): is called in Hindustanee "kothmir" or "dhaniya" (D'roz.); was observed by Graham "in gardens" in the environs of Bombay, the seeds "much used by Musselmen in their curries;" by Roxburgh, in other parts of Hindustan: by Mason p. 495, "exotic" and called "nan-nan" in Burmah, often cultivated by the natives who use the seeds "as a condiment for curries as well as for medicine." By European colonists, was carried prior to 1670 to New England (Josselyn. rar. . .), where as throughout our Northern and Middle States it continues in gardens. Its fruits according to Lindley are "carminative and aromatic." (The English word "virtue" as pronounced "virtshu" may be compared with the above Egyptian names).

"In the third month" after leaving Egypt (ex. xix. 1 to xx. 17), the Ten commandments delivered on Mount Sinai.

Moses was of course familiar with Egyptian hieroglyphic writing, and a modification in which figures of animals and other external objects (the human form excepted) are avoided, — has been discovered in Palestine: the language not ascertained, but possibly Hebrew.

The "argmn" to be brought as an offering (ex. xxv. 4) — is admitted to be *sea-purple;* a dye procured from *Murex trunculus* (Wilde in Kitt. cycl. bibl.) and other marine univalve shells of the Mediterranean. The "argmn" and garments dyed with it, are also mentioned in Ex. xxvi. to xxxix. 29, Judg. viii. 26, Prov. xxxi. 22, Jer. x. 9, and Ezek. xxvii. 7; the "alipōrphūrōs," by Homer od. vi. 54; the "pōrphura thalassia," in 1 Macc. iv. 23, Diodorus iii. 68, and Josephus bell. Jud. v. 5; and the "dibapha Tyria" or Tyrian dye, by Horace, Pliny, and others. This dye continued to be manufactured in the "Twelfth century" at Thebes in Greece, but its use has now become obsolete.

Balsamodendron myrrha of Abyssinia. The imported product is called in Britain *myrrh;* in France "myrrhe" (Nugent), in Germany "myrrhe" or "mirrhe" (Grieb), in Latin "myrrha," in Greek sometimes "murra" (Gesen.), in Egypt "mur" (Forsk.), in Egyptian "tshal" (transl. Sept. and N. Test.) or "val" (Plut. is. and osir.), in Sanscrit "bola" (Royle) and in Hindustanee "bol" or "mur" (D'roz.), in which we recognize the "mr" in the anointing oil enjoined through Moses ex. xxx. 23; — "mur" is mentioned also in Prov. vii. 17, Cant. v. 5, Psalm xlv. 8, and Esther ii. 12: "smurna" by Herodotus iii. 107, the Hippocratic writings, Theophrastus, ix. 4, Nicander, and Oppian; "myrra" by Plautus, Virgil, and Ovid am. i. 288; and of myrrh brought to Egypt, a portion according to Forskal mat. med. comes from Arabia, but the best from Abyssinia. The myrrh tree as seen under cultivation in Tropical Arabia was described to Theophrastus ix. 4. 3; is mentioned as growing along the Sabaean or opposite African coast by Artemidorus, Strabo, the Erythraean periplus, and Pliny xii. 33: was ascertained by Ehrenberg and Hemprich to be the "kataf" found by Forskal p. 80 cultivated at Beit el fakih; and I learned at Mocha that a portion of the myrrh of commerce is really produced in Arabia, the main supply coming from the opposite Somali country, where the tree was observed by Bruce, and Johnson. Eastward, myrrh has long been imported into Hindustan, and is generally known there under the above name "bol" (Royle in Kitt. bibl. cycl.). The "bdellium" seen in Egypt by Forskal mat. med. was ascertained by him to be only imperfect myrrh. (See Amyris commiphora, and Borassus dichotomus).

Pandanus odoratissimus of the seashore of Hindustan. The *fragrant screwpine* is called from Cutch to Bombay "keura" (Forsk., and Graham), in Malabar "kaida" (Rheede), in Yemen "kadi" (Forsk.), in which we recognize the "kthĕ" in the anointing oil, — and sold according to Ezekiel xxvii. 19 at Tyre: oil scented with the "kadsi" of Yemen is mentioned by Abu Hanifa, Rhazes, Serapion, and Ebn Baitar; P. odoratissimus was observed by Forskal p. 172 under cultivation among the mountains of Yemen, and I found its fragrant flowers in the Mocha market, but is a maritime plant, and from the character of the coast so far as examined by myself can hardly be indigenous in Arabia. Eastward, was observed by Rheede ii. pl. 1 to 8 in Malabar; by Graham, in the environs of Bombay, its flowers "very sweet scented" and "generally sold in the bazars;" by myself, wild in the same neighbourhood around Elephanta; by Roxburgh, on the Coromandel coast; is described also by Rumphius iv. pl. 74; and was observed by Mason "exotic" in Burmah and called "hsatta-phu."

Acorus calamus of Northern Climates. Called in Britain *sweet flag* (Prior), in Germany "kalmus" (Grieb), in Italy "calamo aromatico" or "acoro" or "acoro vero" (Lenz), in Greek "akōrōs" (Sibth.), in Egyptian "okĕ" (ms Borg.) or "akĕ" (Zoeg.); in which we recognize the "knĕ bshm" in the anointing oil, — or "knĕ" of Cant. iv. 14, Isaiah xliii. 24, "from a far country" according to Jeremiah vi. 20, and according to Ezekiel xxvii. 19 imported and sold at Tyre; also, the "kalamōs" in the "kuphi" incense mentioned by Manetho (Plut. is. and osir.); the "kalamōs murĕpsikōs" of 2 Mul. morb. 651; the "kalamōs ĕuōthēs" of Theophrastus iv. 8. 4 to odor. 34, growing around a lake in Syria and scentless while fresh, its root marked with interstices; the "calamus alexandrinus"

of Celsus, and Dionysius Periegetes; and the "akōrōn" of Dioscorides having leaves like the "iris" but narrower, roots jointed at intervals and extending near the surface, acrid to the taste and fragrant, mentioned also by Galen: A. calamus was observed by Sibthorp in the Peloponnesus; its root is enumerated by Alpinus among the ingredients of the Egyptian theriac, and by Forskal mat. med. as imported into Egypt from Greece. Westward, the "acorus" is mentioned by Celsus, and Pliny xii. 48 to xxv. 100: A. calamus is termed "a. verus sive calamus aromaticus officinarum" by C. Bauhin pin. 34; was observed by Lenz in North Italy, and is known to grow throughout middle Europe as far as Sweden (Engl. bot. pl. 356, Dec., and Wats.). Eastward from Syria, "kalamōs arōmatikōs" produced in India is mentioned by Dioscorides i. 17: A. calamus was observed by Rheede xi. pl. 48, Roxburgh, and Lush, under cultivation in Hindustan, by Nimmo seemingly wild in the Southern Concan; is called in Hindustanee and Bengalee "bach," in Telinga "vasa" or "vadaja," in Tamil "vashambu" (Drur.), in the environs of Bombay "yekund" and "employed in medicine as a febrifuge" (Graham): was observed by Mason v. 496 "exotic" in Burmah, cultivated "to a small extent for its medicinal properties" and called "lĕn-hæ;" by Thunberg, near Nagasaki in Japan; and by Gmelin, wild throughout Siberia. Farther East, by Drummond on the Saskatchawan river at 54° in central North America; by Nuttall on the Arkansas, by Short in Kentucky, by myself from 43° to 38° along the Atlantic, by Croom at 35°, and is known to grow as far as Florida (Ell., and Chapm.). The root according to Lindley is in Constantinople "made into a confection" which is "eaten freely during the prevalence of epidemic diseases," but in Britain is "chiefly employed by perfumers, in the manufacture of hair powder." (See Andropogon Martini).

Cinnamomum aromaticum of Mindanao. Imported *cinnamon* is called in Arabic "dar-sini" (Sontheim.), in Hindustanee and Bengalee "dar-chini" (D'roz.), in Sanscrit "dhal-kinna" China-wood (. . .); the "knmwn" in the anointing oil,—and of Prov. vii. 17, and Cant. iv. 14, is referred here by writers: "the best cinnamon of any" according to Pigafetta 121 grows on Mindanao, is called there "cainmana" from "cain" wood and "mana" sweet, "is a small tree not more than three or four cubits high," and "its wood and leaves when they are green have the taste and force of the bark itself:" C. aromaticum, furnishing according to Nees von Esenbeck the valuable *Chinese cinnamon*, was seen by Roxburgh, and Wight, under cultivation in Hindustan; by Graham, "in gardens Bombay, rare."

The name however seems to indicate the route of transmission of the earliest-known article, and that the Hebrew "kn" really means *China* or possibly *Siam*, appears from the Sanscrit "kinna"—occurring in the Greek words "kinnamŏmōn" and "kinnavar" (another product of China, and mentioned by Ctesias). China is called in Egyptian "ĭēlōpōn" (Mar., and Kirch.)

The concluding Hebrew syllable "mwn" is perhaps the Tamil "maun" signifying tree, in accordance with the above Sanscrit name; and if so, may prove the earliest specimen known of the *Tamil language.*

Cinnamomum cassia of Java and Ceylon. A tree furnishing the *cinnamon* of commerce or *Ceylon cinnamon;* probably the "knmwn" of Moses,—and Solomon, "kinnamŏmōn" of Herodotus iii. 111, Hippocrates, Theophrastus, Strabo, Dioscorides, and Galen, "cinnamomum" or "cinnamum" of Ovid, Pliny, and Claudian, and "dar-sini" of Ishak ben Amran, Avicenna, and Ebn Baitar. The bark of the roots and coarser branches according to Marshall is the *cassia* of commerce, and according to Galen antid. i. p. 70 the two spices are from the same tree: the "kasia" brought by the Arabs is mentioned also by Herodotus iii. 111, Theophrastus ix. 5. 1, Agatharchides, Strabo xvi. 4, Dioscorides, Pliny xii. 42, and Dionysius Perigetes 939: C. cassia is known to be "cultivated to a great extent in Ceylon" (Graham); and a degenerate variety according to Nees von Esenbeck was by Europeans carried to the neighbouring portion of Hindustan, where it has become naturalized (Wight pl. 123). By European colonists also, C. cassia was carried to various places within the Tropicks, and is now cultivated even in America (Lindl.).

Galbanum officinale of central Asia. The imported gum-resin *galbanum* is called in Egypt "qanavascheq" (Forsk.), in Egyptian "kakōnia" (Edw.); and the "hlbnĕ," an ingredient of the perfume enjoined ex. xxx. 34,—is referred here by writers: "halvanē" is regarded by Theophrastus ix. 7.2 as the product of a Syrian plant called "panakōus," of a "narthēkōs" according to Dioscorides, of a "ferula" called "stagonitin" according to Pliny xii. 56, and "halvanis riza" is mentioned by Nicander ther. 938: "galbanum" is mentioned by Celsus, and Juvenal; and its odour driving away reptiles and insects, by Nicander ther. 555, Virgil geor. iii. 415, and Pliny xix. 58: "kinnah" is mentioned by Ebn Baitar, the "narthex" of the Greeks being called "kana" (Sontheim.); and "galbanum" was found by Forskal mat. med. imported into Egypt "from Persia." Farther East, the drug is called in Hindustanee "qanna" or "birzad" or "barija" (D'roz.); and Royle learned that the plant is called "kinneh" or "nafeel;" but according to Lindley, "nothing is known of this plant except" the imbedded seed described by Don (which may belong elsewhere), "the drug comes from Smyrna and India."

The "shḥ" entering into the composition of the enjoined perfume — is referred by Gesenius to *blatta byzantina* also called *unguis odoratus*, and valued on account of the fragrant odour given out in burning: the "ōnux" is described by Dioscorides as the operculum of a shell resembling the purpura-shell, and inhabiting the marshes or pools of Hindustan; the "ostracium" by some called "onychem," is mentioned by Pliny xxxii. 46; unguis odoratus, by Arab writers cited by Bochart, and under the name of "dofr el affrit" was found by Forskal mat. med. imported into Suez from Mocha. Eastward, the "nakhi" meaning nail, is enumerated among perfumes in the Amera Cosha, and is sold under that name in the bazars of Bengal (Wils.); under the Arabic name "azfar-al-teeb" may everywhere be obtained in Northern Hindustan, and is further described by Royle antiq. hind. med. p. 95 as the operculum of *Strombus lentiginosus*, but he "was unable to ascertain whence it was brought:" the operculum however "is less fragrant than that of *Pleurotoma Babyloniæ* or *Pl. Trapezii*."

The "shphn" whose flesh is prohibited by Moses lev. xi. 5, — finding refuge among rocks (Psalm civ. 18), and translated "hoirogrullios" in the Septuagint, is admitted to be *Hyrax Syriacus*: the "hoirogrullios" is described by Hieronymus ii. 658 as an animal resembling a mouse and bear and hence called "arkomus" in Palestine, where it abounds, dwelling in caves among rocks and holes in the ground.

1239 B. C. On the first day of "the first month in the second year" after leaving Egypt, "the tabernacle was reared up" (Ex. xl. 17).

Vitex agnus-castus of Subtropical Arabia and Persia. Called in English gardens *chaste-tree* or *hemp-tree* or *Abraham's balm* (Ainsw.), in Italy "agno casto" (Lenz), in Greece "agnĕia" or "lugaria" (Sibth.), in Egypt "kaf maryam" Mary's hand (Del.), in Egyptian "tshēts" or "tshĕu-tshits" (transl. Sept.) or "sōum," by the prophets "sĕmnōn" or "aima ivĕōs" (Syn. Diosc.); and the "orby" whose boughs are enjoined by Moses lev. xxiii. 40 to be brought during the Feast of tabernacles, — mentioned also in connexion with brooks in Isaiah xv. 7 and xliv. 4, Job xl. 22, and as growing "by the rivers of Babylon" in Psalm cxxxvii. 2, is referred here by the Septuagint: the Hebrew name according to Gesenius implying whitish leaves: the "kaf maryam" is mentioned by Ebn Baitar; and V. agnus-castus was observed by Forskal, Delile, and Clot-Bey, in the gardens of Egypt. Farther North, the "lugos" of Homer il. xi. 105, od. x. 166, Nicander ther. 65, and others, is identified by Dioscorides with the "agnos" strewn by women in religious ceremonies; mentioned also by Theophrastus, Nicander, Galen, and Paulus Aegineta: V. agnus-castus is known to abound along the water-courses of Syria and Greece, arborescent, sometimes twenty-five feet high, its trunk eight inches in diameter (Forsk., Sibth., Chaubard, and Fraas). Westward, the "agnos" or "agonon" or "amiktomiainon" or "tridaktulon" is identified in Syn. Diosc. with the "salix marina" or "pipĕr agrĕstĕ" or "lĕkristikoum" of the Romans; by Pliny xxiv. 38, with the "vitex" growing in Italy: V. agnus-castus was observed by Lenz wild in Italy, is known to grow also in Sicily (Pers.) and Southern France (Lam. fl. fr.). Eastward from Syria, has a Persian name "band-schankascht" (Avicenn., and Ebn Baitar), and is therefore known in Persia; but the plant belongs to a Tropical genus, and may only be exceeding its natural limits in extending into the Mediterranean countries. Its berries, according to Lindley are "acrid," and the powdered seeds were found by Forskal at Smyrna applied externally against colic.

On "the fourteenth day of the first month" the passover was kept (Num. ix. 5); terms implying, a reckoning of lunations in a regularly-formed calendar.

"On the first" day "of the second month, in the second year after they were come out of the land of Egypt" (Num. i. 1 to 18), the Tribes numbered. "On the twentieth of the second month" (Num. x. 11 to 33), departure of the Israelites from Sinai through the Desert for Paran.

Allium ampeloprasum of the Mediterranean countries. Its cultivated form is called in Britain *leek*, in Anglo-Saxon "por-leac," in Holland "look," in Germany "lauch" (Prior), in France "poireau" or "porreau" (Nugent), in Italy "porro" or "porretta" (Lenz), in Greece "ta prasa" (Fraas), in Egypt "korrat" (Forsk.), in Egyptian "ĕshĕ" or "ēshĕ" (ms. Borg.) or "ĕji" (Kirch., and transl. Sept.); the "htsyr" of Egypt longed for by the Israelites and mixt multitude ex. xi. 5 — is referred by the Septuagint to the "prasa;" but the "htsyr" of Psalm civ. 14, Job viii. 12 and xl. 15, is admitted to be grass: the cultivation of the "porrum" in Egypt is mentioned by Pliny xix. 33; the "kurrath," by Ebn Baitar; and the leek was observed under cultivation in Egypt by Forskal, Delile, and Clot-Bey. Farther North, the term "prasiai" is used by Homer od. vii. 127, "prasiōs" green by Plato, "prasiēs hlōĕrōn prasōn" by Nicander ther. 875; the "prasŏn" is mentioned in the Batrachomyomachia, also by Chionides, Theophrastus, Athenaeus ix. 13; and is identified by Diphilus, and Dioscorides, with the "kĕphalōtōn" of Epicharmus, and Polemon: the leek was observed by Chaubard, and Fraas, under cultivation in Greece. Westward, the "prasŏn" is identified in Syn. Diosc. with the "pōrōum" of the Romans; the "porrum" is mentioned by Horace, Columella, and the "capitato" kind is distinguished by Pliny xx. 22: the leek is figured by Blackwell pl. 421, is known to be culti-

vated in Italy (Lenz) and throughout middle Europe (Pers.). Eastward from Egypt, is mentioned in the Institutes of Menu (transl. Deslongch.); is called in Bengalee "purou" (Pidd.) from the Latin, in Hindustanee "kurras" (D'roz.), in the environs of Bombay "khorat" (from the Arabic), "cultivated" there "to a small extent" according to Graham: and farther East, was observed by Mason "exotic" in Burmah and called "tau-kyet-thwon." By European colonists, was carried to Northeast America, where it continues under cultivation in our Middle States. *A. ampeloprasum* in its wild form is the "ampĕlōprasōn" of Dioscorides; occurring in vineyards according to Pliny xxiv. 86; is described by Lobel, Clusius (Spreng.) and Rudbeck elys. ii. pl. 151; is termed "a. sphæriceo capite folio latiore" by Tournefort inst. 383; has not been found as far East as Caucasus (A. Dec.), but was observed by Sibthorp frequent on rocks and the minor Greek islands; by Fraas, frequent in vineyards and cultivated ground in Attica; is known to occur as far West as Algeria and Portugal, and as a weed in cultivated ground as far as Britain and Ireland (Ray hist. p. 1125, Gay, and A. Dec.); but by European colonists was carried to the Azores Islands (Wats.).

Allium sativum of the plains of Western Tartary. Called in Britain *garlic* from the Anglo-Saxon "gar-leac" spear-plant (Prior), in France "ail." (Nugent), in Germany "knoblauch," in Italy "aglio" or "aglio sativo" (Lenz), in Greece "aglithia" or "gĕlgithia" or "skōrthōn" (Fraas), in Egypt "toum" (Del.), in Egyptian "skōrtōn" (lex. Oxf.) or "tshshēn" (transl. Sept.) or "tshjēn" (ms Borg.); and the "shwm" of Egypt longed for by the Israelites and mixt multitude, — is referred by the Septuagint to the "skōrtha:" cultivation of the "allium" in Egypt is mentioned by Pliny xix. 32; and the "thum," by Ebn Baitar: A. sativum was observed by Forskal under cultivation in Egypt, but according to Hasselquist, Delile, and Clot-Bey, is principally imported from Syria. Farther North, the "skōrōthōn" is mentioned by Homer, Herodotus ii. 125, Aristophanes, Theophrastus, and Dioscorides: and A. sativum was observed by Chaubard, and Fraas, under cultivation in Greece, in some instances becoming spontaneous. Westward, the "skōrōthŏn" is identified in Syn. Diosc. with the "allĭōum" of the Romans; and "allium", is mentioned by Plautus, Varro, Horace, Virgil, by Pliny xix. 34 as cultivated in Italy and springing up spontaneously in cultivated ground: A. sativum was observed by Lenz under like circumstances in Italy; and is known to be cultivated in Spain and throughout middle Europe (Lobel pl. 158, and Morison iv. pl. 15). Eastward from Greece, is known to grow wild in the Soongoro-Kirgish Desert (Ledeb., and A. Dec.): is mentioned in the Institutes of Menu (transl. Deslongch.); is called in Sanscrit "mahoushudha" (Roxb.), in Bengalee "rasun," in Hindustanee "sir" or "lahsan" (D'roz.), in the environs of Bombay "lussun" and according to Graham "cultivated:" farther East, was observed by Mason, "exotic" in Burmah and called "kyet-thwon-phyoo;" and by Loureiro, under cultivation in China. By European colonists, was carried to America, and has been observed by myself under cultivation in both the Northern and Austral portions of the continent.

Allium scorodoprasum — supposed to be a variety only of the preceding (Dec. fl. fr., and Koch), is called in France and Britain *rocambole* (Nugent, and Prior), in Italy "agliporro" (Lenz), and with a corresponding combination in Egyptian "kōrthōm" (Kirch.): the "skōrōthōn agriōn" called according to Dioscorides ii. 181 "ōphiŏskōrōthōn," and in the addition identified with the "ĕlaphŏskōrōthōn," is referred here by writers: A. scorodoprasum was observed by Sibthorp, and Fraas, on Cyprus and the Greek islands. Westward, is described by Valerius Cordus, Tragus (Spreng.), and Clusius hist. i. pl. 191; is termed "a. sativum alterum sive allioprasum caulis summo circumvoluto" by Tournefort inst. 383; was observed by Lenz seemingly wild in Italy, is known to occur throughout middle Europe as far as Denmark (Pers. and A. Dec.), and is besides cultivated. "A. arenarium" regarded as not distinct, is described by Bauhin hist. ii. 599 (Spreng.), and is known to occur from the Pyrenees and Switzerland to Denmark (fl. Dan. pl. 290, Hall., Lapeyr., and Steud.).

On reaching Paran, spies including Caleb and Joshua, sent into the land of Canaan (Num. xiii. 3, and xxxiii. 16 to 18).

1236 B. C. (= 1216 + "20 years" of Euseb. ii., and Syncell. = 710 + "526 years" of Berosus), accession of Sosares as Assyrian emperor, Berosus' "526 years" of Assyrian rule over Babylon, as usually adjusted, begin with this reign (see above Ramessu III.).

Subsequent to the "parousia" arrival of Danaus (Tat., and Clem. Alex.), Dardanus grandson of Atlas (Apollod. iii. 10.1) and fifth lineal ancestor of Priamus (Homer il. ω 215) leading a migration of Pelasgian Greeks to Samothrace (called in consequence "Dardania"), and thence into the Troad. — The city of Larissa in the Troad, mentioned by Homer, may be compared with this migration.

Dardanus had received an ark or chest containing an image of Dionysus or *Bacchus*. As mount "Nusa" of the Greeks is clearly Sinai written after the Hebrew manner from right to left, etymology indicates the origin of the new deity and his worship. — The same ark or chest constituted in after times the palladium or one of the palladia of the city of Troy (Hom. il. xx. 459, Paus. vii. 19. 6, and Serv. ad aen. viii. 285).

Osiris when born was placed in an ark and set adrift upon the water; and his identity with

Dionysus is expressly stated by Plutarch is. and osir. 35. Indeed, Osarsiph is given as the Egyptian name of Moses by Manetho.

Trigonella hamosa of Cyprus, Syria and Egypt. Called in Egypt "daragrag" or "adjelmælek," in which we recognize the "alchimelek" of Avicenna, or the "achilel melich" identified by Serapion with the "mĕlilŏtŏs:" the "mĕlilŏtŏn," growing on the banks of the Nile, coronary and connected with the history of Osiris — (Plut. is. and osir. 14 and 38), may therefore be compared: T. hamosa was observed in Egypt by Alpinus, Forskål, and Delile; and farther North, by Hasselquist in Palestine, and by Sibthorp on Cyprus. (See Lotus rectus).

Ninety-second generation. Sept. 1st, 1234, mostly beyond youth: Assir, Elkanah, and Abiasaph, sons of Korah (ex. vi. 24, num. xxvi. 11, and 1 Chron. vi. 22 and 37): and among Greeks, Erichthonius son of Dardanus and father of Tros (Hom. il. xxiv. 215 to 240); the Aeolic chieftains Sisyphus and Salmoneus (Hes., Hom. il. vi. 154 and od. xi. 235, and Apollod.).

By Tectamus, grandson of Hellen and father of Asterion, a migration of Dorians from Northern Greece led into Crete — (Hom. od. xix. 172, Andron in Strab., and Diodor. iv. 60).

Saul succeeded by Baal-hanan, son of Achbor and now seventh king of Edom (Gen. xxxvi. 38, and 1 Chron. i. 49).

1231 B. C. (= "28th year of Tsou-kia," Pauth. p. 69), death of the chief of the province of Tcheou, after naming his youngest son for the succession. The two excluded brethren retired to "the Eastern extremity of Kiang-nan," and after cutting their hair and making marks on the skin, were received as rulers by the barbarous population around the mouth of the Kiang. The eldest brother, Tai-pe, is regarded by several Chinese historians as the ancestor of the "dairis" or emperors of Japan.*

Setaria verticillata of Subtropical Asia. A small kind of millet called in Yemen "særa erra" (Forsk., and Steud.), in Japan "hiye," and cultivated there from the introduction of agriculture by Ukemochi-no-kami — (Jap. centen. comm. 104); observed under cultivation there by Kaempfer, and Thunberg. Westward, by Roxburgh, and Graham, in Hindustan, and the same or a closely allied species by myself under cultivation on the Decean; by Forskal p. 20, at Hadie in Yemen, and termed "p. adhærens;" by Delile, around Cairo; by Sibthorp, frequent in cultivated ground on the Greek islands; is termed "gr. geniculatum" by Tabernæmontanus iii. 1,532 (Spreng.), "p. vulgare spica simplici et aspera" by Tournefort inst. 515; is known to occur as a weed throughout middle Europe, and from at least the time of Ray in Britain (Roth germ. ii. 69, Lam. fl. fr., Pers., and A. Dec). Probably by European colonists was carried to Northeast America, where it continues a weed "near dwellings, rare northward" (A. Gray), occurs also "around dwellings, North Carolina" (Chapm.).

Phaseolus radiatus of Subtropical Eastern Asia. Called in Japan "adzuki," and included perhaps in "the various kinds of peas and beans" cultivated there from the introduction of agriculture — (Jap. c. c. 32 and 104): P. radiatus is known to occur also in China (Pers.). And from transported specimens is described by Linnæus.

The same year = "18th year of Ramessu IV.;" the latest date in his reign found on the monuments — (Birch). His name occurs also in his tomb at Bab-el-meluk.

1230 B. C. (= 1280 y. 2 mo. — "51 yrs" of the Afr.-Manéth. table), a date possibly marking the accession of the usurping Ramessu V. Amunihopsef-miamun, third king of the Twentieth dynasty. The name of Ramessu V. occurs in a tablet recording benefits conferred on Silsilis — (Birch).

In this year (= 710 + "520 years" of Herodot. i. 95, Appian praef. c. 9 giving. 331 + "900 years" = 1231), commencement of "Assyrian rule in Upper Asia;" after the death, as will be observed of Ramessu III. The "526 years" of Berosus, may again be compared. (See above, Sosares and Ramessu III.).

As early perhaps as this date (Graha Munjari tables, Puranas, and Bentley as. res. viii. 232) Diptiman reigning in Hindustan.

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* *Anemone cernua* of Japan. Known to the Chinese as early perhaps as this date and called "hak-too-woo;" — observed by Thunberg, and Siebold i. pl. 4, on exposed parts of the mountains of Japan; and according to Lindley, the "root in great reputation among the Japanese and Chinese."

Xanthoxylon piperitum of Japan. A prickly shrub called in Japan "seo" or "sansjo" (Lindl.) or "sansho" (Jap. c. c. 31), and known from early times: — observed there by Kaempfer pl. 893, Thunberg, and Siebold, used as spice in place of ginger or pepper. According to Lindley, "the active principle chiefly in the fresh leaves, the dry bark, and the pericarp;" the bruised leaves applied in a poultice to sore throats.

Ocymum crispum of Japan. — Observed there by Thunberg 248, an infusion of the leaves used against rheumatism (Lindl.).

"1225 B. C. = 1st year of Lin-sin, of the Chang" or Fourth dynasty — (Chinese chron. table)!

"In the time of the Chang" (topog. Cant., and Pauth. 472), arrival in China of Youe-yeou of the East, having the hair cut short and the body *tattooed* (*Malayans*) "bringing boxes of fish skins, bucklers and short swords; and from the South, *pearls*, *tortoise-shell*, *elephants*' teeth, *peacocks*' feathers, birds, and small dogs."

The "*peacocks*' feathers" may have come from Burmah; where the bird in its wild state was observed by Mason, being not exclusively confined to Hindustan. — The peacock (according to Stevenson) is mentioned in the Sama Veda: a doubtful figure was observed by myself in the Budhist cave-temples at Adjunta; but distinct figures, in Braminical cave-temples at Ellora. Westward, "twkyym" peacocks were brought up the Red Sea in Solomon's ships (1 K. x. 22, and 2 Chron. ix. 21); and among the Greeks, the "taôs" peacock is mentioned by Eupolis, Aristophanes, Strattis, Anaxilaus, Menodotus, and Athenaeus.

The "pearls" may have come from the coral-bound shores of the East Indies and Burmah, or possibly from Ceylon, — long celebrated for its pearl-fishery. The discovery of pearls "margaritēn thē tōn thalassiōn," was attributed by some among the Indians to Hercules; the shell containing them, or the pearl-oyster, is further described by Megasthenes; and Arrian ind. 8 states, that pearls imported from India were formerly in great request among the wealthier Greeks, as in his own day among the Romans.

The "*tortoise-shell*" was probably really from the South, from among the East India islands. Tortoise-shell from the Indian Ocean, may at this time have been brought up the Red Sea to the Mediterranean countries, — but I am not aware of any direct evidence. "Dorsa testudinum" were brought to Alexander on the Lower Indus (Q. Curt. ix. 25); the art of splitting tortoise-shell was first taught by Carvilius Pollio (Plin. ix. 13); and I found tortoise-shell a well known article of commerce at Mocha.

The Philippines known therefore to the Chinese probably at this date.*

Subsequent to the "parōusia" arrival of Danaus, and before the accession of Lynceus (Tat., and Clem. Alex.), recovery and return of Europa daughter of Phoenix. She became the wife of Asterion ruler of Crete (Hom. il. xiv. 321, Apollod. iii. 1. 2, and Paus. vii. 4. 1).

1222 B. C. (= 1181 + "41 years" of Castor in Euseb. i. p. 129, see also Apollod., and Pausan. x. 35. 1), Danaus succeeded by Lynceus, husband of his daughter Hypermnestra, and now twelfth king of Argos. *Minerva's* temple at Lindus in Rhodes, attributed to the daughters of Danaus, — continued extant in the days of Herodotus, Callimachus, Apollodorus, Diodorus, and Strabo xiv. 2. 11.

Xanthium strumarium of Northern climates. Called in Britain *bur-weed* or *ditch-bur*, by Turner "dyche-bur" from growing on dykes (Prior), in France "lampourde glouteron" (Fée), in Germany "spitzklette," in Italy "sanzio" or "lappolone" or "lappola minore" or "bardana minore" (Lenz), in Greece "ēmĕra kōllētzatha" (Fraas), in Egypt "kharaq el-bahr" (Del.), in Yemen "mandj el ma" or "kavar el abid" (Forsk.): the "argemon" herb healing swine, and said to have been discovered by Minerva, — is identified by Pliny xxiv. 116 to xxv. 15 with the "canaria lappa;" and the 'lappam" of the Romans by Syn. Diosc. with the "xanthiōn:" the "xanthiōn" is described by Dioscorides as growing in fertile soil and dried-up pools, a cubit high with an angular fleshy stem, "atraphaxĕi"-like leaves having the odour of "karthamŏ," fruit like a large olive, prickly and adhering to garments, and made into a plaster against swellings; is identified in the added Synonyms with the "hōirathōlĕthrōn" by some called "aparinēn;" is mentioned also by Galen, and Paulus Aegineta; X. strumarium was observed by Forskal, Sibthorp, Chaubard, and Fraas, from Constantinople to the Peloponnesus; and farther South, by Forskal, and Delile, in Egypt, by myself along the river-bank; and by Forskal, among the mountains of Yemen. Westward, is described by Lobel, Gerarde, and Parkinson; is termed "xanthium" by Tournefort inst. 439 and plant. par. ii. p. 124, who found scrofula dispersed by its leaves (Spreng.); was observed by Lenz seemingly wild throughout Italy; and is known to occur as far as Sweden (fl. Dan. pl. 970, and A. Dec.). Farther West, is known to occur on the Azores Islands (Wats.); was observed by myself along the seashore of New England

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* *Justicia* (*Graptophyllum*) *pictum* of the Malayan archipelago. A garden shrub called in Malabar "tjude-marum" (Rheede), in Burmah "gnwæ-ban" or the sanguineous-leaved variety "salat-nee" (Mason), in Tagalo "balasbas" or from its variegated leaves "moradong maputi" violet white, in Bisaya "balasbas" or "antolang" or "san francisco;" and known from early times: — observed by Rheede v. pl. 60 in Malabar; by Graham, "a very common shrub in gardens" and "several varieties" cultivated in the environs of Bombay; by Roxburgh, and Wallich, in other parts of Hindustan; by Mason, "exotic" in Burmah; is described also by Rumphius iv. pl. 30; was observed by Blanco on the Philippines, planted by the natives, the bruised leaves applied to cancerous tumours of the breast.

and inland along river-banks, but occurring also as a weed around dwellings; by Nuttall, on the Upper Missouri and the Arkansas; by E. James, near the base of the Rocky mountains (Tor.); by Baldwin, as far South as Lat. 31° in Florida; but is regarded by Elliot as not indigenous around Charleston. Clearly by European colonists, was carried to Greenland (Wats.); to Patagonia, and the Hawaiian Islands, and in both localities as observed by myself has become naturalized. "X. Orientale" regarded as not distinct, was observed by Kaempfer, and Thunberg, near Nagasaki in Japan, and called "sooni" or usually "namone."

1221 B. C. (= 1412 y. 2 mo. — "51 — 61 — 20 — 60 yrs" of the Afr.-Maneth. table = 1613 y. 3 mo. — "393 yrs" of Josephus c. A. i. 16 and 26, Manetho in Jos. giving 1280 y. 2 mo. — "59 yrs" = 1221 y. 2 mo, and the Euseb.-Maneth. table and Egyptian Chronicle 1413 — "194 yrs" = 1219), marking perhaps the accession of Ramessu VI. Amunikhopsef-nuterhikten, fourth king of the Twentieth dynasty. — His name occurs in a tomb near Deru, in which an Ethiopian prince offers a royal statue; also in his own tomb at Bab-el-meluk (Birch).

(Some similarity in name may be remarked with "Něhěphrěōus" given by Artapanus jud. in Clem. strom. i. 23 as the pharaoh of the Exodus, called "Hěnéphrěōus" by Eusebius, "Hěnévrŏn" in the chron. alex.; and according to Birch, the rising of Sothis or the Dog-star is calculated in the tomb of Ramessu VI. "at 1240 B. C.;" compare also the second Sethos of Manetho in Jos. c. A. i. 26).

In this year (= 716 + "505 years" of Herodot. i. 7, and Clint. i. p. 133), *beginning of Lydian history;* Agron becoming king at Sardis. — His descendants reigned there in lineal succession "twenty-two generations," Candaules being the last. The *Lydian language* continued extant in the mountain district of Cibyra South of Lydia proper in the time of Strabo xiii. 1. 17.

"In the reign of Lynceus" (Tat., and Clem. Alex.), abduction of Proserpina.

"1219 B. C. = 1st year of Keng-ting, of the Chang" or Fourth dynasty (Chinese chron. table).

"In the reign of Lynceus" (Tat., and Clem. Alex.), agriculture of Triptolemus. The city of Tarsus on the Southern coast of Asia Minor, founded (according to Strabo xvi. 2. 5) by the Argive companions of Triptolemus. — Tarsus or Tharshish continued in existence in the time of Solomon (1 K. x. 22, xxii. 48), of Isaiah xxiii. 1 to 10, and of the Apostle Paul (Acts xxii. 3).

1216 B. C. (= 1186 + "30 years" of Euseb. i. and ii., and Syncell.), accession of Lampares as Assyrian emperor.

About this time (Pind. ix. 86, Plut. quaest. graec. 15, and Eustath. hom. p. 277), the city of Hyantheia or Oeantheia in Western Greece founded by Locrus, son of Physcius and grandson of Amphictyon.

Rosa sempervirens of the Mediterranean countries. An evergreen *rose* called in Greece "vata" or "agria vata" or "hamōvata" (Fraas); and the "kunōsvatōn" that wounded Locrus in fulfilment of an oracle respecting the bite of a wooden dog, — mentioned also in Ulc. 8, Theophrastus iii. 18. 4, Theocritus v. 92, having according to Dioscorides white flowers and oblong fruit of the shape of an olive-stone and downy within, known also to Athenaeus ii. 87 in Egypt, is referred here by Sibthorp, and Fraas: the "kunakanthē" is mentioned by Aristotle an. v. 19, and the "kunōsvatōn" by some called "ōxuakanthan" in Syn. Diosc.: R. sempervirens was observed by Sibthorp, Chaubard, and Fraas, frequent in Greece and the Peloponnesus. Westward, the "cynosbaton" of the Greeks is identified by Columella xi. 3. 4 with the "sentis canis;" the "spina" called "rubus caninus" is mentioned by Palladius i. 34. 5: and R. sempervirens is known to grow wild in Northern Italy, on the Balearic Islands, and as far as Germany (Pers., Steud., and Lenz). A scented variety "var. moschata" is distinguished by Fraas, is called in Greece "agriō mōskia" (Sibth.), and by Tournefort inst. 637 "r. moschata sempervirens."

Smilax aspera of the Mediterranean countries. Called in Italy "rogo cervione" or "smilace aspra" or "smilace" (Lenz), in Greece "smilagga" (Forsk.) or "smilax" or "xulōklĕma" or "arkōuthōvatōs" or "skulōvatōs" (Fraas), in Egyptian "luisthē" (Syn. Diosc.); in which we recognize the "smilax trachĕia" called by some "kunōsvatōn" according to Syn. Diosc., and therefore possibly the plant that wounded Locrus: — the "smilax" is described by Theophrastus iii. 18. 11 as resting upon other stems, its own stem prickly, leaves ivy-like but not angular, and white odorous flowers; the "smilax trahĕia" by Dioscorides as twining around trees and bearing red berries, and is identified in the added Synonyms with the "lukanthĕmŏn" or "ĕliŏphutōn" or "anatōlikōn:" S. aspera was observed by Forskal, Sibthorp, Chaubard, and Fraas, from Constantinople to the Peloponnesus, Crete, and Cyprus, tangling the forest and in spring the young shoots eaten. Farther South, is known to grow in Palestine (Pers.), and branches of "milaxi" (of course imported) were carried in Alexandria at the festival of Ptolemy Philadelphus (Callixen., and Athen. v. 28). Westward, the "smilax trahĕia" is identified in Syn. Diosc. with the "rathia" of the Tuscans, and "mĕrgina" of the Romans; the "smilax" growing in Italy and worn although unsuitable in garlands at festivals of Bacchus, is men-

tioned by Pliny xvi. 63; S. aspera is described by Fuchsius p. 719, is termed "s. a. fructu rubente" by Tournefort inst. 654, was observed by Lenz in Italy, by Forskal near Marseilles, and is known to grow in Carniolia and other parts of Southern Europe (Pers., and Spreng.). "S. nigra" described by Clusius hist. i. 113, termed "s. a. minus spinosa fructu nigro" by Tournefort inst. 654, and known to grow in Portugal and Spain (Pers.), was observed by Sibthorp, and Bory, from the Peloponnesus to Constantinople, but is regarded by Fraas as not distinct.

1208 B. C. (= "40th year after" leaving "Egypt, in the first of the fifth month," Num. xx. 27, xxi. 4, and xxxiii. 37), Eleazar installed high priest, and the death of his father Aaron on Mount Hor. In proceeding "to compass the land of Edom," many persons were bitten by serpents; and "Moses made a serpent of brass." — This specimen of his handiwork was kept in after times at Jerusalem; and continued to attest the reality of the abode in the Desert, until broken in pieces by order of king Hezekiah (2 K. xviii. 4).

Clutia lanceolata of the mountains of Tropical Arabia. Called in Yemen "luch" or "alloh" (Forsk.); and the growing "ašlym" trees of Balaam's propheey num. xxiv. 6 — may be compared: C. lanceolata was observed by Forskal p. 170 at Boka in Yemen in the middle region of the mountains; and according to Vahl resembles C. pulchella of Austral Africa (Pers.).

August (= 1207 y. 241$\frac{1}{36}$ d. = 1240 — "40 years" of ten lunations of num. xiv. 33, xxvi., and xxvii. 12), death of Moses on Mount Abarim in sight of the promised land. — Mount Nebo has been re-discovered by De Saulcy (correspond. Lond. athen. 1865), and still bears the name of "Jebel Neba;" while another eminence in the vicinity called "Jebel Jelul" illustrious mountain, is regarded by him as very probably marking Beth-peor or the burial-place of Moses. As Moses gave directions for building an altar "of whole stones" untouched by iron (Deut. xxvii. 5 and 6), it may be inferred, that some "twenty *dolmens* and *cromlechs* exactly like those of France and England" observed by De Saulcy, were not in existence before the days of Moses.

1207 B. C. ("on the tenth of the First month," Josh. iv. 19), the Jordan crossed by the Israelites under Joshua. "On the fourteenth day of the month," the Passover kept "in the plains of Jericho." And not many days afterwards, the city of Jericho captured; an event attended by the transgression of Achar (Josh. v. 10, vii. 26, xxii. 20, and 1 Chron. ii. 7).

Hazor, the Canaanitish or Phoenician capital of the country around the sources of the Jordan, burned by Joshua (Josh. xi. 10). — In the time of Deborah, the city had recovered its importance (Judg. iv. 2). Its site, bearing the ancient name, was found by C. Williams (Sm. geogr. dict.) East of the Jordan and of Lake Merom, on a hill commanding the road from Tyre to Damascus.

1203 B. C. (= 1239 — "45 years" of ten lunations of Josh. xiv. 5 to 13), division of the conquered land among the Israelites; Hebron being assigned to Caleb son of Jephunneh.

Phragmites communis of Temperate climates. Soft-stemmed and called in Britain *bog reed* or *bennels* from its use in forming roofs (Johnst.), in Anglo-Saxon "hreod," in Germany "riet" (Prior) or "schilfrohr," in Italy "canna palustre" or "cannuccia" or "spazzola di palude" (Lenz), in Greece "agriokalamos" or "haita" (Sibth.) the latter word used by Homer and Euripedes and applicable to thatch, in Egypt "bous" (Del.), and doubtless connected with the river "knĕ" mentioned in Joshua xvi. 8 and xvii. 9 to xix. 28: — the "agmwn" growing at Babylon (Jer. li. 32), may also be compared: P. communis was observed by Delile on islets in the Nile, by Forskal p. 25 occupying the Ghobeibe marsh in the Sinai peninsula and its stems transported to Egypt and throughout Arabia. Farther North, "kalamoi" were found by Darius around a lake beyond the Danube (Herodot. iv. 109); were figured growing in water among fishes by Polygnotus at Delphi (Paus. x. 28. 1); and are one of the kinds distinguished by Theophrastus iv. 11: 11: P. communis was observed by Sibthorp, Chaubard, and Fraas, frequent in marshes from the Peloponnesus throughout the Greek islands to Bithynia. Westward, the "fluvialis arundo" is mentioned by Virgil georg. ii. 414; "canna" covering the slothful pool, by Ovid; "arundines" lasting for ages as thatching among Northern people, by Pliny xvi. 64; and remnants of P. vulgaris for bedding or for thatching roofs, have been found among debris of the earliest Swiss villages (Troyon p. 44): P. communis is termed "a. vulgaris" by Tournefort inst. 526; was observed by Savi, and Lenz, in Italy; and is known to grow in Barbary, Portugal, and throughout middle and Northern Europe as far as Lapland and Iceland (Desf., Brot., Wats., and Hook.). Eastward from Syria, is known to grow in the Tauro-Caspian countries, and throughout Siberia as far as Japan (Bieb., Gmel., and Thunb.). Farther East, was observed by myself in California and Oregon; by Drummond, at Cumberland House on the Saskatchewan; was called "wekinash" by the aboriginals of New England (R. Williams); and is known to grow throughout Canada and along the Atlantic as far as Lat. 31° in Florida (Wats., Baldw., and Chapm.). In the Southern Hemisphere, was observed by myself in the drizzly climate of Western Peru, also in Chili and Patagonia; and is known to grow in Australia (Wats., and Kunth).

Baal-hanan succeeded by Hadar or Hadad II., eighth king of Edom (Gen. xxxvi. 39, and 1 Chron. i. 50).

Ramessu VI. succeeded by his brother Ramessu VII. Atamum-nuterhikten, fifth king of the Twentieth dynasty. The name of Ramessu VII. occurs at Medinet Abu, and in his own tomb at Bab-el-meluk.

As early probably as this date, the "paiēōna" composed by Tynnichus of Chalcis (Plat. ion. 5). The "paiēōna" is described by others, as originally sung at Delphi to celebrate the killing of the serpent Python by Apollo: — it was sung by the Greek army before the walls of Troy (according to Homer il.).

Ninety-third generation. Jan. 1st, 1200, mostly beyond youth: Micah of Mount Ephraim (Judg. xvii): and among Greeks, Tros father of Ilus (Hom. il. xxiv. 215 to 240), Tyro daughter of Salmoneus and mother of Neleus and Amythaon (Hom. od. xi. 234 to 258).

1199 B. C. (= 1071 + "128 years" of Euseb. ii., and Clint. i. p. 345), Gordius succeeded by his son Midas as king of Phrygia. — Midas promoted the worship of Dionysus or Bacchus, and founded the city of Ancyra (Herod. i. 14, Strab. vii. p. 304, Paus. i. 4. 5, and Ael. var. hist. iv. 17).

Rosa centifolia of Eastern Caucasus. A *rose* called in Italy "rosa a bottoni" (Lenz) in Greece "triantaphullĕa" (Fraas), in Egypt "ouard" (Del.), in Egyptian "vĕrt" or "ĕrt" (ms. Borg.) or "ouērt" or "ouĕrt" (ms. Par.): "rōtha" having sixty petals and exceeding other kinds in fragrance were springing up spontaneously in the gardens of Midas in Macedonia — in the days of Herodotus viii. 138: the most fragrant roses yielding the sweetest ointment came from Cyrene in the days of Theophrastus vi. 6. 5: R. centifolia was observed by Forskal, Delile, and Clot-Bey, cultivated for commercial purposes in Egypt; by Fraas, in the gardens of Greece; is well known in the gardens of Italy and middle Europe (Desf., Pers., Red. pl. 25 and 52, and Lenz); and according to Lindley is indigenous in "woods in the eastern parts of the Caucasus." Its petals are employed medicinally, and "for the distillation of *rose water*" (Lindl.). A fragrant oil of roses was known in the time of the Trojan war (Hom. il. xxiii. 186); the "nirth" at the king's table in Cant. i. 12, rose-ointment for the dinner-table mentioned by Pliny xxi. 10, may also be compared: the term "narthōs" being extended by the modern Greeks to a similar perfume, the essential oil of lavender (see R. Damascena, Lavandula, and Valeriana jatamansi).

"1198 B. C. = 1st year of Wou-y, of the Chang" or Fourth dynasty — (Chinese chron. table).

"1197 B. C. = 2d year of Wou-y" (Chinese chron. table), beginning of the Twenty-fifth cycle.

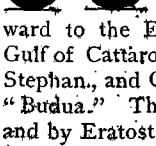
The same year (= 1071 + "23 + 30 + 48 + 25 years" of Castor in Euseb. i. p. 134), Erichthonius succeeded by his son Pandion, sixth Attic king.

The same year ("in the reign of Pandion at Athens," Castor in Euseb. i. p. 135, and "of Lynceus at Argos," Tat. and Clem. Alex., and "about 130 years before the fall of Troy," Clint. i. p. 86), arrival of Cadmus in Greece: bringing (according to Sophocles, Herodotus, Aristotle, and ancient authors generally) the *alphabet* and art of writing from Phoenicia.

One of his companions, Membliarus, was left upon the island of Kallistē (afterwards called "Thērē," Herodot. iv. 147, Pausan. iii. 1. 7, and Schol. Pind. pyth. iv. 88). Traces of ancient colonization from Phoenicia and Palestine, are found in geographical names in various parts of Greece: as in the Peloponnesus a river called "Iardanos" or Jordan, another in Crete (Hom. il. vii. 135, od. iii. 292, and Pherecyd.); and in . . . . a city called "Hebron."

The worship of *Bacchus* also brought by the Cadmeans — (Herodot. ii. 49, and Pausan. ix. 5).

"1194 B. C. = 1st year of Tai-ting, of the Chang" or Fourth dynasty — (Chinese chron. table).



The same year (= 991 + "7 + 26 + 40 yrs" of the Euseb.-Maneth. table), a date possibly marking the accession of Ramessu VIII., sixth king of the Twentieth dynasty. — His reign is recorded by a royal scribe in a sepulchral tablet dedicated to the deities Osiris, Onouris, and Horus (Birch).

Leaving Boeotian Thebes, Cadmus and Harmonia proceeded Westward and Northward to the Encheleans on the Illyrian shore of the Adriatic; and near Rizon (Risano on the Gulf of Cattaro) founded the new city of Bōuthōē (Herodot., Apollod., Nicand., Strab., Etym. magn., Stephan., and C. Mull. geogr. min. i. p. 31): — called "Butuam" by Pliny, and at the present day "Budua." The temple or tomb of Cadmus in that vicinity is mentioned in the Scylacean Periplus, and by Eratosthenes, Phylarchus, Apollonius Rhodius, and others.

"1191 B. C. = 1st year of Ti-y, of the Chang" or Fourth dynasty — (Chinese chron. table).

As early perhaps as this date (Graha Munjari tables, Puranas, and Bentley as. res. viii. p. 232), Cripa reigning in Hindustan.

Phinehas being high-priest (Ex. vi. 1, Num. xxv., Josh. xxii., and Judg. xx. 28), civil war; ending in the almost total extirpation of the Tribe of Benjamin.

The OVP klo used in this war — (Judg. xx. 16), mentioned also in the history of David (1 Sam. xvii. 40), and somewhat later in 2 K. iii. 25, is admitted to be the sling; figured on the Assyrian

monuments at Nineveh (Bonom. iv. 3); and bands of "funditores" or slingers were employed in the Roman armies (Sall., and Val. Max.). The use of this weapon extended even to America: as shown by an ancient Peruvian sling found by myself among the ruins of Pachacamac near Lima.

1186 B. C. (= 1141 + "45 years" of Euseb. ii., and Syncell.), accession of Panyas as Assyrian emperor. He is also mentioned by Cephalion: but "forty-two" years only are assigned to his reign in Euseb. i.

Tantalus father of Pelops, Broteas, and Niobe, a wealthy king, and (according to Diodorus iv. 74, Hyginus 124, and Servius ad aen. vi. 603) king of Lydia or of Sipylus; — an account confirmed by recent discoveries on mount Sipylus (see Niobe).

1185 B. C. (= 1176 y. 302$\frac{1}{6}$ d. + "8 years" of Judg. iii. 8), the Israelites "sold" into "the hands of Chushan-rishathaim king of Mesopotamia;" or the first Servitude.

"In the reign of Lynceus" (Tat., and Clem. Alex.), Crete governed by the lawgiver Minos. Regarded as having inaugurated naval dominion: extending his authority over other islands, and even imposing tribute on the city of Athens. — The wisdom and justice of Minos are celebrated by Homer (il. iii. 232, xiii. 450, od. xi. 322, 569, and xix. 179), the Cretans continuing pre-eminent as mariners, and communication with the main land being frequent. The tribute imposed by Minos on Athens, continued to be paid annually for about eight hundred years, ceasing soon after the death of Socrates (Plat. leg. iv. 2).

Minos encouraged *archery*, and a law in which he directs children to be instructed in the art — has been preserved by Ephorus (Strab. x.): the quiver is represented on the earliest coins of Crete (Goltz. græc.); the Cretan archers according to Xenophon iv. rendered great assistance in the Retreat of the ten thousand; to the time of Pausanias, the Cretans excelled all other Greeks in the art; and their proficiency was found by Tournefort trav. i. 100 not altogether obsolete.

Cenchrus? frutescens of the East Mediterranean countries. Called in Greece "pĕtrōkalamō" (Sibth.), and furnished the arrows — according to Tournefort trav. i. 100; the "kalamōus inthikōus" or "mĕstōkalamōus" or "valitas" is said by Democritus to indicate water if the shoots are tender; the "kalamōu epigĕiŏn" of Theophrastus iv. 13 may be compared; and the "nastōs" from which arrows are made, distinguished by Dioscorides i. 114, is referred here by Sibthorp: C. frutescens is termed "arundo graminea aculeata" by Alpinus exot. pl. 104, as observed by him on Crete (Spreng.), "gramen orientale spicatum fruticosum spinosum spicis echinatis in capitulum congestis" by Tournefort cor. 39; was observed by Sibthorp frequent in maritime sands around Crete, the Peloponnesus, and the Greek islands, and according to Linnæus occurs also in Armenia; but in the absence of specimens from the Linnæan and Sibthorpian herbaria, the plant remains altogether obscure (J. E. Smith).

1181 B. C. (= 1158 + "23 years" of Castor in Euseb. i. p. 129, see also Pausan. ii. 16. 2, and Tat.), Lynceus succeeded by his son Abas, thirteenth king at Argos.

1178 B. C. = "17th year of Ramessu VIII.," in a papyrus — (Birch, in Buns. præf iii.).

1177 B. C. (= 1158 y. 302$\frac{1}{6}$ d. + "18 years" of judg. iii. 14), Chusan-rishathaim of Mesopotamia defeated by the Israelites under Othniel.

Cleitor, succeeded by his cousin Aepytus, grandson of Arcas and now seventh king of Arcadia — (Pind. vi. 54, and Paus. viii. 4. 7). Aepytus was killed by the bite of a "sēps," described by Pausanias as a *viper* of the smallest size, ash-coloured with dots, the head broad and neck slender. The tomb of Aepytus is mentioned by Homer il. ii. 604, and was visited by Pausanias.

On the summit of mount Cyllene in Arcadia, Cyllen brother of Aepytus built a temple to Mercury; — in ruins when visited by Pausanias viii. 17. 1.

Callitris quadrivalvis of Barbary. Called in Egypt and Yemen "atl" (Forsk.): by a marked exception, the image of Mercury in this temple was of "thuōu" — (Paus.); burned on Calypso's Isle (Malta) for sacrifice (Hom. od. v. 60); mentioned by Theophrastus v. 3 as growing in Cyrene and the Oasis of Ammon; and "xulōn thuinōn" by Callixenus, Strabo iv. 6, and in Rev. xviii. 12: the "athl" is mentioned by Ishak ben Amran, Serapion, and Ebn Baitar: C. quadrivalvis was observed by Forskál, Delile, and Clot-Bey, in Egypt; by myself, planted in gardens throughout and in the distance much resembling a Casuarina; according to my Nubian attendant is well-known in Dongola; was observed by Forskal as far as Yemen; and *galls* from the "atl" are enumerated by Forskal mat. med., and Clot-Bey, as employed in Egypt for dyeing in place of those from the oak. Westward, the "thyōn" of Homer and others is identified by Pliny xiii. 29 to 30 with the "citrus" of the Romans, the material of tables so highly prized from the time of Cicero, the variegated knotty root being especially valued: "libyssa citrus" is mentioned by Varro; its wood as precious by Horace iv. 1; and "citrea mensa" by Petronius, Lucan, and Martial: C. quadrivalvis was ascertained by S. E. Cook to have furnished the roofing of a mosque at Cordova built in the "Ninth" century (Royle in Kitt. bibl cycl.); and according to Daubeny "beautiful specimens of ornamental cabinet-work" so much admired a few years ago in Paris; was observed by Schousboe in its wild state, "a tree of enormous size" in the Upper portion of the province of Temsme in Morocco.

This tree (according to Broussouel) yields *sandarach*, called in Egyptian "vanĕ" (Arab. transl. ex. xxx. 34) or "stiriakĕ" — (Kirch.): "sandarakē" or "sandarahē" is mentioned as a vegetable product by Menecrates, Aristotle an. viii. 24, and Pliny xi. 7. From "the resinous substance called *sandarach*" is "prepared the *pounce* employed in rendering parchment fit to write upon" (Lindl.).

1173 B. C. (= 1155 + his "19th year"), the accession of Ramessu IX. Khaem-miamun, seventh king of the Twentieth dynasty, may be placed provisionally at this date. His name occurs at Medinet Abu, and on two stelæ — now in Berlin (Glid. analect.).

1172 B. C. (= 1071 + "23 + 30 + 48 years" of Castor in Euseb. i. p. 134, see also Apollod iii. 14. 15, and Pausan. i. 2. 5), Pandion succeeded by his son Erechtheus, seventh Attic king. Erechtheus is mentioned by Homer il. ii. 547 and od. vii. 81; and according to some writers, was an Egyptian (Diod. i. 29, and Leps. eg. and sin. p. 383).

His brother Butes now hereditary priest of *Neptune*: this being the original worship in Attica (Isocr. panath. lxxviii. p. 273. c., and Apollod. iii. 14. 1). The temple called the "ĕrĕhthĕiōn," situated on the acropolis at Athens, is mentioned by Herodotus viii. 55.

Senecio vulgaris of Europe and the adjoining portion of Asia. Called in Britain *groundsel*, in Anglo-Saxon "grundswelge," by Galfridus pr. pm. "chynchone," in medieval Latin "ceneceon" (Prior), in France "seneçon" (Nugent), in Italy "erba calderugia" or "solleccione" or "senecione" (Lenz), in Greece "ōglēgōras" (Fraas); in which we recognize the "sĕnĕkiōum" of the Romans identified in Syn. Diosc. with the "ērigĕrŏn" or "ĕrĕhthitēs" (named apparently from Erechtheus and his temple on the Acropolis): — the "ērigĕrŏn," old in the spring from flowering throughout the winter, is mentioned by Theophrastus vii. 7. 1 to caus. i. 22. 4; is termed "acanthida" by Callimachus from its heads of down resembling those of thistles, by others "pappus" (Plin.); is yellow-flowered according to Dioscorides and growing chiefly in cities and along walls; and is identified by Ebn Baitar with the "shih elrabia:" S. vulgaris was observed by Delile at Damietta in Egypt; by Sibthorp, Chaubard, and Fraas, frequent about dwellings from the Peloponnesus throughout Greece; is known to occur also along the Taurian mountains and in Siberia (Bieb., and Ledeb.). Westward, the "erigeron" or "senecio" is mentioned by Pliny xxv. 106: S. vulgaris is described by Brunfels i. p. 119 (Spreng.); is termed "s. minor vulgaris" by Tournefort inst. 456; was observed by Munby in Algeria, by Forskal on Malta, by Lenz in Italy; and is known to occur in waste places as far as Lapland and Iceland (Hook., Fries, and Wats.). By European colonists, was carried to Madeira (Lowe, and A. Dec.); to the Falkland Islands (Durv, and J. D. Hook.); and before 1669 (Jossel.) to Northeast America, where it has become frequent in our Northern States, in one winter observed by myself flowering until January in the streets of Boston.

1171 B. C. = "3d year of Ramessu IX.," on the monuments — (C. Mull. fr. Man. p. 589).

Of hymns and prayers to particular deities "composed in the reign of Ramessu IX.," several — were procured at Thebes by Lepsius eg. and sin. 392.

"1169 B. C." (Diodor, Euseb. ii. p. 299, and Clint. i. p. 23), a change in naval dominion. The "empire of the sea" acquired by the Lydians and Mæonians. — Held by them "ninety-two" years.

On the death of Polydorus son of Cadmus, Nycteus father of Antiopa governing Boeotian Thebes during the minority of Labdacus (Apollod. iii. 4. 2, and Paus. ix. 5).

Ferula Tingitana of Barbary. Pills of "*ammoniac*," employed in Egypt medicinally and called "kelleck" are mentioned by Alpinus, and Forskal mat. med., and "calak" was ascertained by Rouyer to be brought "from Barbary:" agreeing therefore with the "ammŏniakōn" of Amythaon — (Gal.), Hippocrates (Perein.), Antipater, Callinicus, Meges, Triphon, Servilius Damocrates, Galen comp. med. gen. vii. 7, and Paulus Aegineta, termed "thumiamatŏs" by Andreas, "guttae" by Scribonius Largus, and described by Dioscorides as the juice of a "narthēkŏs" growing in Libya and together with its root called "agasullis:" two kinds or qualities are distinguished by Dioscorides, and Pliny xii. 49 and xxiv. 14; gum ammoniac is mentioned by Rhazes, and Avicenna; and the plant producing it was observed by Shaw, and Jackson, in Barbary, and is described by them as belonging to this genus (F. Adams): F. Tingitana is described by Hermann par. pl. 165, Morison ix. pl. 15, and Rivinus pentap. iii. pl. 10; and is known to grow in Spain and Morocco (Pers., and Lindl.), but according to Viviani not as far East as Cyrene. The "fetid gum resin ammoniacum" according to Lindley "is chiefly employed as a discutient and expectorant." (See Dorema.)

Ninety-fourth generation. May 1st, 1167, mostly beyond youth: Salmon (Ruth iv. 20, and 1 Chron. ii. 11), the high-priest Abishua (1 Chron vi. 5, Ezr. vii. 4, and Jos. v. 11. 15); and among Greeks, Hyagnis the earliest flute-player known to the Greeks (Plut. mus., and others).

The city of Ilium or Troy, founded by Ilus (Euseb.). Ilus, brother of Assaracus and father of Laomedon, — is mentioned by Homer il. xxiv. 215 to 240.

In Boeotian Thebes, death of Labdacus shortly after his accession, leaving a son Laius "a year old." Lycus, who succeeded his brother Nycteus as regent, made war against Epopeus fourteenth king of Sicyon, and brought back his own niece Antiopa (Apollod. iii. 5. 2, and Pausan. ix. 5).

1159 B. C. (= 1138 y. 302$\frac{1}{8}$ d. + "20 years" of Judg. iv. 1), Eglon king of Moab, slain by Ehud; and shortly afterwards, the Moabites defeated in battle by the Israelites.

1158 B. C. (= "16th year of Ramessu IX.," on the monuments — (Leps. k. tab. p 19, and Birch).

In this year (= 1141 + "17 years" of Castor in Euseb. i. p. 129, see also Apollod. ii. 1. 4, Pausan., and Clint.), Abas succeeded by his twin sons, Acrisius at Argos, and Proetus as king at Tiryns. The walls of Tiryns built by Proetus — (Strab. viii. 6. 11, and Pausan. . .) are mentioned by Homer il. ii. 559, and from their colossal dimensions continue to excite admiration to the present day (Sm. geogr. dict.).

Salix viminalis of Europe and the adjoining portion of Asia. Called in France and Britain *osier*, in medieval Latin "oseria" (Prior): the earliest Greek shields, as those carried by Acrisius and Proetus, were woven of "itĕa" — (Pausan. corinth., and Fée); "itĕinōisin" shields are mentioned by Theocritus xvi. 79; the bending of "salignas umbonum crates," by Virgil æn. viii. 632; manufactured articles of wicker-work, by Plato vii. 23; "ōisuinōs," by Homer od. v. 256; and the "ōisua" is enumerated among the signs of water by Democritus (Cass. geopon. ii. 6): S. viminalis was observed by Sibthorp in moist situations in Greece and around Constantinople. Westward, willow-grounds "salicta" are mentioned by Ennius, Cato, and Cicero; the person having charge "salictarius," by Cato; slender withs "vimines" by Caesar, Varro, and Columella; "salices fecundae viminibus," by Virgil; and the cultivation and product of "salicis viminalis," by Pliny xvi. 68 and xvii. 32. Farther North, articles of fine osier-work have been found in debris of the lake-villages of Switzerland (Troyon p. 465 and pl. vii. 22); S. viminalis is termed "s. folio longissimo angustissimo utrinque albido" by Tournefort inst. 591; was observed by Forskal near Marseilles; and is known to grow along banks of streams throughout middle Europe as far as Britain (Hoffm. pl. 2, 5, and 21, Lam. fl. fr., and Engl. bot. pl. 1828). By European colonists, was carried to Northeast America, where I have occasionally observed it cultivated.

In Thessaly, a city called "Larissa" founded by king Acrisius: a temple to Ceres at Thermopylæ, is also attributed to him (Callim. e. 41, Pausan. ii. 23. 9, and Steph. Byzant.).

As early perhaps as this date (Graha Munjari tables, Puranas, and Bentley as. res. viii. p. 232), Rishyasringa reigning in Hindustan.

"In the reign of Proetus" (Tat. and Clem. Alex., see also Thucyd. ii. 5, Isocr., Lycurg., and Pausan. i. 31. 2), invasion of Attica by Thracians under Eumolpus, assisted by the citizens of Eleusis: apparently a religious war between the partisans of Neptune and Minerva. Erechtheus was supported by Ion, but was slain (Philochor., Strab., and Pausan. i. 38. 4). He was succeeded by his brother Cecrops II., eighth Attic king. The date is confirmed by Tatian and Clemens Alexandrinus, who make Ion and Cecrops II. contemporary with Acrisius.

1155 B. C. (= 1071 + "18th + 67 years" of Castor in Euseb. i. p. 131 = "85th year" of Syncellus, see also Homer il. ii. 105), Pelops brother of Broteas appointed curator of the Olympiads at Pisatis.

The most ancient statue of Cybele mother of the gods on the rock of Coddinos on mount Sipylus, made by Broteas brother of Niobe — (tradit. of the Magnetes in Pausan. iii. 22. 4). The statue has been recognized as the Niobe turned to stone of Homer il. xxiv. 603, Ovid met. vi. 155, and Pausanias viii. 2, continues extant (Van Lennep in trans. Amer. Orient. soc. May 1867), and is the earliest specimen known of *Greek art* (see Mycenæ).

The same year (= 1613 y. 2 mo. — "393 — 66 yrs" of Josephus, Manetho in Jos. c. A. i. 26 giving 1221 y. 2 mo. — "66 yrs" = 1155 y. 2 mo, and the Euseb.-Maneth. table 991 + "130 + 7 + 26 yrs" = 1154), possible date of the sacrilegious plundering of ten royal tombs at Thebes, and punishment of the offenders in the "19th year of Ramessu IX." — After his "19th year," Ramessu IX. associated his son in the government (Birch).

Helleborus Orientalis of the mountains of Asia Minor and Greece. Called by the Greeks "skarphē" (Sibth.), by the Turks "zoptême" (Lindl.): the "ĕllĕvōrōs melas" with which the daughters of Proetus were healed by Melampus son of Amythaon — (Hesiod in Apollod ii. 2. 2, Diosc., and Plin. xxv. 21), mentioned also by Euryphon 2 morb. 34, Theophrastus ix. 11, and according to Dioscorides having the root purgative and flower purplish, is referred here by writers: H. Orientalis is termed "h. niger Orientalis . . . . flore purpurascente" by Tournefort cor 20; was observed by Sibthorp, and Fraas, on the mountains of Asia Minor and Greece, frequent also in the environs of Constantinople; and is known to grow in Macedonia and Thrace (Spreng.). Farther South, the "ĕllĕvōrōs melas" is identified in Syn. Diosc. with the "zŏmaritis" of the prophets, and "isaia" or "ĕlaphuēs" or "kĕmĕlĕg" of the Egyptians; and roots of "helleborum nigrum" were found by Forskal mat. med. used medicinally in Egypt. Westward, the "helleborus" is mentioned by Plautus, Horace, and Virgil, and the medicinal use in Italy of "elleborum nigrum" (probably imported roots) is implied by the account of Pliny xxv. 21 to 94. The root of H. Orientalis according to Lindley "is acrid and violently cathartic" but "is still used in the Levant." (See H. niger, and Veratrum nigrum.)

By Melampus also, the *worship of Dionysus* or Bacchus (derived according to Herodotus ii. 49 through the Cadmean Phoenicians in Boeotian Thebes) was extended in Greece. Melampus resided at first with his uncle king Neleus at Pylos: — and his descendants, hereditary prophets as far as Theoclymenus of the fourth generation seen by Telemachus, are enumerated by Homer od. xi. 291, and xv. 225.

1154 B. C. (= "527 A. D. + 1680" = 1804 A. D. + "2957 years" of Bentley as. res. viii. p. 233), the Hindu astronomer Parasara, whose rule for the adjustment of the calendar — is quoted in the Vedas.

"The same year = 1st year of Tcheou or Cheou-sin, of the Chang" or Fourth dynasty — (Chinese chron. table).

Olen of Lycia the earliest composer of "umnōi" or hymns among the Greeks — (Herodot. iv. 35, and Pausan. ix. 27. 2): "hymns to the gods" were recited or sung during the Trojan war (Homer il.).

The names of a party of Hyperborei visiting Delos recorded by Olen of Lycia: — Hyperborei are also mentioned by Boeo of Delphi, Hesiod epigon.; and their home is placed by Aeschylus prometh., and Pindar, at the sources of the Ister or Danube.

The arts of *agriculture* and *weaving cloth* known to the Hyperboreans as early probably as this date (see Menephta Sethos, and amber): — the presents they continued sending to Delos came wrapped in straw of "purōs" (Herodot., and Paus. i. 31. 2):

And in direct accordance, the two kinds of grain most anciently cultivated in Switzerland are shown by the debris of lake-villages to be *Triticum vulgare* var. antiquorum (Heer, see also Chinnoung), and *Hordeum vulgare* var. hexastichum sanctum, six-rowed barley.

Linum angustifolium of Europe and the adjoining portion of Asia. Called in Greece "agriōlinari" (Sibth.): and shown by the debris of lake-villages to be the kind of *flax* cultivated in Switzerland for weaving cloth during the Stone period — (Heer): L. angustifolium is termed "l. sylvestre angustifolium floribus dilute purpurascentibus vel carneis" by Tournefort inst. 340; was observed in Barbary by Desfontaines; and is known to grow in Britain, especially in the vicinity of the sea (Huds., Engl. bot. pl. 381, and Pers.). Eastward, the "amōrgithōs" is mentioned by Aristophanes lysistr. 735; "amōrginōs hitōn," by Antiphanes, and Pollux; the "amōrgis" is identified by Orion etym. with the "linōkalamēn;" and according to other authority, is the most slender kind of flax and an herb with a purple flower (see also Scarlatus): L. angustifolium was observed by Sibthorp and Chaubard, in Crete and the Peloponnesus.

The domestic animals of Switzerland during the Stone Age, are enumerated as: the *bullock*, Bos taurus, a small race with the horns short and incurved forward; the *goat*, Capra hircus, numerous; the *sheep*, Ovis aries, in rare instances; *swine*, Sus scrofa domesticated; and the *dog*, Canis familiaris (Troyon p. 273 and 442).

In Denmark, judging from the culinary relics, the *dog* appears to have been the only domestic animal during the Stone Age (Troyon), but additional wild animals occur in debris of the earliest dwellings and villages, as the following used for food: the *seal*, Phoca; *lynx*, Felis lynx; the "rat de terre" . . . .; of birds, the *wild swan*, Cygnus . . . .; *eider duck*, Anas mollissima; "petite oie sauvage," Anser . . . .; *great auk*, "Alca impennis;" "coq de bruyère," Tetrao . . . .: of fishes, the *herring*, Clupea . . . ., and *eel*, Anguilla . . . : of Crustacea, the *crab*, Cancer . . . : and of mollusks, the *oyster*, Ostrea . . .; *scollop*, Pecten. . . .; and *land-snails*, Helices (Steenstrup, and Troyon 97).

"1150 B. C." (Pauth. note to Chi-King iii. 1. 1), Wen-Wang, founder of the Tcheou dynasty.

In this year (= 1071 + "80th year" of Philistus, Dionys. i. . .), the Sikels, driven out of Italy by the "Aborigines" and associated Pelasgian Greeks, proceeding to the neighbouring large island occupied by Sikani; an Iberian tribe recently driven there by the Ligurians. The Sikels formed settlements; and hence the name "Sikĕlia" or *Sicily*. — The island of Sikelia is mentioned by Homer od.

The above event is further referred to the "twenty-sixth year of the priestess Alcyone; in the third generation before the fall of Troy" (Hellan.): the first part of this extract being from the Register kept at Argos by the priestesses of Juno. The language of this Register was in all probability Greek, and the *writing* alphabetic.

Lycus after governing Boeotian Thebes "twenty years" (including the short reign of Labdacus) slain and succeeded by Zethus and Amphion, sons of Antiopa. Instead of continuing the regency, they expelled Laius, and proceeded to build a wall around the city (Homer od. λ 262, Apollod. iii. 5. 2, and Pausan. ix. 5).

The improvement of combining *poetry* with *instrumental music* attributed to Amphion (Heraclides in Plut. mus. p. 1132). The poet-musician Linus at this time living, — whose tomb at Boeotian Thebes continued to be pointed out for many centuries (Pamph., Hes., Heraclid., and Pausan. ix. 29. 3).

Petroselinum sativum of the Mediterranean countries. Called in Britain *parsley*, by Treveris "percely" (Prior), in Germany "petersilie," in Italy "petroselino" or "prezzemolo" or "apio ortense" (Lenz), in Greece "makĕthōnēsi" or "maithanō" or "murŏthia pĕtrōsĕlĭna" (Fraas) or "murōthia" (Sibth.), in Egypt "baqdunis" (Forsk.) or "maqedounis" (Del.); in which we recognize the "apium amarum" with which the poet Linus adorned his head — (Virg. ecl. vi. 98): the "apium" with which Nemean victors were crowned (Plin.) is identified by Cato with the "sĕlinōn kēpaiōn" of Pindar, and Aristophanes, mentioned also by Dioscorides iii. 67; and the "sĕlinō ōulō" is mentioned in 2 Morb. mul. 63: P. sativum was observed by Sibthorp on mount Athos and other craggy declivities in Greece, but by Chaubard, and Fraas, nowhere indigenous in the Peloponnesus. Farther South, the "mokadunas" is mentioned by Ebn Baitar; P sativum was observed by Forskal, and Delile, under cultivation in Egypt, the roots besides and "aqua petroselin." employed medicinally. Westward, the cultivation of the "apium" is mentioned by Columella, and Palladius, and directions for rendering the plant "crispius" are given by Pliny xix. 46: P. sativum is described by Dodoens pl. 694; is termed "a. hortense seu petroselinum vulgo" by Tournefort inst. 305; is known to grow wild on Sardinia (Pers., Moris i. p. 21, and Spreng.), and is besides cultivated and naturalized in Italy and throughout middle Europe as far as Britain (Wats., and A. Dec.). Eastward from Egypt, is called in Hindustanee "pitirseli" or "ajmod" or "karafs bostani," in Bengalee "randhani shak" (D'roz.), and was observed by Graham "in gardens" around Bombay; by Mason, "exotic" in Burmah; by Kaempfer, and Thunberg, under cultivation in Japan and called "kin," or usually "seri." By European colonists, was carried to Northeast America, where it continues under cultivation. The leaves according to Lindley "are diuretic, and are at once recognized by their agreeable smell."

As early perhaps as this date, the accession of Ramessu X. Amunikhopsef, eighth king of the Twentieth dynasty. His name occurs on a tablet — now in the British museum, and in his own tomb at Bab-el-meluk (Glid. analect.).

1149 B. C. = "2d year of Ramessu X.," the latest date in his reign found on the monuments — (Leps. k. tab. p. 19).

"1144 B. C." (= 11th year of Cheou-sin, Pauth. note to Chi-King iii. 1. 3), Wen-Wang imprisoned by the emperor Cheou-sin — for three years.

During his imprisonment Wen-Wang explained the y-king or eight Koua symbols, and doubled the number of symbols. — His explanations were continued by his son Tcheou-kong (Visdelou, and Pauth. panth. lit.).

1141 B. C. (= 1122 + "19 years" of Euseb. i. and ii.), accession of Sosarmus as Assyrian emperor. The assigned length of this reign probably incorrect, falling short of the "twenty years" limit given by Cephalion; and in fact, the reign of Sosarmus is extended to "twenty-two" years by Syncellus.

The same year (= 1096 + "45 years" of Castor in Euseb. i. p. 129, see also Homer il. xiv. 319, Pherecyd., Pausan., and Clint. i. p. 81), not later than this date, death of Acrisius by the hand of his grandson Perseus. Perseus removed the Argive seat of government to Mycenae; and (according to Apollodorus ii. 4. 4, and Strabo viii.) built walls there. These cyclopian walls include a gateway with two sculptured lions; an early specimen of Greek art — (see Sm. geogr. dict, and Broteas).

Boletus edulis of Europe and the adjoining portion of Asia. An edible *mushroom* called in Italy "ghezzo" or "porcino" or "bolè porcin" (Lenz), and the "mukēs" growing on the site and giving its name to the new city — (Paus. ii. 16. 3) may be compared: "mukai" are enumerated as edible by Epicharmus, Ephippus, Antiphanes, are termed "ĕustōmous" by Diphilus of Siphnus although in his day an article of food generally despised; and mushrooms growing near fig-trees are pronounced salutary by Nicander (Athen. ii. 56): "suilli" are enumerated by Pliny xxii. 47 as collected and dried in Italy, like those imported from Bithynia: B. edulis was observed by Sibthorp in woods in the Peloponnesus; and is known to grow in Italy and throughout middle Europe as far as Britain (Schæff pl. 134, Bulliard h. fr. i pl. 60, 494, and Sibth. oxon. 375).

"In the days of Shamgar the son of Anath, in the days of Jael" wife of Heber the Kenite (Song of Deborah, and Judg. iii. 31 and iv. 4), the country inhabited by the Twelve tribes disturbed and unsafe.

1139 B. C. (= 1131 y. $302\frac{1}{8}$ d. + "7 years" of Judg. vi. 1), the army of Jabin king of Canaan at Hazor, defeated by the Israelites under Deborah and Barak.

In the Song of Deborah, "*ships*" mentioned, also *embroidery* or the Sidonian "needlework."

The accession of Ramessu XI. Siptah, ninth king of the Twentieth dynasty, hardly later than this year. His name has been found "only on a large tablet at Silsilis" — (Glid. analect.).

"1137 B. C. = 18th year of Cheou-sin" (Chinese chron. table), beginning of the Twenty-sixth cycle. The emperor urged to change his course by his minister Pi-kan, who was in consequence put to death: the first instance in Chinese history of this self-sacrifice (Pauth. p. 70).

Plantago major of Northern Asia. Called in France and Britain *plantain* (Prior, and Nugent), in Germany "wegerich" (Grieb), in Italy "piantaggine maggiore" (Lenz), in Greece "pĕntanĕurōn" (Forsk., and Sibth.), in Egypt "massasah" or "lissan el-hamal" lamb's tongue (Del.), by the prophets "ōuran ihnĕumēnōs," in Egyptian "asōnth" or "asōēth" (Syn. Diosc.) or "asōut" from "ĕsŏōu" sheep (Kirch.), in Japan "siaden," or usually "obako" (Thunb.): the "feou-yi." gathered by women in pathways and under the wheels of chariots according to an ancient ode — (Chi-King i. 1. 8) is referred here by Pauthier: P. major was observed by Kaempfer, and Thunberg, in Japan; by Siebold, on Yeso; by Gmelin, throughout Siberia. Westward, "lissan el-hamal" translated into Greek becomes the "arnōglŏssōn" of Theophrastus vii. 8. 3, and Themisōn, "arnōglŏssōn mĕizōn" being medicinally the most useful kind according to Dioscorides: in Syn. Diosc., the "arnōglŏssōn" or "arnĕiōn" or "provatĕiōn" or "ĕptapleurōn" is identified with the "atiĕirkōn" of Numidians, "thēsarikam" of Spaniards, and "tarvēlōthathiōn" of Gauls; and the "heptapleuron" is identified by Pliny xxv. 39 with "plantago maior:" P. major is known to occur in waste places along the Taurian mountains (Bieb.); was received by A. Richard from Abyssinia; was observed by Forskal, and Delile, around Damietta and Cairo; by Forskal, Sibthorp, Chaubard, and Fraas, frequent from Constantinople to Crete and the Peloponnesus; is known to occur in pathways from Italy throughout Western Europe as far as Lapland (Tourn. inst. 126, Pers., and Wats.). Eastward from Japan, may have been carried by Aino or Aleutian colonists to America; was received from the neighbouring American coast by Gmelin, was observed by Brackenridge around Chinnook villages on Gray's harbour, but otherwise by him and myself throughout Oregon only around the trading-post of Fort Colville; was received however by Hooker from California, Fort Vancouver, and Sitcha; was observed by Nuttall on the Arkansas; and in 1515 by Oviedo gen. hist. xi. 2 in the West Indies, "plantĕ al qual los medicos llamen plantago." In our Atlantic States, has an indigenous aspect along salt-marshes, was received by Hooker from Labrador, and observed by him on Iceland, yet may have been introduced throughout by European colonists: Josselyn voy. 188 and rar. 86 found in 1663 "broad-leaved plantain" the only "sort" in New England, which "the Indians call Englishman's foot, as though produced by their treading;" Bartram also found the natives "pretending that this plant never grew here before the arrival of Europeans" (Kalm trav. i. 92); and in various instances the plant has certainly accompanied the footsteps of fur-traders. Clearly also by European colonists, was carried to the Southern Hemisphere; to Chili (C. Gay); and to New Zealand, occurring there in but one known locality (Raoul, and A. Dec.; see P. media).

Hardly later than this date, Panaceia the "all-healing." — She was regarded as the daughter of Aesculapius, and a temple was erected to her at Oropus (Aristoph. plut. 702, Paus. i. 34. 2, and schol. Aristoph.).

Ferula ferulago of the East Mediterranean countries. The "panaces" called after Aesculapius because he named his daughter Panacea, — further described by Pliny xxv. 11 as yielding "succus coactus ferulae," that procured in Macedonia being called "bucolicon," may be compared: "halvanē" produced in Syria by a plant called "panakēs," is mentioned by Theophrastus ix. 7 to 11; "halvanis riza," by Nicander ther. 938; a "narthēx" in Syria producing "halvanē," by Dioscorides iii. 87; "galbanum" produced by a "ferula" growing on mount Amanus in Syria and called "stagonitin," by Pliny xii. 56; F. ferulago was obtained by Lobel obs. 451 from seeds found in the gum (Spreng.); was observed by Sibthorp, and Chaubard, from Crete to the Peloponnesus; is known to grow also in Transylvania, Gallicia, and as far as Caucasus (Jacq. austr. app. pl. 5, and Lindl.). Westward, is termed "f. galbanifera" by Tournefort inst. 321; is known to grow in Sicily (Morison ix. pl. 15, and Pers.); and was observed by Desfontaines p. 251 in Barbary. The plant according to Lindley "yields abundantly a gum-resinous secretion," but "it would appear that the opinion of" its producing galbanum "is unfounded." (see G. officinale).

Thapsia Asclepium of the East Mediterranean countries. Called in Greece "aglēgōra" (Sibth.); and the "panakēs asklēpiĕiōn" — distinguished from the preceding by Theophrastus ix. 8 to 11, having a white root a span long "alukŏthē" brackish, stem geniculate every way, and "thapsia"-like leaves, which according to Dioscorides are hairy and the flowers yellow, is referred here by Columna (Spreng.): T. Asclepium was observed by Sibthorp from the Peloponnesus to Rhodes and Constantinople. Westward, is enumerated among foreign plants in the Ortus Sanitatis and termed "thapsiam" (Spreng.), but was found by Brassavolus on the Appenines; is described also by Matthioli 545, and Columna ecphr. i. pl. 85; is termed "th. tenuiore folio apula" by Tournefort inst. 322; and is known to grow as far as Apulia at the Southern extreme of Italy (Pers.).

"1134 B. C. = 1st year of Wou-wang" (Chinese chron. table). A *vase* dedicated to Wou-wang's father Wen-wang, is figured by Pauthier pl. xxxix. 5.

Ninety-fifth generation. Sept. 1st, 1134, mostly beyond youth: Boaz, and Ruth; the high-priest Bukki (1 Chron. vi. 5, Ezr. vii. 4, and Josep. v. 116); Bellerophon grandson of Sisyphus (Hom. il. vi. 154); Laomedon king of Troy and father of Priamus, and Capys father of Anchises

(Hom. il. xxiv. 215 to 240); the Phrygian flute-player Marsyas, son of Hyagnis (Plut. mus., Clem. Alex., and others); Pittheus son of Pelops (Pind. and Apollod.).

1132 B. C. (= 1113 y. 302$\frac{16}{88}$ d. + "18 years" of Judg. x. 8), the Midianites defeated by the Israelites under Gideon, also called Jerubbaal.

Ramessu XI. built the temple in the rear of Karnak — dedicated by his successor to the god Khons (Birch).

Platanus Orientalis of the Tauro-Caspian countries. Called in Britain *plane tree* (Prior), in Italy "platano" (Lenz), in Greece "platanōs" (Sibth.), in which we recognize the "platanus" on the road from Apamea into Phrygia, said to be that on which Marsyas was hanged, — and which continued to be pointed out in the days of Pliny xvi. 88 and 89; who further mentions a "platanus" at Delphi said to have been planted by Agamemnon, and trees or their offshoots continuing on the tomb of Protesilaus within sight of Troy: the "platanistōs" (translated "platanus" by Cicero) was already at the beginning of the Trojan war in Asia Minor and Greece, as appears from Homer il. ii. 307; is mentioned also by Herodotus vii. 31; and the "platanōu" is described by Dioscorides as having green globular fruit and down on the leaves: P. Orientalis was observed by Forskal, Sibthorp, Chaubard, and Fraas, abounding along streams in Asia Minor and throughout Greece and the Greek islands, besides being sometimes planted. Farther South, was already planted in Egypt in the days of Theophrastus; and was observed there in gardens by Forskal, Clot-Bey, and by myself as far even as Middle Egypt. Westward, according to Pliny xii. 3 the "platanus" was first brought over the Ionian Sea to the isle of Diomedes to adorn his tomb there, and thence to Sicily, having been planted by the first Dionysius; "platanōs" trees on the tomb of Diomedes are mentioned also by Theophrastus: P. Orientalis continues to be planted for ornament in Southern and middle Europe.

1131 B. C. (= 431 + "700 yrs" of Thucyd. v., Tourn. trav. i. 174), from this date the island of Milo, halfway between the Peloponnesus and Crete, — retained its independence "seven hundred years."

1130 B. C. (= 1071 + "60th year" of Dionys. i., see also Strab.), in Italy, arrival of Evander from Arcadia with "two ships" and the *alphabet;* which had "recently been acquired by the Arcadians." He was amicably received by king Faunus of the tribe called "Aborigines," and allowed to settle on the Palatine hill: — four centuries later, included in the site selected for the city of Rome.

Acer pseudoplatanus of Europe and the adjoining portion of Asia. Called in Britain *sycamore* or *great maple* (Prior), in Germany mountain "ahorn," in Italy "acero" or "acero di montagna" (Lenz), in which we recognize the "acernis" of which the spear of Evander was made — and the Trojan horse (according to Virgil aen. ix. 87), the tree growing in the sacred groves of Phrygia: the "klinōtrōhōn" with wood white and tough employed for the rollers of bedsteads, is further described by Theophrastus iii. 10 as having the leaves lobed as in the plane but less fleshy and pointed at the apex: A. pseudoplatanus has been observed by modern travellers in Greece, and according to Forskal is called there "platanōs:" farther South, was observed by Clot-Bey in the gardens of Egypt. Westward, the "acer gallicum" affording wood of special whiteness, is further described by Pliny xvi. 26 as growing in Italy North of the Po, and in the country beyond the Alps; A. pseudoplatanus is known as a lofty forest-tree in France and middle Europe as far as "Lat. 52°" (Duham. i. pl. 36, Pers., A. Dec., and Daub.); and is besides planted for ornament (Engl. bot. pl. 303). By European colonists, was carried to Northeast America, where it continues occasionally planted; to the Mauritius Islands, where it is called "platane," but was not seen by Bojer flowering.

1128 B. C. (= 51 A. D. + "1178 years" of Plin. xvi. 79, pseud.-Aristot. mir. 146 giving 859 + "287 years" = 1146, see C. Mull. geogr. min. i. p. xx), Utica, sometimes called "Old Carthage," founded by Phoenician mariners.

Cedrus Atlantica of the Atlas mountains. Rafters of the temple of Apollo at Utica, built at the same time with the city, — continued extant in the days of Pliny xvi. 79, and proved to be of "numidicarum cedrorum;" referred by A. Decandolle to the *cedar of Atlas:* the timber was doubtless sometimes imported into Egypt and Italy, and included in the "cedrus magna" of Pliny; but the living C. Atlantica remained unknown to botanists until recently discovered by Manetti (see C. Libani).

The same year (= 991 + "130 + 7 yrs" of the Euseb.-Maneth. table), possible date of the accession of Ramessu XII. Miamun, tenth king of the Twentieth dynasty. His name occurs at Karnak, Medinet Abu, on a stela — now belonging to Mr. Hoskins (Glid. analect.), and in his own tomb at Bab-el-meluk.

1127 B. C. (= 1071 + "56 years" of Clint. i. p. 78, see Hom. il. xi. 719, and Pind. ol. ix), war against king Neleus of Pylos, his son Nestor at this time regarded as too young to bear arms. Other particulars illustrating the condition of Greece from this period — down to the Trojan war, are contained in the narrations of Nestor.

Mulius, the husband of Agamede daughter of king Augeas of Elis, slain in battle by Nestor.

Agamede was acquainted with all the "pharmaka" medicinal plants that the Earth produces—(Hom. il. xi. 739).

Geranium Robertianum of Europe and the adjoining portion of Asia. Called in Britain *herb robert* from at least the Thirteenth century (ms. vocab., and Prior), in Germany "ruprechtskraut" (Grieb): the "heracleon siderion" supposed to have been discovered by Hercules—(Plin. xxv. 15), termed "sithēritis ērakleian" by Cratevas, agglutinating wounds according to Dioscorides, and growing in vineyards and along walls, its single root giving out many coriander-like leaves around smooth tender whitish or reddish stems a span high and bearing small red flowers bitter and viscous to the taste, is referred here by Dodoens p. 62, and Anguillara p. 257: G. Robertianum was observed by Sibthorp, and Chaubard, in shaded situations in the Peloponnesus and on the Greek islands. Westward, the "amomum" of Ortus Sanitatis 22 is referred here by Sprengel: G. Robertianum is described by Brunsfels ii. 37, Fuchsius iii. 206, and Tournefort inst. 268; was observed by Desfontaines in the gardens of Algiers, by Savi in Etruria, and is known to grow throughout middle Europe as far as Denmark and Moscow (fl. Dan. pl. 694, Pers., and Dec). By European colonists, was carried to Northeast America, where it has become naturalized in our Northern and Middle States, observed by myself among shaded rocks in wild situations; to Brazil, observed in the streets of Porto Alegre by A. Saint-Hilaire (A. Dec.). Employed in Germany according to Prior to cure a disease called "ruprechts-plage;" and according to Lindley, "a popular remedy in Wales in Nephritic complaints."

Scrophularia lucida of the East Mediterranean countries. Possibly the plant in question:—the "sithēritis ērakleian" as described by Dioscorides, and Pliny, is referred here by Sibthorp, and Sprengel; and the "sideritin" by some regarded as the "achilleon" is enumerated by Pliny xxv. 19 as growing on walls and fetid when bruised:—S. lucida is termed "s. saxatilis lucida laserpitii massiliensis foliis" by Tournefort inst. 167; was observed by Sibthorp, and Chaubard, on the Greek islands; is known to grow on Crete and about Naples, and on the walls of Hydrus in Southern Italy (Bocc. mus. pl. 117, and Pers.). "S. livida" observed by Sibthorp pl. 601 in Asia Minor, but regarded by Bory as not distinct, seems the "aliam sideritin" of Pliny xxv. 19 growing in vineyards and resembling the preceding, but having whiter and more fleshy leaves.

Heracleum sphondylium of Europe, Northern Asia, and Northwest America. Called in Britain *cow-parsnep* (Ainsw., and Prior) or *brankursine* (Lindl.), in Germany "barenklau," in Italy "panace" or "panace erculeo" (Lenz), in which we recognize the "panakēs ērakleiōn"—having according to Theophrastus ix. 11. 3 large spreading leaves three palms either way, and a bitterish root as thick as the finger: H. sphondylium was observed by Sibthorp, and Chaubard, from the Peloponnesus to mount Athos. Westward, is described by Rivinus pl. 4; is termed "sphondylium vulgare hirsutum" by Tournefort inst. 320, "s. branca ursina" by Hoffmann; was observed by Scopoli in North Italy, by Linnæus in Sweden, its young shoots eaten; and is known to grow throughout middle and Northern Europe (Pers., and Engl. bot. pl. 939). Eastward from the Black Sea, is known to grow throughout Siberia to Kamtschatka (Spreng.), and as far as Unalaschka near the American coast (Lindl.). The "rind and root" according to Lindley "are acrid and will ulcerate the skin," but the "root contains sugar."

Pastinaca opopanax of the East Mediterranean countries. Called in Greece "pōlukarpōn" or "ampēlōna" (Sibth.) or "kōphtia" (Fraas): the "panakēs ērakleiōn"—of Dioscorides yielding "opopanax" and growing in Cyrene, Arcadia, Boeotia, and Macedonia, cultivated besides for its juice, very tall with a terminal "anēthōu"-like umbel of yellow flowers, the seed fiery and fragrant, clearly belongs here: "jawashir" is mentioned by Rhazes, Avicenna, and gum "opopanax" called "djoaschir" is enumerated by Alpinus, and Forskal mat. med., as imported into Egypt from Syria: seeds of P. opopanax were found in the gum by Dodoens p. 309; and the living plant was observed by Sibthorp, Chaubard, and Fraas, frequent in the Peloponnesus and Southern Greece; is known to grow also in Syria (Pers.). Westward, the account by Pliny xii. 57 and xx. 100 of the "panacem" five cubits high, the drug "opopanacis" being separately mentioned, seems chiefly taken from the Greeks; P. opopanax is described by Lobel adv. p. 312 as observed by him near Montpellier (Spreng.); is termed "p. sylvestris altissima" by Tournefort inst. 319; is known to grow also in Hungary, Italy, and Sicily (Gouan pl. 13, Lam. fl. fr., Kitaib. hung. iii. pl. 212, and Pers.). According to Lindley, *opopanax* is "a fetid gum resin similar in its effects to assafœtida."

Lagoecia cuminoides of the East Mediterranean countries. Called in Greece "lagōkuminō" (Fraas) or "agriōrigani" (Sibth.); in which we recognize the "agriōriganōs" identified in Syn. Diosc. with the "panakēs ērakleiōn,"—and according to Dioscorides iii. 31 having slender stems a span high, "anēthō"-like umbels, white flowers, and a slender useless root: the "panakē lēptōphullōn" is mentioned by Theophrastus ix. 11. 4; and the "lagōou kuminōn" in Syn. Diosc. iv. 17: L. cuminoides was observed by Sibthorp, Chaubard, and Fraas, in vineyards and cultivated ground frequent from the Peloponnesus throughout Greece. Westward, is described by Matthioli (Spreng.); is termed "cuminum sylvestre capitulis globosis" by C. Bauhin (Pers.), "cuminoides vulgare" by Tournefort inst. 301.

Origanum Creticum of the Mediterranean countries. Also called in Greece "agriōrigani" (Sibth.); in which we recognize the "agrian. ōrĕiganōn" or "panakitha" or "ērakleiōn" — identified by Diocles with the "kōnilēn" (Petrich. oph., and schol. Nicand.); also the "panakē" not "lĕptōphullōn" of Theophrastus ix. 11. 4; the "panaktĕiōn kōnilēn" of Nicander ther. 626; the "cunilam bubulam" called "panacem" by Cratevas, bruised and placed on wounds and taken internally against serpents even by tortoises (Plin. xix. 50 to xx. 61); the "agriah ōriganōn" by some called "panakĕs" according to Dioscorides iii. 49, his "agriōriganōs," identified with the "kōnilēn" of Nicander, so far as relates to the "ōriganŏ"-like leaves clearly belonging here; also the "panaces heraclion" of Pliny xxv. 12, attributed to Hercules and by some called "origanum heracleoticum silvestre" from resembling "origano," its root useless: O. Creticum was observed by Sibthorp, and Fraas, from Crete and Greece throughout the Greek islands; is known to grow also in Palestine (Pers.). Westward, is described by Lobel pl. 494, and Tournefort inst. 199; was observed by Lenz in Italy, and is known to grow in other parts of Southern Europe (Pers.; see O. Heracleoticum).

Hyoscyamus albus of the Mediterranean countries. Called in Greece "gĕrōuli" or "uōskuamōs," by the Turks, "ben tochunni" (Sibth.), in Egypt "beng" (Del.), in which we recognize the "uōskuamōs" supposed to have been discovered by Hercules — (Plin. xxv. 17), mentioned also by Pherecrates, Xenophon oecon. i. 13, Nicander alex. 415, Paulus Aegineta, and the medicinal and mildest kind described by Dioscorides as white-seeded and growing by the seaside and in waste places: H. albus was observed by Forskal, Sibthorp, and Chaubard, in precisely those situations from the Peloponnesus to Smyrna. Farther South, the "hyoscyamus" or "apollinaris" is identified by Pliny with the "altercum" of the Arabs; H. albus was observed by Delile around Alexandria, but the seeds of "hyoscyamus" or "bindj" employed medicinally in Egypt were found by Forskal mat. med. to be imported from Greece. Westward, "hyoscyamus" is prescribed by Celsus ii. 33; seeds of "alterci albi" and roots of "apollinaris herbae," by Scribonius Largus 90 to 121; the "apŏllinaris" of the Romans is mentioned also in Syn. Diosc., and Pliny's description corresponds: H. albus is termed "h. a. major vel tertius Dioscoridis et quartus Plinii" by Tournefort inst. 118; and is known to grow in Italy and other parts of Southern Europe (Blackw. pl. 111, Pers., Spreng., and Lenz).

Colchicum montanum of the East Mediterranean countries. The "petilio" said to have been named by Hercules, — in the autumn according to Pliny xxi. 25 springing up among brambles and commended for its colour only which is that of "rosae silvestris," the leaves appearing after the nodding flower turns upwards, "parvo calyce at versicolori" enclosing yellow seed, may be compared: C. montanum is described by Clusius hist. i. pl. 200; is termed "c. m. angustifolium" by Tournefort inst. 350; was observed by Sibthorp on the mountains of Attica, and by D'Urville on the island of Milo (Bory).

1124 B. C. (= 1071 + "23 + 30 years" of Castor in Euseb. i. p. 134, see also Pausan. i. 5. 3). A date possibly marking the accession of Pandion II., son of Erechtheus, and now ninth Attic king.

1123 B. C. = "6th year of Ramessu XII.," on the monuments — (C. Mull. fr. Man. p. 589).

"1122 B. C. = 13th year of Wou-wang; who, vanquishing Cheou-sin," now becomes the head of the new dynasty of the Tcheou. He changed the name of the years from "sse" to "nian," a term having reference to harvest-time (commentator of the Li-ki, and Chinese chron. table). Wou-wang also reformed the calendar: making "the lunation containing the Winter solstice the first one of the year;" and making "the civil day commence at midnight." *

Khi-tsu of the dethroned imperial family, unwilling to accept office under Wou-wang, was made king of Corea — (geogr. Chin., and Klaproth).

In this "13th year" (Chou-king iv. 4. 1), the Hong-fan, a philosophical treatise attributed to the emperor Yu, delivered by prince Ki-tse to Wou-wang.

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* *Euryale ferox* of Southern China. A kind of *water-lily* having leaves nearly a yard in diameter and thorny on the nervures and petiole, called in China "ki-teou:" at this time under cultivation but rare, — has since according to Cibot (mem. Chin. iii.) become more frequent, its seeds yielding farina, the pulp around them eaten, and the root used medicinally; was observed by G. Staunton in the province of Kianang. Westward, was carried at an early period to Hindustan, where it has become seemingly wild in lakes in Chittagong and Eastward of Calcutta and Lucknow, and is called in Hindustanee "machana" (Roxb., Royle, and Drur.).

Rubus Moluccanus? of Eastern Asia. Called in Bisaya "dagamit" (Blanco), in Japan "fugu itsiigo" (Siebold); and the "ronces flexibles" holding back the door of tombs, mentioned in an ode of the kingdom of Tchin — (Chi-King i. 12. 6) may be compared: R. Moluccanus was observed by Rumphius v. pl. 47 on Amboyna (Pers.); by Roxburgh, Wallich iii. pl. 234, Wight, and Graham, in Hindustan; by Mason, in Burmah; by Blanco, on the Philippines; by Thunberg, in Japan; by Siebold, on Yeso, enumerated among the useful plants.

"When the Tcheou conquered the Chang" (topog. Cant., and Pauth. p. 472), eight barbarous nations in communication with China.

The same year (= 1095 + "27 years" of Euseb. i. and ii., and Syncell., see also Cephal.), accession of Mithræus or Metraios as Assyrian emperor.

Aconitum napellus of the mountains of middle and Eastern Europe. Called in Britain *monkshood* or *aconite* (Prior), in Italy "napello" or "aconito" (Lenz), in Greece "akŏnitŏn," in which we recognize the "akŏnitŏn" discovered by Hecate, wife of Aeetes king of Colchis and mother of Medea —(Diodor. iv. 45); growing in the countries on the Black Sea according to Theopompus, and Strabo, mentioned also by Heraclides, Antigonus Carystius, Euphorion, and Aelius Promotus, and the "akŏnitŏn pŏntikŏn" used by physicians of Syn. Diosc. iv 78: the "parthalianhĕs" whose root was placed in meat to destroy wild beasts, according to Aristotle an. ix. 6, and Nicander alex., identified in Syn. Diosc. iv. 77 with the "thĕluphŏnŏn" or "thērŏphŏnŏn" or "muŏktŏnŏn," may also belong here: A. napellus was observed by Sibthorp in the Peloponnesus. Westward, Calpurnius Bestia consul B. C. 111 was accused of poisoning women with "aconitum," and this material is mentioned as a poison by Ovid, by Pliny xxv. 75 and xxvii. 2 as the most speedy poison known: A. napellus is described by Lobel pl. 679, and Clusius hist. ii. pl. 96; is termed "a. cæruleum seu napellus primus" by Tournefort inst. 425; is known to grow wild on the mountains of Italy Switzerland and Eastern Germany (Spreng., and A. Dec.); is besides cultivated and naturalized throughout middle Europe, and was already in Britain in the days of Gerarde. By European colonists, was carried to Northeast America, where it continues to be cultivated for ornament. The plant according to Lindley is "a true narcotico-acrid poison," and "numerous fatal cases of its application are recorded."

About this time (Sm. b. d.), Clymenus king of Orchomenus slain by Perieres at the festival of the Onchestian Neptune. His son and successor Erginus marched at once against Boeotian Thebes, and compelled the inhabitants to pay an annual tribute.

Lonicera periclymenum of Europe and the adjoining portion of Asia. Called in Britain *woodbine*, in Old English "woodbinde" or "woodvynde," in Anglo-Saxon "wudu-bind" or "wudu-winde" (Prior), in Germany "geissblatt" (Grieb), in Italy "periclimeno" (Lenz), in Greece "agriŏklēma" (Fraas), in which we recognize the "pĕriklumĕnŏn" identified through Syn. Diosc. with the "klumĕnŏn" named after king Clymenus (Plin.) and called in Egyptian "klumĕniŏn" or "agŏnŏn" or "ŏxiŏni:" — the "klumĕnŏn" is described by Dioscorides as having a tetragonal stem and plantain-like leaves, the mountain kind best, the juice of the root and whole plant astringent and refrigerating administered in potion, and the bruised leaves applied to recent wounds: L. periclymenum was observed by Sibthorp, Chaubard and Fraas in Greece and Cyprus, along hedges as well as on the mountains. Westward, the "klumĕnŏn" by some called "smilax" or "kalukanthĕmŏn" or "ēliŏphtĕs" or "ēpatitis" or "anatŏtikŏn" or "thutikŏn" or "mĕrginē" is identified in Syn. Diosc. with the "ŏuŏlŏukrŏum" or "ŏuŏlŏukrŏum maiŏus" of the Romans; the "clymenus herba" is described by Pliny xxv. 33 and xxvi. 48 as growing in woodland and mountainous situations, the stem "inani articulis præcincta," the odour "gravi," and the seed ivy-like and administered in wine; L. periclymenum is described by Tragus f. 311, and Fuchsius p. 646; is termed "wald-winde" by Gerarde (in Tabernæm. ii. 616), "caprifolium germanicum" by Tournefort inst. 608; and is known to grow in Italy and throughout middle Europe as far as Denmark (fl. Dan. pl. 908, and Pers.).

Lonicera caprifolium of the wooded portion of the Mediterranean countries. Called in Britain *caprifoly* (Prior), in Italy "caprifolio" or "madreselva" (Lenz), in Greece "agriŏklēma" (Sibth., and Forsk.), in which we recognize the "sylvae matrem" identified by Scribonius Largus 129 with the "pĕriklumĕnŏu" of the Greeks; called by some "klumĕnŏn" — (according to Syn. Diosc.), and described by Dioscorides as twining around other shrubs in hedges and cultivated places, and having at intervals leaves "pĕriĕlēphŏta" surrounding the stem (compare also Periclymenus brother of Nestor, Hom. od. xi. 285): L. caprifolium was observed by Forskal, Sibthorp, and Chaubard, frequent in hedges from the Peloponnesus throughout the Greek islands to Constantinople. Farther South, the "pĕriklumĕnŏn" by some called "kalukanthĕmŏn" or "ēpatitis" or "aiginē" or "klēmatitis" or "karpathŏn" or "splēniŏn" or "ĕlxinē mĕizŏn" or "mursinē" is identified in Syn. Diosc. with the "pŏliŏn aphrŏthitēs" of the prophets, and "tŏurkŏn" of the Egyptians. Westward, with the "lanath" of the Numidians, and "ŏuŏlŏukrŏum maiŏus" of the Romans; the account of the "periclymenos" by Pliny xxvii. 94 seems chiefly taken from Dioscorides; but L. caprifolium is described by Matthioli p. 691 (Spreng.), is termed "c. italicum" by Tournefort inst. 608, and is known to grow wild in Southern France (Mut., Gren., and A. Dec.); is besides planted for ornament throughout middle Europe, and has become naturalized in various localities as far as Britain (J. E. Smith flor. 260, Wats., and Bromfield). By European colonists, was carried to Northeast America, where it continues to be cultivated for ornament.

1117 B. C. (= 1114 + "3 years" of Judg. ix. 22), not later than this date, Abimelech son of Jerubbaal made by the "men of Sechem" ruler "over Israel."

Lycium Europæum of the Tauro-Caspian countries and mountains of Tropical Arabia. Called in Greece "ramnōs" (Sibth.), in Egypt and Yemen "ausadj" or "ausædj" (Forsk.), in which we recognize the "ramnōs" identified in Syn. Diosc. with the "atathin" of the Numidians; or "atth" of Jotham son of Jerubbaal — (Judg. ix. 14), and Psalm lviii. 9: L. Europæum was observed by Hasselquist in Palestine; by Alpinus, Forskal, and Delile, at Alexandria and Damietta. Among the Greeks, the "ramnōs" was regarded sacred to Aesculapius (Pausan. iii. 14), is mentioned also by Sophron, Euphorion, Eupolis, Theophrastus, Nicander; and is described by Dioscorides as a shrub with straight thorns growing along hedges: L. Europæum was observed by Sibthorp, and Chaubard, frequent in hedges in Greece. Westward, the "ramnōs" is identified in Syn. Diosc. with the "spina kervalis" of the Romans, but the account of the "rhamnus" by Pliny xxiv. 76 seems in part taken from Dioscorides: L. Europæum is known to occur also in Italy, Barbary, Portugal, and France (Pers.). In its wild state, was observed by Pallas trav. iv. not far from Astrakan; by Forskal, among the mountains of Yemen.

"Before the time of Homer" (Strab. iii.), the Phoenicians, in possession of the best part of Africa and Spain, discovered the Islands of the Blest (Canaries), not far from the extremity of Mauritania, opposite Gades (Cadiz).

"1116 B. C. under the Tcheou dynasty" (Stan-Jul.), the following plant known to the Chinese.

Carthamus tinctorius of Eastern Asia. Called in English gardens *safflower* (Prior), in Germany "saflor" (Grieb), in France "safranon" or "faux safran" (A. Dec.), in Italy "zafferano falso" or "saracinesco" or "zaffrone" or "cartamo" (Lenz), in Greece "saphlanōni" or "asphōuri" (Fraas), in Egypt "ösfar" or "qortom" (Forsk.), in Egyptian "tshōurg" (Lex oxf.) or "jōuj" (Kirch.) or "shōush" (ms. Par.), in the environs of Bombay "koosumba" (Graham), in Japan "benino fanna" or "kookwa" or "kurenai" (Thunb.), and as early as this year used in China in cosmetic pigment; imported in "115 B. C. under the Han dynasty" (Stan. Jul. industr. chin. 83), but at present cultivated and exported (parcels examined by myself): was observed by Kaempfer, and Thunberg, under cultivation in Japan as well as growing spontaneously, and occasionally employed by women to tinge the lips. Westward, is enumerated by Mason v. p. 512 as "exotic" in Burmah and extensively cultivated, "the best yellow dye in the country, and mixed with other ingredients" to "dye red and to give a variety of tints:" is termed "crocus indicus" by Rumphius v. pl. 79; was observed by Roxburgh under cultivation in Hindustan; by myself, commonly cultivated on the Deccan, for the use according to Graham "of dyers and for the oil obtained from the seeds;" and according to Gibson cultivated "also in Guzerat to a small extent." Farther West, "krŏkōpĕplōs" saffron-coloured clothing was known to Homer il. xxiii. 227; the term "krōkōvaphēs" dyed with saffron occurs in Aeschylus ag. 1092, "krōkōtithiōn" and "krōkōtōs" saffron robe in Aristophanes lys. 48 and ran. 46, "crocotula" saffron garment in Plautus, "tunica crocina" in Catullus; the "cnicon" mentioned by Pliny xxi. 53 to 107 as unknown in Italy, an "aegyptia herba" with seeds yielding oil, may in part belong here; and the "kurthum" or "usfar" is mentioned by Ebn Masawia, Abi Othman, Abu Hanifa, Ebn Masah, Maserjawia, Rhazes, Edrisi, and Ebn Baitar: C. tinctorius was observed by Abd-allatif, Forskal, Delile, and Clot-Bey, under cultivation in Egypt; by Grant in descending the Nile was found cultivated "for its oil" at Kartoom in 15° 30′; was seen by Fraas experimentally cultivated in Greece; is described by Caesalpinus, and Bauhin iii. p. 76; and is known to be now cultivated in Italy (Lenz). By European colonists, was carried to Northeast America, where it continues in gardens. (See C. Creticus).

"1115 B. C. = 1st year of Tching-wang, of the Tcheou" or Fifth dynasty (Chinese chron. table). The earliest round *copper-money* having "a square hole in the middle," issued during the reign of Tching-wang (Pauth. 84).

Ranunculus thora of the mountains of middle and Eastern Europe. The acrid juice of its root employed by Swiss hunters to envenom their weapons (Lindl.) as early perhaps as this date, in accordance with the Latin word "toxicum" perverted from the Greek through the use of poisoned arrows — (Nicand. alex. 207 and schol., Plin. xvi. 20); the word "toxicum" occurs as early as Plautus: the "phthoram" of the Waldenses or R. thora is described by Gesner hort. f. 244 (Spreng.), and C. Bauhin pin. 284; is termed "r. cyclaminis folio asphodeli radice major" by Tournefort inst. 285; and is known to grow "near the limits of perpetual snow" on the Pyrenees, Alps, and Carpathians (Jacq. austr. pl. 442, Pers., A. Dec., and Lindl.). Eastward, the "thruŏn," a magic plant of the Colchians (argon. Orph. i. 916), is identified in Syn. Diosc. with the "pĕntathruŏn" or "struhnŏn manikōn;" the "thruōrōn" or "pĕrittōn" or "struhnōs manikōs" is described by Theophrastus ix. 11. 6 as having a head like the fruit of the plane tree, and Dioscorides adds that the head is sessile; the "manicon" is further identified by Pliny xxi. 105 with the "dorycnion" poison in which spear-points were dipped; and in Alexipharm. praef. and 6, and Galen comp. med. x. p. 356 with the "thōrukniōn" plant: R. thora was observed by Sibthorp on the mountains of the Peloponnesus. (See Atropa belladonna).

1114 B. C. (= 1413 y. 302$\frac{1}{38}$ d. — "300 years" of Judg. xi. 26), the Ammonites defeated by the Israelites under Jephthah. — From the etymology of the name, it has been conjectured: That Jephthah's daughter became the Iphigeneia of the Greeks; and confirmation is found in the silence of Homer respecting Iphigeneia.

In this year = "22d of Epiphi in the 15th year of Ramessu XII.," medical aid requested for the queen's sister, a daughter of the chief of Bakhtan — (Birch, and Mariette 98).

Chiron residing on mount Pelion, — where in the following year he was visited by Jason and his companions on the Argonautic expedition (Apollon. Rhod. i. 554, and Orph. 375).

Hypericum lanuginosum of the mountains of Greece. The "hĕirŏnōs rizan" or "panakĕs" discovered on mount Pelion by Chiron, — further described by Nicander ther. 500 as having "amarakŏëssa" marjoram-like foliage and golden flowers, by Theophrastus ix. 11. 1 as having leaves like those of "lapathŏ" but larger and more hairy, applied externally and the small root (see Pliny xxv. 13) taken in wine against poisonous reptiles, by Dioscorides as growing chiefly on mount Pelion and having a slender acrid root, may be compared: H. lanuginosum is termed "h. montis Olympi foliis circa margines hirsutis" by Tournefort inst. 255; and was observed by Sibthorp in Greece, probably on mount Athos (J. E. Smith).

Tamus communis of Europe and the adjoining portion of Asia. Called in Britain *black bryony* from its dark glossy leaves (Prior), in Italy "smilace liscia" or "tamaro" or "vite nera" (Lenz), in Greece "vruōn" or "ta vrua" (Fraas), in which we recognize the "vruŏnia mĕlaina" or "ampĕlōs mĕlaina" identified in Syn. Diosc. with the "hĕirŏnĕiōn ampĕlōn," discovered by Chiron — according to Pliny xxv. 16; also the "bryoniam" proper or "chironiam" or "vitis nigra" whose "asparagos" young shoots from their medicinal properties are preferred for food to "veris asparagis" by Diocles (Plin. xxiii. 17): the "ampĕlōs mĕlaina" is described by Dioscorides as ascending trees and having leaves approximating those of "smilakōs," the young shoots eaten: the entangling of the *urus* by its horns in "tanis" vines, is mentioned by Epiphanius phys. 3: T. communis was observed by Sibthorp, Chaubard, and Fraas, frequent in woods and hedges from Crete and the Peloponnesus to Cyprus, and on the last-named island the young shoots cooked and eaten. Westward, the "ampĕlōs mĕlaina" or "vōukraniōn" is identified in Syn. Diosc. with the "priathēla" or "pĕgrina" of the Dacians, "laŏuōthĕn" of the Numidians, and "ŏvlamēnia" or "vatanōuta" or "vĕtisalka" of the Romans; "taminia uva" are prescribed by Celsus, and besides medicinal uses are according to Pliny sometimes worn as an amulet; the "vitis nigra" is also identified by Pliny with the "gynaecanthen" or "aproniam:" T. communis is termed "tamnus racemosa flore minore luteo-pallescente" by Tournefort inst. 103; and is known to grow in Italy and throughout middle Europe, but in Britain is regarded by Bromfield as possibly exotic and only naturalized (Pers., A. Dec., and Lenz).

Tamus Crĕtica of the East Mediterranean countries. Called in Greece by the same names with the preceding (Fraas), and possibly the plant discovered by Chiron: — the "vruŏnian" or "vruŏnitha" is prescribed by Apollodorus ther. against freckles and cutaneous affections; the "vruŏnis" is mentioned also by Nicander ther. 858; the "ampĕlōu agrias" is enumerated as a drug by Theophrastus ix. 14. 1; is identified by Cratevas with the "hĕirŏnĕiŏn" (schol. Nicand. ther.); and is described by Dioscorides as a woody vine, having the flower after the manner of "trihas vruōthĕis," round berries red while ripening, the root used against dropsy, and young shoots stored for food: T. Cretica is termed "tamnus cretica trifido folio" by Tournefort cor. 3, and was observed by Sibthorp in the woods and hedges of Greece, Crete, and Cyprus, not rare and the young shoots eaten. (See Bryonia dioica, and Clematis vitalba).

1113 B. C. (= 1071 + "42 years" of Clint. i. p. 140), the Argonautic expedition led into the Black Sea by Jason, son of Aeson and father of Euneus. Periclymenus brother of Nestor was one of the Argonauts (Pind. pyth. iv. 311); and Philammon was the bard of the Expedition — (Pherecyd. fr. 63, and Apollon. Rhod.). After the return to Greece, the ship Argo was drawn on shore and left with a dedicatory inscription in the city of Corinth (Dio Chrys. corinth. p. 458, and Aristid. isthm. i. p. 24).

Salvia horminum of the East Mediterranean countries. Called in Greece "sarkōtrŏphi," and the "ŏrminōn" of the companions of Jason — (argon. Orph. i. 917), Polemon diæt. ii. 14, Theophrastus viii. 7, Nicander, wild and cultivated according to Dioscorides and its stem quadrangular, is referred here by writers; together with the "phŏrviōn" of Galen fac. simpl. viii. p. 152, "phŏrmiōn" of Paulus Aegineta vii. p. 249, and "zĕntōgalēn" of Nicolaus Myrepsus iii. 62: S. horminum is described by Alpinus exot. p. 112, and was observed by Sibthorp, and Fraas, frequent in cultivated ground in Greece. Farther South, the "ŏrminōn" was known to Athenaeus xi. 56 in Egypt. Westward, the "ŏrminōn ēmĕrōn" is identified in Syn. Diosc. with the "ormia" of the Dacians, and "gĕminalis" of the Romans; the "horminum" is mentioned by Pliny xviii. 10 and xxii. 76 as cultivated in Italy, and his account seems in part taken from Dioscorides: S. horminum is described by Matthioli, Dodoens, and Lobel pl. 555; is termed "h. coma purpuro-violacea et coma rubra" by

Tournefort inst. 178; and is known to occur in both Northern and Southern Italy (Pers., and Lenz). "S. viridis," termed "h. coma viridi" by Tournefort inst. 178, is regarded as probably not distinct; was observed by Forskal, Sibthorp, and Bory, in cultivated ground from Constantinople to Caria and the Peloponnesus, and is known to occur in Italy and around Tunis (Desf. atlant. pl. 1, and Pers.).

Lagurus ovatus of the Mediterranean countries. A grass called in Britain *hare's-tail* (Prior), in Greece "lagōunōura" or "alōupōnōra" or "rĕnna vōutōmō," in which we recognize the "vōutōmōn" cut for beds by the companions of Jason — (Theocr. xiii. 35), having according to Democritus "lĭriŏis"-like leaves, growing in marshes, eaten by cattle, and one of the signs of subterranean water; described also by Theophrastus i. 10. 5 as having keeled leaves: L. ovatus was observed by Forskal, Sibthorp, and Chaubard, from the Dardanelles to the Peloponnesus abounding on hills near the sea, especially in depressions that have contained water. Farther South, was observed by Forskal and Delile, on the Mediterranean border of Egypt. Westward, is described by Morison viii. pl. 4; is termed "gramen spicatum tomentosum longissimis aristis donatum" by Tournefort inst. 517; was observed by Forskal on Malta; and is known to grow in various parts of Southern Europe (Pers.).

Butomus umbellatus of Europe and the adjoining portion of Asia: Having a "tall rush-like stem" and called in Britain *flowering rush* (Prior), in France "jonc fleuri" (Fée), in Italy "biodo" or "giunco florido" (Lenz), in Greece "psathē" (Fraas), and the "vōutōmōn" — described by Theophrastus as growing in water, is referred here by writers: B. umbellatus was observed by Sibthorp, and Fraas, on the banks of streams from Constantinople throughout Greece. Westward, is described by Gerarde p. 27, and Bauhin; is termed "juncus cyperoides floridus" by Lobel, "b. flore roseo" by Tournefort inst. 271; and is known to grow in Italy and throughout middle Europe as far as Denmark (fl. Dan. pl. 604, Pers., and Lenz).

Cyclamen Persicum of the East Mediterranean countries. Called in Greece "kuklamitha" (Sibth.), in which we recognize the "kuklamis" of the Argonautic expedition — (Orph. 916), or the "kuklaminŏs" identified in the Syn. Diosc. with the "trimphalitis" of Zoroaster and "asphŏ" of Osthanes, prescribed in 1 Morb. mul. 682, mentioned also by Theophrastus ix. 10, Nicander ther. 945, by Dioscorides as having the leaves spotted on both sides, again identified in the added Synonyms with the "ihthuōthērōn," and according to Pliny xxv. 69, and Oppian h. iv. 658 the root employed for poisoning fish: C. Persicum was observed by Sibthorp, and Chaubard, on the mountains of Greece and frequent around Athens, the root employed for driving cuttle-fish from their hiding places; is known to grow also on Cyprus (Pers.).

1111 B. C. (= 1141 — "31 years" of Castor in Euseb. i. p. 129, = "32d year of Perseus" mentioned by Apollodorus chron. in Clem. Alex. strom. i. p. 322, see Clint. i. p. 76), a date to all appearance marking the end of the reign of Perseus. He was succeeded as Argive king by his four sons, Sthenelas II., Alcaeus, Mestor, and Electryon (Herodor., see also Palaephatus, Apollod., and Strab. viii. p. 372).

"In the reign of Laius" (Herodot. v. 59), war of Amphitryon son of Alcaeus against the Teleboae: connected (according to Hesiod in Schol. Apollon. i. 747) with the death of Electryon. The inscription on Amphitryon's commemorative tripod, seen and copied by Herodotus, is described by him as in the "*Cadmean letters*;" differing very little from those used among the Ionians.

Lemna minor of Temperate Climates. Called in Britain *duck-weed* or *duck-meat*, by Galfridus pr. pm. "ende-mete" (Prior), in an Anglo-Saxon glossary "dok metĕ" (Harl. 3388, and Cockayne), in Italy "lente palustre" (Lenz), in Greece "psarōphaki" (Fraas): and the aquatic plant "pin," collected according to an ode of the time of Tchao-Koung — (Chi-King i. 2. 4), is described by Tchou-hi as a diminutive rootless herb floating upon stagnant water, and called "piao" by the inhabitants East of the river Kiang: L. minor was observed by Thunberg in Japan; is known to grow also throughout Siberia as far as Taurus and Caucasus (Bieb., Kunth, and Wats.). Farther West, the "phakōs ō ĕpi tĕlmatŏn" is described by Dioscorides as growing moss-like on stagnant water, resembling lentils, and a refrigerating application; is prescribed by Paulus Aegineta; is identified in Syn. Diosc. with the "phakōs agriōs" or "ĕpiptĕrōn," and with the "vipĕralis" or "ikĕōsmigthōnōs" of the Romans; and the account of the "palustris lens" by Pliny xxii. 70 seems taken from Dioscorides: a Lemna called "blesemman" was observed by Forskal among the mountains of Yemen; L. minor is known to grow in Abyssinia (Fresen.); was observed by Sibthorp, Chaubard, and Fraas, on stagnant water throughout Greece; by Desfontaines, and Munby, in Barbary; and is known to grow throughout Europe as far as the border of Lapland (Fries), also on the Canary Islands, Madeira, and the Azores (Lemann, Wats., and A. Dec.). Beyond the Atlantic, has been observed by myself from 43° in New England; by Elliot, in South Carolina; by Chapman, as far as "Florida;" by Short, in Kentucky; by Drummond, at Fort Cumberland in 54°; by Nuttall, on the Arkansas; by Humboldt and Bonpland, on the mountains of New Grenada (Kunth); by Gay, in Chili; by J. D. Hooker, in New Zealand; and by R. Brown, in Tasmania and Australia; probably in some instances transported through entanglement in the plumage of water-fowl. By Feejeean or possibly Polynesian

colonists, carried together with taro culture to the Feejee Islands, observed by myself on the artificial pools there. (See L. gibba).

1105 B. C. (= "11th year of Tching-wang," Pauth. 88), death of the regent Tcheou-koung; distinguished also as an astronomer and literary man. He was acquainted with the properties of the right-angle triangle, measured the elevation of the pole and length of the solstitial shadow, and built an observatory, which is still pointed out in the city of Teng-foung in Ho-nan. Some of his poetry and other writings are also extant. By Tsheu-Kung (according to Humboldt cosm. iv. p. 125) the earliest *Chinese astronomical observations*, and the meridian shadows in the two Solstices measured, making the Obliquity of the Ecliptic "23° 54′ or 27′ greater — than in 1850."

Tching-wang made war against the Toungi or Oriental tribes; regarded as all belonging to Corea (comment. Chou-king, and geogr. Chin. transl. Klapr. p. 152).

"Some time after the Argonautic Expedition" (Clint. p. 64), Medea of Colchis at Athens on the arrival there of Theseus, at this time a "mĕirakiōn" boy of about fourteen (Plut. thes. 6). His father Aegeus, tenth Attic king, now reigning.

Colchicum autumnale of Europe and the adjoining portion of Asia. Called in Britain *meadow saffron* or *naked ladies*, in Germany "nakte jungfern" (Prior) or "zeitlose" (Grieb), in France "colchique" (Nugent), in Greece "vōlhikōn" (Sibth.); and the "ĕphēmĕrōn" discovered by Medea — (Nicand. ther. 849 and alex. 250), mentioned as deadly by Theophrastus ix. 16. 6, is identified in Syn. Diosc. with the "kōlhikōn" of Dioscorides, growing mostly in Messenia and Colchis, putting forth a whitish saffron-like flower late in the autumn, and its bulbous root when eaten fatal: C. autumnale was observed by Sibthorp, and Fraas, from Parnassus to Constantinople; and is enumerated by Clot-Bey as long known in Egypt. Westward, the "kōlhikōn" or "vōlvōn agriōn" is identified in Syn. Diosc. with the "vōulvōum agrĕstĕm" of the Romans; "colchicon" is enumerated among poisons by Pliny xxviii. 33; and C. autumnale is described by Maranta simpl. p. 83 (Spreng.), is termed "c. commune" by Tournefort inst. 348, and is known to grow throughout middle Europe as far as Britain (Hall., and Pers.). Its root and seeds according to Lindley "are used extensively in the manufacture of *veratria*, and in various" medicinal preparations.

1103 B. C. = "26th year of Ramessu XII.," on a second application for medical aid for the queen's sister, the ark of the god Khons sent to Bakhtan; represented on the tablet as borne by twelve priests — (Birch, and Mariette 98. Compare Amos v. 26).

1102 B. C. "Little more than thirty years before the fall of Troy" (Clint i. p. 87, see also Homer il. xxxiii. 670 and od. xi. 271), Oedipus succeeded by Eteocles, as king of Boeotian Thebes.

As Erginus reigned at Orchomenus "till within thirty years of the fall of Troy" (Clint. i. p. 49), the war against him in which Amphytrion was slain, possibly not earlier than the last-named date.

1101 B. C. (= 1071 + "not more than 30 years" of Clint. i. p. 51, and during the infancy of Diomed, il. vi. 222 and xiv. 121), the First war against Boeotian Thebes; conducted by Adrastus king of Argos and Sicyon, accompanied by Tydeus, Amphiaraus, and four other chieftains, of whom Adrastus alone lived to return. The rival brothers Polyneices and Eteocles were both slain, and Laodamas son of Eteocles became king of Boeotian Thebes.

The same year (= 1103 — "seventeen months" on the tablet), arrival of the ark of Khons in Bakhtan — (Birch).

The inscription in hexameter verse on Laodamas' votive tripod (copied by Herodotus v. 59) is an early specimen of *Greek poetry*. The inscription was in the "Cadmean letters."

Ninety-sixth generation. Jan. 1st, 1100, mostly beyond youth: Obed (Ruth iv. 22, and 1 Chron. ii. 12); the high-priest Uzzi (1 Chron. vi. 5, Ezr. vii. 4, and Josep. v. 11. 15): and among Greeks, Idomeneus grandson of Minos (Hom. il. xiii. 450, and od. xix. 178); the Phrygian poet and flute-player Olympus, a pupil of Marsyas (Plat, Plut., Clem. Alex., and others); the sculptor Daedalus (Paus. ix. 40. 3 and x. 17. 4).

1098, August (= 1097 y. 240 $\frac{12}{36}$ d. = 1113 y. 302 $\frac{12}{36}$ d. — "20 years" of ten lunations, Judg. xv. 20), death of Samson. The death of Hercules corresponds (as deduced by Clinton i. p. 78 from Greek authorities, "26 years before the fall of Troy" = 1097). Hercules is described by Homer as a military chieftain, who wore armour and led an army. By Herodotus and other Greek writers, Hercules is admitted to have been a Phoenician; and his identity with Samson — is confirmed by the fact (recorded by Menander Ephes. in Jos. a. J. viii. 3. 1 and c. A. i. 18) that the temple to "Hercules" at Tyre was built by king Hiram. Friendship towards Greeks of "Boeotia and the Peloponnesus only" (Cadmean and Dorian) was extended by Arab tribes on the Red Sea in the time of Agatharchides 95. (See Dorian conquest of the Peloponnesus).

Before the close of the year (= 1103 — "1 y. 5 mo — 3 y. 9 mo" in the tablet), after a detention of "three years and nine months," departure from Bakhtan of the ark of Khons, the chief having been warned in a vision — (Birch).

1096 B. C. = "19th of Mechir in the 33d year of Ramessu XII.," return of the ark of Khons to the temple of the god at Thebes — (Leps. k. tab. p. 19, and Birch).

1095 B. C. (= 1071 + "25th year" of Euseb., see also Ctesias in Diodor. ii. 21), accession of Teutamos as Assyrian emperor.

The same year (= 1091 + "4 years" of Apollod. ii. 8. 2, see also Hom. il. xix. 123, Thucyd. i. 9, Euseb. ii. p. 288, and Clint. i. p. 106, Castor's numbers corresponding very closely 991 + "105 years of the Pelopidæ" = 1096), the Argive king Eurystheus son of Sthenelas II., slain in battle; succeeded by two sons of Pelops, Thyestes at Mycenae, and Atreus at Argos.

As early possibly as this date, Jewish colonists settling at the Southern extreme of Arabia. — An offshoot of these colonists is perhaps found in the Zaffe-Hibrahim inhabiting the island of Nossi Hibrahim and neighbouring portion of Madagascar: who brought with them Geomancy or foretelling by fingers, practise circumcision, will not intermarry with strangers, observe Saturday, claim descent from Abraham, and have retained the names of Noah, Isaac, Jacob, Joseph, and Moses; but know nothing of later prophets, nor of the author of Christianity, nor of Mohammed, whose followers they regard as "Caffres" or destitute of laws (Flacourt præf.).

Theseus on his expedition against the Marathonian bull hospitably entertained by a poor old woman named Hecale, — in whose honour he subsquently ordained in Attica a sacrifice, to her and Zeus Hecalus (Callim., Ov. rem. am. 747, and Plut. thes.).

Sonchus oleraceus of Europe and Northern Asia. Called in Old German "du-tistel," in Anglo-Saxon "thuthistel" or "thufethistel" all meaning sprout thistle, in Ortus Sanitatis 148 "suwe-distel" or "saw-distel," in current English *sow thistle* (Prior), in current German "gansedistel" (Grieb), in France "laiteron" (Nugent), in Italy "cicerbita" or "sonco" (Lenz), in Greece "sōhōs" (Sibth.), in Egypt "galayl" or "libbeyn" (Del.); in which we recognize the "sonchos" placed by Hecale before Theseus — (Callim., and Plin.), mentioned as esculent by Dioscorides, and the "albus" kind by Cleemporus (Plin. xxii. 44): the "sōghōs" is also mentioned by Matron, Antiphanes, Hegesander, Theophrastus, Erasistratus, Nicander, as medicinal by Agathocles, and Zenon, and was known to Athenaeus in Egypt: S. oleraceus was observed by Sibthorp frequent in waste and cultivated ground throughout Greece and the Greek islands; by Forskal, and Delile, around Cairo in Egypt. Westward, is described by Tournefort inst. 474; was observed by Forskal on Malta as well as near Marseilles; and is known to grow throughout middle and Northern Europe as far as Lapland (fl. Dan. pl. 682, Fries, and Wats.). Southward from Egypt, was observed by Forskal among the mountains of Yemen and called "myrrejr," and was received from Abyssinia by Richard. Eastward, is known to grow throughout Siberia and in Nepal (Ledeb., and Wats.); was observed by Nimmo "at Surat," and by Lush "in Deccan gardens" (Graham); by Roxburgh, and Wight, in other parts of Hindustan; by Blume, on Java; by Thunberg, in Japan, frequent and called "fsitsikusa;" and probably by Polynesian navigators was carried throughout the islands of the Pacific to New Zealand (where it was found by Cook and Forster) and Southeast Australia (where it was found by R. Brown). Clearly by European colonists, was carried prior to 1669 (Jossel.) to Northeast America, where it has extended itself from Newfoundland to our Southern States (Chapm.) and throughout Canada to the Saskatchawan and mouth of the Columbia (Hook.), following the fur traders as verified by myself at Fort Nisqually on Puget Sound; to the West Indies (Swartz, and Wydl.), Rio Janeiro and Buenos Ayres (herb. Dec.), Patagonia and Peru (observed by myself), Chili, the Chonos archipelago, Falkland Islands, and Tristan d'Acunha (Hook., and A. Dec.); to the Mauritius Islands (Bojer); to Southwest Australia, where it was unknown before English settlement (J. Drummond in Hook. journ. 1840); to the remote Aukland Islands, the only evidence of prior visits of mariners obtained by Dr. Silas Holmes on our Expedition; seems in fact the pioneer of plants accompanying man, the first to acquire foothold even within the Tropics.

Asparagus acutifolius of the Mediterranean countries. A kind of wild *asparagus* called in Italy "sparaghella" or "asparago selvatico" (Lenz), in Greece "sparaggi" or "spharaggia" (Sibth.) or "asparaggia" (Fraas); in which we recognize the "aspharagōs" thickets that concealed Perigyne beloved of Theseus, — the plant in consequence protected by law among the Ionians inhabiting Caria (Plut. thes. viii): the "aspharagōn" is mentioned also by Cratinus, Pherecrates, Phrynichus, Ameipsias, Antiphanes, Theopompus, Athenaeus ii. p. 240; and the "asparagōs pětraiōs" of Dioscorides is identified in the added Synonyms with the "muōn" or "muakanthan:" A. acutifolius was observed by Forskal, Sibthorp, and Fraas, from the Peloponnesus to Constantinople; by Chaubard, abounding in the Peloponnesus. Westward, the "myacanthon" or "hormenum" or "libycum" or "silvestrem asparagum" is identified by Pliny xvi. 67 and xx. 43 with the "corruda" of Cato and others; A. acutifolius is termed "a. foliis acutis" by Tournefort inst. 300; was observed by Forskal near Marseilles; is known to grow also in Italy, Spain, and Portugal, its young sprouts eaten (Pers.).

Asparagus aphyllus of the Mediterranean countries. Called in Greece by the same names as the preceding (Sibth.), in Egypt "a'aqoul" or "shouk" (Del); and probably included with the preceding species: — the "aspharagōs" is enumerated by Theophrastus vi. 4. 1 as one of the two leafless plants known to him: A. aphyllus is termed "a. creticus fruticosus crassioribus et brevioribus

aculeis" by Tournefort trav. i. pl. 88; was observed by Sibthorp, and Chaubard, frequent from Crete and the Peloponnesus to mount Athos, the young sprouts collected and eaten; by Forskal, and Delile, was observed in Lower Egypt. Westward, the "asparagus" leafless and altogether thorn is mentioned by Pliny xxi. 54; A. aphyllus is described by Morison i. pl. 1, and is known to grow in Sicily, Barbary, Spain, and Portugal (Pers.). "A. horridus" regarded as not distinct, was observed by Sibthorp on Cyprus, is known to grow also in Barbary and Spain (Desf., Cav. ii. pl. 136, and Pers.).

Corydalis solida of Europe and the adjoining portion of Asia. The "thĕsĕiōn" flower of which the Ariadne garland was made — according to Timachidas (Athen.), may be compared: the root of the "thĕsĕiōn" is enumerated by Theophrastus vii. 12. 3 as tuberous "kĕphalōrrizŏn," bitter, and purgative: C. solida was observed by Sibthorp, and Chaubard, in Boeotia and the Peloponnesus from the fertile plains to the higher portion of Taygetus near the snow. Westward, the account of the "thesium" by Pliny xxi. 67 to xxii. 31 seems taken from Theophrastus: C. solida is termed "f. bulbosa radice non cava major" by Tournefort inst. 422, "pistolochia solida" by Bernhardi; and is known to grow in shaded situations throughout middle Europe as far as Denmark (fl. Dan. pl. 1224, Engl. bot. pl. 1471, and Pers.).

1094 B. C. (= 1078 + his "17th year" on the monuments = 1280 y. 2 mo. — "55 — 66 — 40 — 26 y." in the Euseb.-Maneth. table), accession of Ramessu XIII. Hhaemmianun-nuterhikten, eleventh king of the Twentieth dynasty. His name occurs at El Kab, Karnak, Gurna, and on a stone — now in Cairo (Glid. analect.).

The same year (= 1071 + "23 years" of Castor in Euseb.), Theseus being absent or excluded from Athens, the accession of Menestheus son of Peteus as Twelfth Attic king.

Examples have been already given of Scriptural names of animals and plants continuing in use in Egypt: but further, many names current there are found to go behind the formation of the Greek language, supplying the meaning of obsolete Greek words, and showing relationship, the more intimate as we recede into antiquity.

Next after Olen and before Homer, hymns to the gods composed at Athens, and first by Pamphos — (Pausan. ix. 27. 2, and Philostrat. her. p. 693).

Narcissus tazetta of the Mediterranean countries. Called in Greece "toumpakia" (Fraas), in Egypt "nardjis," in which we recognize the ΝΑΡΚΙΣΣΟΣ of Pamphos, — the Cyprian Verses, hymn to Ceres, Hippocrates, Theophrastus vii. 12, Plutarch sympos. iii. 1, Pausanias ix. 31, and the "narkissōs ĕn mĕsŏ krōkōĕithĕs" of Dioscorides referred here by Sibthorp, and Fraas: N. tazetta was observed by Wheeler, Sibthorp, Chaubard, and Fraas, wild and frequent in Greece; by Forskal in the gardens of Constantinople, "introduced from Cyprus;" by Forskal, in gardens at Cairo, and by Delile, "growing spontaneously in gardens at Damietta." Westward, the "narcissus" of Ovid metam. iii. 509, and the "calyx herbaceus" kind of Pliny xxi. 12 and 75, are referred here by Fraas; N. tazetta is termed "n. medio luteus copioso flore odore gravi" by Tournefort inst. 354; and is known to grow in Italy, Barbary, Portugal, Spain, and Southern France (Barrel. pl. 918, Desf. i. p. 282, Pers., and Lenz). Is enumerated among medicinal species by Lindley.

Narcissus poeticus of the mountains of Southern Europe. Called in Italy "giracapo" or "tazzette selvatiche" or "narciso poetico" (Lenz), and possibly the "narkissōs" of Pamphos: — the "narkissōs ĕupnōōs" fragrant, is mentioned by Moschus ii. 65; the sweet-scented mountain kind is pronounced the best by Dioscorides, and his "narkissōs ĕn mĕsŏ pōrphurōĕithĕs" is referred here by writers: N. poeticus was observed by Wheeler on Helicon and other mountains of Greece (Sibth.). Westward, the "purpureus narcissus" is mentioned by Virgil ecl. iv. 34, and the kind "flore candido calyce purpureo" by Pliny xxi. 12: N. poeticus is described by Camerarius (Spreng.); is termed "n. albus circulo purpureo" by Tournefort inst. 353; is known to grow wild on the mountains of Northern Italy and as far as central France (A. Dec., and Lenz); is besides cultivated for ornament, and has become naturalized in various localities as far as Belgium and Britain (Wats.). By European colonists, was carried to Northeast America, where it continues to be a favourite garden flower. According to Lindley, "the bulbs have considerable energy as emetics," and "in doses of two to three drachms the extract is a deadly poison."

1091 B. C. (= 1071 + "20 years" of Herodotus ix. 26, and Clint. i. p. 79 to 106), First invasion of the Peloponnesus by the Heraclidæ. Met on the Isthmus by the Achæans, Ionians, and the Arcadians of Tegea; and Hyllus the Heraclid leader slain in single combat by king Echemus of Tegea.

The worship therefore of Samson or Hercules advancing rapidly throughout middle and Western Europe. — The "temple to Hercules" supposed by Ephorus to exist on Cape Sagra in Portugal, was found by Artemidorus to consist of only "three or four stones put together in many places," which the inhabitants taught by their fathers said was the work of Hercules (Strab. iii. 1. 4); an account clearly referring to *cromlechs*. Druidical circles are perhaps less ancient: but Druids were

seen in France by Posidonius, and Caesar; and as appears from Pliny xvi. 95 "sexta luna quae principia mensium annorumque his facit et seculi post tricesimum annum" the sixth day of the moon which is the beginning of their months and years and of their thirty-year period, the Druids used the calendar year of twelve lunations, and were acquainted with the "Cycle of 360 lunations = 10,631 days." (See mount Nebo, Deut. xxvii. 5, Jeroboam, and Amaziah).

Ireland inhabited as early probably as this date, and *crannoges* (palisaded villages on lake islets and shoals) perhaps already constructed: — they are mentioned in Irish annals "from the Fifth century A.D.," serving as strongholds and places of refuge during wars, and one of them continued extant as late as "1610" (Wilde, and Troyon p. 87 and pl. 2).

The kinds of timber employed in these crannoges include "aulne," *Alnus glutinosa* (Troyon p. 458).

Among bones of animals in great quantities on the site of these crannoges, those of the extinct *Irish elk*, Cervus . . . . , were probably merely collected in the fossil state. Implements are intermingled of different degrees of antiquity, some made of stone and possibly belonging to the Stone Age (see Troyon).

Of plants less anciently cultivated in Switzerland during the Stone Age, possibly therefore as early as this date, the following are enumerated (by Heer, in Troyon p. 443): the *pear*, Pyrus communis; *sour cherry*, Cerasus avium; *plum* or *bullace*, Prunus insititia; two-rowed *barley*, Hordeum vulgare; *spelt*, Triticum spelta; and *T. monococcum*.

Of forest trees and shrubs, the following are enumerated (by Heer in Lee's edit. Keller): *Juniperus communis* and *Pinus sylvestris*.

Besides the manufacture of metallic implements throughout middle and Western Europe, the *Bronze Age* is especially marked by the change from burying to burning the dead — (Troyon 302).

"1089 B. C." (Euseb. and Clint. i. p. 23, Diodorus' numbers giving 1169 — "92" = 1077), "Second" change in naval dominion. Leaving the Lydians and Mæonians, the "empire of the sea" acquired by the Pelasgian Greeks. — Held by them "eighty five" years.

1088 B. C. (= 1071 + "18th year" of Castor in Euseb. i. p. 131, and of Clemens Alexandrinus), Thyestes succeeded at Mycenæ by Agamemnon, son or grandson of Atreus and now Argive king.

1087 B. C. (= 1071 + "16 years" of Clint. i. p. 140, see Homer il. iv. 406), Second war against Boeotian Thebes, Diomed being old enough to take part. On the capture of the city, its wall was demolished, and the *Cadmeans* with their king Laodamas expelled from Boeotia. — At a later period, the Gephyraei, a Phoenician and Cadmean family or clan, were allowed to reside at Athens; and are specially noticed by Herodotus v. 57 to 61.

Ruscus hypoglossum of the mountains of Eastern Europe and Asia Minor. Called in Italy "bonifacia" or "bislingua" or "lauro alessandrino" (Lenz), in which we recognize the "alĕxanthrĕia thaphnē" with which Alexander or Paris was crowned victor in the Games at Troy — (Stapel ad Theophr.), termed "epiphullocarpus" by Theophrastus i. 10 and iii. 17, and identified by Dioscorides with the "stĕphanēn" or "ithaian" or "thanaēn" or "upŏglŏttōn" or "zalĕian" growing on mountains and having red fruit in the middle of the leaf: R. hypoglossum was observed by Sibthorp on mount Athos and in thickets towards the Black Sea. The "laurus alexandrina" or "hipoglottion" or "carpophyllon" growing mostly on Ida and about Heraclea in Pontus always on mountains, is mentioned by Pliny xv. 39 and xxiii. 80: R. hypoglossum is described by Matthioli p. 829, is termed "r. angustifolius fructu folio innascente" by Tournefort inst. 79, and is known to grow in shaded situations on the mountains of Hungary and Italy (Pers., Spreng., and Lenz).

Ruscus hypophyllum of Southeastern Europe. Called in Greece "kŏrallŏvŏtanōn" (Sibth.), in Egypt "qafandar" (Del.): the "hamaithaphnē" by some called "alĕxanthrĕian" — (Diosc. iv. 147), mentioned by Theophrastus iii. 18, and described by Dioscorides as having laurel-like but smoother leaves with red fruit attached to the leaves, is referred here by Columna ecphr. i. p. 165, and Sibthorp: R. hypophyllum was observed by Sibthorp in the woods on mount Athos; and by Delile, in the gardens of Egypt. Westward, the "chamaedaphne" is mentioned by Pliny xv. 39 and xxiv. 81 as a woodland shrub "silvestris frutex;" R. hypophyllum is termed "r. latifolius fructu folio innascente" by Tournefort inst. 79; and is known to grow on hillsides in Italy (Pers., and Lenz).

Daphne laureola of Europe and the adjoining portion of Asia. A shrub two or three feet high called in Britain *loril* or *laury* (Ainsw.), or *copse laurel* or *spurge laurel* (Prior), in France "laureole" (Nugent), in Italy "laureola" (Lenz), in which we recognize the "laurĕōla" of the Romans identified with the "thaphnitēn" in Syn. Diosc. iv. 147: the "daphnoides" or "stephanon alexandri" — or "pelasgum" or "eupetalon" of Pliny xv. 39, or the "thaphnōĕithĕs" growing according to Dioscorides in mountainous situations, a cubit high with thong-like branches leafy from the middle upward, the leaves laurel-like but not easily broken, burning the throat if tasted, and the ripe fruit black, clearly belongs here: D. laureola was observed by Sibthorp in shaded situations on the Bithynian Olympus. Westward, is described by Anguillara, Dodoens, Lobel, and Cæsalpinus (Spreng.); is

termed "thymelæa lauri folio sempervirens" by Tournefort inst. 595; and is known to grow in woods in Sicily, Italy, and throughout middle Europe (Jacq. austr. pl 183, and Smith engl. fl. ii. 229), "every part" according to Lindley "very acrid," producing "a burning heat in the mouth and throat," the scent of the flowers "resembling saffron, with an overpowering sweetness," but "perceptible in an evening only," the berries "black."

1082 (= "2 years" before the assembling of army and fleet at Aulis, Sm. b. d.), preparations commenced by the Greeks for war against Troy.

Pinus maritima of the Northern shores of the Mediterranean. A kind of *pine* called in Greece "pĕukŏs" (Sibth.), in which we recognize the "pĕukē" whose timber withstands rain — (Hom. il. xxiii. 328), mentioned also in Hesiodic scut. herc. 376, and by Crates, Euripedes med. 4, Dioscorides, Athenaeus iii., and the "pĕukēn paralian" by Theophrastus iii. 9. 1 and ix. 2. 5: P. maritima was observed by Sibthorp, and Chaubard, in low sandy situations from the Peloponnesus throughout Greece, and the only kind of pine on Cyprus, furnishing pitch, turpentine, and abundance of excellent ship-timber. Westward, "tibulos" are described by Pliny xvi. 17 as growing along the seashore of Italy, slender and used for ship-building: P. maritima, "a tree twenty feet high," is described by Bauhin (Pers.), and Lambert pl. 10; is known to grow in Italy as far as Genoa, and in Southwestern France (A. Dec., and Daub.). By European colonists, was carried to the Mauritius Islands (Boj.). "P. Alepensis" regarded as not distinct, was also seen by Bory in the maritime portion of the Peloponnesus, is known to grow from Tauria to Barbary (Lamb. pl. 11, and Pers.), was observed in the gardens of Egypt by Forskal, Delile, and Clot-Bey, and its imported timber called "snoubar."

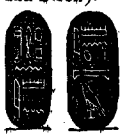
Spartium junceum of the Mediterranean countries. Called in Italy "ginestra" (Lenz), in Greece "spartō" (Sibth.) or "ta sparta" (Fraas), in which we recognize the material of the ropes "sparta" in the Greek ships — (Hom. il. ii. 135), the "spartŏn" or "spartiŏn" plant of Cratinus, Herodotus v. 16, Plato polit. 280, Aristotle an. ix. 40, Dioscorides, and the "linŏspartŏn" plant of Theophrastus i. 5. 2: S. junceum was observed by Forskal, Sibthorp, Chaubard, and Fraas, frequent from the Peloponnesus throughout Greece and the Greek islands to the Dardanelles: and "sparta" cordage was known in Egypt as early at least as the arrival of the ships of Menelaus (Hom. od. iii. 300). Westward, great quantities of "spartum" were accumulated by Asdrubal for naval use (Liv.), and that produced in Africa being small and worthless, were probably imported from Carthagena in Spain, where according to Pliny xix. 7 and xxiv. 40 the plant covers whole mountains and is collected by persons having their hands and legs protected: the term "sparteus" occurs in Columella, and "lentae genistae" in Virgil, but whether the "genista" of the Romans useful for ties is identical with the "sparton" plant of the Greeks, Pliny is uncertain: S. junceum is termed "genista juncea" by Tournefort inst. 643; was observed by Forskal near Marseilles; and is known to grow in Italy and other parts of Southern Europe (Pers., and Lenz).

1080 B. C. ("in the beginning of the war against Troy," Pausan. ix. 5. 7. and Clint. i. p. 87). Thersander son of Polynices and father of Tisamenus, slain in Mysia. He had recalled many fugitive Cadmeans.

Fagus sylvatica of Europe and the adjoining portion of Asia. Called in Britain *beech*, in Anglo-Saxon "bece" or "boc," in Germany "buch," in Old High German "puocha," in M. H. G. "buochie," in Holland "beuk," in Old Norse "beyki," in Denmark "bög," in Sweden "bok," all signifying both the tree and book, from Runic tablets made of this wood, and in accordance with the Sanscrit "boko" letter and "bokos" writings (Prior), also in Slavonian "buk" (A. Dec.), in Tartar "biuk" (Pall.), in France "hêtre" or "fouteau" (Nugent), in Italy "faggio" (Lenz), in Greece "oxua" (Sibth.), in Egypt its imported timber "sansan" (Forsk. p. lvi); in which we recognize the "ōxua" tree that gave its name to the Mysians — (Xanthus, quoted by Menecrates of Elais and Strabo xii. 8. 3), and the "ōxuē" spear of Archilochus: the "ōxua" is described by Theophrastus iii. 10. 1 to v. 8. 6 as the only tree of its kind, its softly-echinate fruit enclosing a nut having the sweetness and taste of chestnuts, its wood used for wagons: F. sylvatica was observed by Hawkins on high mountains in Greece, by Sibthorp in woods near Constantinople, by Griesebach on the mountains of Asia Minor, by Karelin as far as Astrabad South of the Caspian; is known to grow also about Caucasus, and in the province of Talusch, and as far as the Ural (Gmel., Pall., and Clauss.). Westward, the "ōxuē" is said by Theophrastus iv. 8. 3 to grow in Latium, large enough for the keels of Etruscan ships; the "fagus" is mentioned by Caesar, Varro, Virgil, Columella, Martial, and is described by Pliny xvi. 7 as bearing nuts "triangula cute:" F. sylvatica occurs in piles or posts of Swiss lake-villages belonging to the Stone Age, and in quantities of the nuts among the debris (Troyon 16 to 40, and Heer); is termed "fagus" by Tournefort inst. 584; was observed by Lenz on the heights of North Italy; and is known to grow throughout middle and Northern Europe as far as Lat. 60° 31′ (Lindblom). By European colonists, was carried to Madeira, where it continues under cultivation (Heer, and A. Dec. g. b. 47 to 154).

"1078 B. C. = 1st year of Kang-wang, of the Tcheou" or Fifth dynasty (Chinese chron: table).

The same year = "17th year of Ramessu XIII.," in an official letter addressed to his son Painehsi. His name occurs also in his tomb at Bab-el-meluk — (Glid. analect, Leps. k. tab. p. 19, and Birch).



The same year (= 1071 + "7 years" of both Maneth. tables = 1417 — "16 — 8 — 15 — 5 — 68 — 40 — 55 — 66 — 40 — 26 years" of the Armenian Euseb.-Maneth. table), accession of "Thōuōris called Pōluvōs by Homer," = (1417 — "51 — 61 — 20 — 60 — 5 — 7 — 135 years" of the Afr.-Maneth table, this table also giving 991 + "14 + 9 + 6 + 9 + 4 + 46 years" = 1079) accession of Směnthēs or Směnthis, first king of the Twenty-first dynasty. The name and portrait of king Herhor-siamun have been found on the temple of Khons at Thebes; with evidence, that under Ramessu XII. he held the office of high-priest of Amon. (Compare the "Prŏtĕus" of Homer, and Herodotus).

Herhor received the submission of the Northern Syrians, and married a Semitic female, — by whom he had several sons bearing Semitic names (Birch).

Aethra, daughter of Pittheus and mother of Theseus, a captive in Troy during the siege by the Greeks (Hom. il. iii. 144, Arctin., Lesch., and Hellan.). Theseus is mentioned as seen by Nestor and Ulysses, and as taking no part in the war — (Hom. il.).

The Eumolpian bard Musaeus, son of Antiophemus (Paus. x. 5. 6), composing poetry about the time of the Trojan war (Theodoret. serm. ii. 741). His daughter Astyanassa is said to have been a slave of Helen — (Suid., Phot., and Sm. b. d.).

Teucrium polium of the Mediterranean countries. Called in Greece "amarantō" or "agapēsvōtanē" or "panagiōhōrtōn," by the Turks "giuda" (Forsk., and Sibth.), and the ΠΟΛΙΟΝ pōliōn celebrated by Musaeus — (Plin. xxi. 84), and Hesiod op. fragm., mentioned also by Hippocrates, Theophrastus ix. 21, Nicander ther., and Dioscorides, is referred here by writers: T. polium was observed by Forskal, Sibthorp, and Chaubard, frequent in mountainous and dry situations from the Dardanelles and Smyrna throughout Greece and the Greek islands; and farther South, by Forskal, and Delile, on the Mediterranean border of Egypt near Alexandria. Westward, the "polium" is mentioned by Celsus v. 23, and Pliny; T. polium is described by Matthioli p. 612; is termed "p. montanum album etiam luteum" by Tournefort inst. 206; was observed by Forskal near Marseilles; and is known to grow also in Italy and Spain (Pers., and Lenz).

Teucrium capitatum of the Mediterranean countries. Called in Greece "livanōhōrtōn" or "pōlĕōn tōu vounou" (Sibth.), and distinguished from the preceding as early probably as this date: — the "pōliōn ĕtĕrōn" is described by Dioscorides as weaker and less odorous; and the "polion herba" by some called "libanotis" is mentioned by Marcellus 20; T. capitatum is described by Sibthorp as "præcedenti valde affinis," and was observed by him, and Fraas, frequent in Greece both on plains and mountains: is known to grow also in Siberia (Pers.). Westward, the "polium campestre" is distinguished by Pliny xxi. 21; T. capitatum is termed "p. candidum tenellum tomentosum flore purpureo" by Tournefort inst.; and is known to grow in Italy, Spain, and Southern France (Barr. rar. pl. 1047, Pers., and Lenz).

Ornus Europæa of mountains on the North side of the Mediterranean. A small tree called in France "orne" (Fée), in Italy "orno" or "ornello" or "avornio" (Lenz), in Greece "mĕlĕŏs" or by the Turks "disu budak" (Sibth.); in which we recognize the ΜΕΛΙΗΣΙΝ mĕliēsin of Musaeus — (Clem. Alex. str. vi. p. 618), Hesiod op. 145, growing according to Homer il. 767 in the mountain forest, mentioned also by Aristophanes, Theophrastus iii. 11, Nicander fragm., Dioscorides, and Oppian cyn. iv. 383; the name derived from its saccharine exudation, a tree yielding honey being expressly mentioned by Diodorus xvii. 75, Curtius vi. 4, Polyaenus iv. 3. 32, and Athenaeus xi. 500: O. Europæa was observed by Sibthorp, Hawkins, Chaubard, and Fraas, from Constantinople frequent on high mountains throughout Greece. Farther South, the "mĕlia" was in Egypt in the days of Theophrastus; and O. Europæa was observed in gardens there by Clot-Bey: the seeds are besides imported for culinary and medicinal use, and are called "lissan asfur" bird tongues (Forsk. mat. med., and Del.). Westward, the "ornus" is mentioned by Virgil, and Pliny xvi. 30, as growing on the mountains of Italy; O. Europæa is termed "f. florifera botryoides" by Tournefort inst. 577; is known to grow in Italy, especially towards the Southern extreme (Lindl., and Lenz), also in Spain (Cav., and Pers.); and according to Lindley yields the *manna* of the shops.

Ornus rotundifolia of Italy and Greece. Another species of *flowering ash* called "mĕliŏs" in Greece, and probably included in the "mĕliēsin" of Musaeus, — and Homer: the "mĕlia" termed "upsĕlē" and "ĕumēkēs" by Theophrastus iii. 11, is referred here by Fraas; and O. rotundifolia was observed by him to be the most frequent kind in Northern Greece; is known to grow also in Hungary (Pers.). Farther West, is known to grow in Calabria or Southern Italy, "yields *manna*, and according to Tenore of better quality than the last" (Lindl.). Farther South, "sarachoscht frandji, manna calabrica" is enumerated by Forskal mat. med. as imported into Egypt.

Juniperus macrocarpa of the East Mediterranean countries. The ΑΡΚΕΥΤΟΣ of Musaeus—(schol. Apollon. iv), and Satyrus, is described by Theophrastus iii. 3. 1 to 12, 3 as growing on mountains, taller than the "kĕthrŏs" and less prickly, its wood inferior and scentless, and berries black and hardly edible; is mentioned also by Nicander ther. v. 584; and the "arkĕuthŏs mikra" having fruit no larger than a filbert, by Dioscorides: "lesser arkĕuthis" berries are among the ingredients of the "kuphi" incense enumerated by Manetho, and the "arkĕuthŏs" is identified in Syn. Diosc. with the "liviŏum" of the Egyptians, and "zōuōrinsipĕt" of the Numidians: the name, subsequently pronounced "argĕtŏs," has according to Fraas become obsolete: J. macrocarpa is termed "j. maior" by Matthioli p. 118, "j. maximi illyrici" by Lobel hist. 629 and ii. pl. 223, "j. major bacca cærulea" by Tournefort inst. 589; was observed by Sibthorp, and Fraas, on the mountains of Greece, its berries obovate, twice as large as in J. oxycedrus and black with a blue bloom; is known to grow also in Illyria, Istria, and Sicily (Spreng., and Lenz).

"1077 B. C. = 2d year of Kang-wang, of the Tcheou" or Fifth dynasty (Chinese chron. table).

1075, November (= 1073 y. $302\frac{1}{8}$ d. — "7 months" of 1 Sam. vi. 1), the ark of the covenant removed from Shiloh and captured by the Philistines: and on "the same day," death of the high-priest Eli.

1074 B. C. (= 1113 y. $302\frac{1}{8}$ d. — "40 years" of Judg. xiii. 1), the ark of the covenant returned by the Philistines; and placed at Kirjath-jearim. The Philistines afterwards defeated by the Israelites under the prophet Samuel (1 Sam. vii. 1 to 13).

Achillea millefolium of Northern climates. Called in Britain *milfoil* or *nosebleed* or *sanguinary* or *yarrow*, in Anglo-Saxon "gearwe," in Germany "garbe," in Low German "geruwe," in Old High German "garawa," in Old Frisian "kerva," names apparently from the Greek "iĕra" (Prior), in France "mille-feuille" (Nugent), in Italy "millefoglie" or "achillea" (Lenz); in which we recognize the "millefolium" or "achilleos" with which the wounded king Telephus of Mysia was healed by Achilles—(Plin. xxv. 19); described by Dioscorides as having coriander-like leaves with numerous incisures, white or purple flowers in a terminal umbel, used for agglutinating wounds and stanching blood, and in the added Synonyms identified with the "ahillĕiŏn sithĕritin" or "hiliŏphullŏn" or "muriŏmŏrphŏn" or "stratiŏtikŏn:" A. millefolium was observed in Greece by Fraas; is known to grow also along the Taurian mountains; and to and beyond Lat. 62° throughout Siberia (Meyer). Westward, the "ahillĕiŏn sithĕritin" or "erakliŏn" is identified in Syn. Diosc. with the "astĕr hōilōth" of the Numidians, and "militarĕm" or "millĕphŏliŏum" of the Romans; and the "millefolium" or "achilleos" or "panacem heracleon" is described by Pliny as a cubit high and branchy, clad from the base with leaves like those of fennel but smaller; the "herbaque quæ foliis nomen de mille" is mentioned by Serenus Sammonicus; the "sanguinaria" or "millefolium," by Marcellus 1; the "millefolium," in a medical formula of the time of Charlemagne (Spreng.); and the "herbam cui nomen foliis de mille," by Macer Floridus: A. millefolium is described by Brunfels iii. p. 171, Lobel, Gerarde, and Parkinson theatr. 695; is known to grow in Italy and from the Pyrenees throughout middle and Northern Europe as far as Lapland (Wats., and A. Dec.). Farther West, was observed by Hooker in Iceland; by Gieseck, in Greenland; by Richardson, nearly to Slave Lake; by Drummond, on the crest of the Rocky mountains; by Georgi, on the Pacific coast of America and islands as far as Kamtschatka; is known to grow from Lat. 57° 20′ in Labrador (Meyer) throughout Canada and along the Atlantic to our Southern States (Chapm.), springing up in clearings and having an un-American aspect, but already in New England in 1620 on the arrival of the first colonists (Mourt rel.); From Europe, according to Clot-Bey, has recently been introduced into the gardens of Egypt.

Achillea tomentosa of the East Mediterranean countries. Included in the "ahillĕiŏs"—at least by Dioscorides, who describes the flowers as sometimes "hrusizŏnta" golden: A. tomentosa was observed by Forskal, Sibthorp, Chaubard, and Fraas, on mountains from the Peloponnesus to the environs of Constantinople. Westward, is termed "millefolium tomentosum luteum" by Tournefort inst. 496; is known to grow in Italy (Lenz), and France (Pers.); but as occurring in England, is regarded by A. Decandolle as hardly naturalized.

Bupleurum rotundifolium of the Tauro-Caspian countries. Called in Britain *hare's ear*, by Turner "thorow-wax" or "throw-wax" its "stalke waxeth throw the leaves," in medieval Latin "auricula leporis" (Prior), in Germany "hasenohr," in Italy "bupleuro" or "cinquefoglio giallo" (Lenz); and the "veram achilleon" with which Telephus was healed—is referred by others to a branchless plant a foot high, its stem blue and elegantly invested throughout with separate round leaves (Plin. xxv. 19): B. rotundifolium is known to grow wild about Caucasus and the mountains of Suwant (Bieb., and Hohen.), and it may be in Persia (Fisch., and A. Dec.); was observed by Sibthorp, and Chaubard, in cultivated and fallow ground from Constantinople and Cyprus to the Peloponnesus. Farther West, is termed "b. perfoliatum rotundifolium annuum" by Tournefort inst. 310; was observed by Forskal near Marseilles, but throughout Western Europe is known only as a weed in cultivated ground (Pers., and A. Dec.).

1072 B. C. (Hom. il. ix. 328), the country around Troy ravaged by Achilles, who destroyed "eleven" towns in the Interior and "twelve" on the coast.

"In the Tenth" and last year of the war (Sm. b. d.), pestilence in the Greek camp, and the daughter of Chryses priest of Apollo at Chryse, sent back to her father. — With which event, Homer's account opens.

Ulmus effusa of the Mediterranean countries. A small kind of *elm* called in Greece "phtĕlla" (Sibth.) or "phtĕlĕa" (Fraas), in which we recognize the "ptĕlĕa" growing along the river-brink near Troy — (il. vi. 419 and xxi. 242 to 350), mentioned also by Hesiod op. 435, Aristophanes nub. 1008, Dioscorides, and distinguished from the "ōrĕōptĕlĕa" large mountain kind by Theophrastus iii. 14: U. effusa was observed by Sibthorp, and Fraas, from Crete throughout Greece, according to Chaubard, never becoming very large; Westward, the "ulmus" is mentioned by Plautus, Virgil, and a "silvestre" kind by Pliny xvi. 29: U. effusa is distinguished by Willdenow, is termed "u. pedunculata" by Fougeroux; and is described by Lindley as "a small tree" growing in "woods in the Southern parts of Europe."

Ulmus suberosa, — by some writers regarded distinct, is termed "u. sativa" by Duroi, "u. pumila" by Pallas, "u. fruticosa" and "arborea" by Willdenow (Steud.), and is perhaps the "kharkhafty" long known in the gardens of Egypt, according to Delile, and Clot-Bey, but hardly exceeding the dimensions of a shrub.

Salix alba of Europe and the adjoining portion of Asia. A large tree called in Britain *white willow* (Prior), in Italy with other species "salcio" (Lenz), in Greece "gĕtigia" (Forsk.) or "ĕtia" (Sibth.) or "itĕa" (Fraas); and the "itĕai ŏlĕsikarpōi" growing among lofty poplars and conspicuous from the sea — (od. x. 510), "itĕa lĕukē" of Theophrastus iii. 13, and "itĕa thĕnthrōn" of Dioscorides, are referred here by Fraas; the "candidam" kind is also enumerated by Pliny xvi. 69 as cultivated in Asia, and the most useful: S. alba was observed by Sibthorp, and Fraas, from Cyprus throughout Greece; by Forskal, in gardens at Constantinople. Westward, the "candida" kind of "salix" is mentioned by Cato vi. 9, Virgil, and Ovid met. x. 96; S. alba is termed "s. vulgaris alba arborescens" by Tournefort inst. 590, "omnium maxima et utilissima" by Persoon, and according to Carey is sometimes "eighty" feet high; is known to grow in meads from Italy throughout middle Europe (Pollini, and Engl. bot. pl. 2430), and is besides planted. Eastward from the Black Sea, was observed by Thunberg in the outskirts of cities in Japan, and called "kawa-ianigi." By European colonists, was carried to Northeast America, where it continues planted for ornament in our Northern States. Its bark, recommended by "Stone in 1763," is regarded by Smith as "valuable in the treatment of agues" though "inferior to that of S. Russeliana" (Lindl.).

Salix fragilis of Europe and the adjoining portion of Asia. A tall and handsome tree called in Britain *crack willow* (Prior), the annual shoots readily breaking off (Pers.), in Germany "brechweide," in Greece "itĕa" (Fraas) or "ĕtia" (Sibth.); in which we recognize the "itĕa" growing along the river-brink near Troy — (il. xxi. 350): the "itĕa" divining-rod is mentioned by Herodotus iv. 67; a shield of "itĕa," by Euripides suppl. 705; and the "itĕa mĕlaina" becoming a tree, according to Theophrastus iii. 13. 7, with shoots more useful for weaving than the "lĕukē" kind: S. fragilis was observed by Sibthorp, Chaubard, and Fraas, on river-banks from the Peloponnesus to Constantinople; by Forskal, in the gardens of Constantinople, as well as those of Egypt. Westward, is described by Tournefort inst. 591; is termed "s. decipiens" by Thuillier (Steud.); and is known to grow throughout middle Europe as far as Sweden and Russia (Pers., Engl. bot. pl. 1807, and Wats.). By European colonists, was carried to Northeast America, where it is "cultivated for basket-work" (Carey), but whether perfecting seeds is not stated. Its bark is "included in some pharmacopoeias" (Lindl.). "S. Russeliana," according to J. E. Smith the most valuable officinal species, seems generally regarded as not distinct.

Cornus mascula of Europe and the adjoining portion of Asia. Called in Italy "corniolo" or "cornal" or "corna" (Lenz), in Greece "krania" (Fraas), in which we recognize the "kranĕia" of the mountain forest — (il. xvi. 767), and of Herodotus vii. 92, Anaxandrides, Theophrastus iii. 12, Dioscorides, and Galen: C. mascula was observed by Sibthorp, Chaubard, and Fraas, in Asia Minor and Greece, wild in the forest; and by Forskal, and Bory, planted in gardens at Constantinople and in the Peloponnesus. Farther South, "cornus" berries are enumerated by Forskal mat. med. as imported from Greece into Egypt, and the living tree according to Clot-Bey has been recently introduced. Westward, the "cornus" is mentioned by Lucretius v. 939, Horace, Columella, Silius Italicus, is termed "bona bello" by Virgil georg. ii. 447, and the "cornus mascula" is described by Pliny xvi. 30 to 42 as growing on mountains and its wood exceeding strong and destitute of pith: C. mascula is termed "c. sylvestris mas" by Tournefort inst. 641; is known to grow wild in Italy and middle Europe, is besides planted (Desf., Pers., and Lenz).

Buxus Balearica of mountains in the Mediterranean countries. The "puxōs" of which Priam's horse-collars were made — (il. xxiv. 268), as well as writing-tablets, not only among the Greeks but

according to the Septuagint translation mentioned in Isaiah xxx. 8, may be compared: wood of B. Balearica according to Royle (in Kitt. bibl. cycl.) continues to be exported from Smyrna, Constantinople, and the Black Sea. and a species of Buxus grows on Caucasus: farther South, the "shamsar" or "shumshad" is mentioned by Ebn Baitar, and other Arab writers. Westward, "buxum gallicum" is enumerated by Pliny xvi. 28 as the largest kind; and B. Balearica is known to grow on Minorca.

Buxus sempervirens of Europe and the adjoining portion of Asia. Called in Britain *box*, in Anglo-Saxon "box" or "bux" (Prior), in Germany "buchs" (Grieb), in France "buis" (Nugent), in Italy "bosso" or "busso" (Lenz), in Illyrian "bus" (A. Dec.), in Calmuk "boschtom," in Georgian "bsa" (Pall.), in Greece "puxari" (Sibth.); and possibly the "puxŏs" in question, — as well as that of the comic poet Plato, Theophrastus iii. 15, and Pollux: B. sempervirens was observed by Hawkins (Sibth.), and Griesebach p. 148, wild in Bithynia and Macedonia and as far South as Pindus; and "buxus minor" was seen by Forskal in gardens at Constantinople. Westward, the "buxus" is mentioned by Virgil, Ovid, Columella, Firmicus, Claudian, as cultivated in gardens and the branchlets sheared "tonsile buxetum" by Pliny, and Martial: B. sempervirens is termed "b. arborescens" by Tournefort inst. 578; is known to grow wild chiefly in calcareous soil in Italy and on the Pyrenees and Jura as far as Lat 48°; is besides cultivated, and has become naturalized as far as Holland and Britain (Gerarde, Ray, Wats., and A. Dec.). Eastward from Greece, is known to grow in Persia (Lindl.); was observed by Kaempfer, and Thunberg, in Japan and called "ojo" or "tsuge," growing here and there and often cultivated. By European colonists, was carried to Northeast America, where it continues a frequent edging in gardens, but I have not seen it flowering. The leaves and wood according to Lindley are "sudorific and purgative," and "a fœtid empyreumatic oil 'oleum buxi,' was formerly sold in the shops."

Sium latifolium of Europe and Northern Asia. Called in Britain *water-parsnip* (Prior), in Germany "wassermerk," in Italy "herba canella" (Lenz), in Greece "nĕrōsĕlina" (Fraas); in which we recognize the "sĕlinōn" of the marshes eaten by horses — (il. ii. 776, vi. 39, and od. v. 32): S. latifolium was observed by Fraas in brooks and standing water everywhere in Greece. Westward, is described by Caesalpinus vii. 39, the leaves in Italy cooked and eaten (Spreng.): is known to grow also throughout middle Europe as far as Sweden (Engl. bot. pl. 204, Pers., and Wats.). Eastward from Greece, is known to grow along the Taurian mountains, and was observed by Gmelin from the Yaic river in Siberia to the Oby.

Helosciadium nodiflorum of Europe and the adjoining portion of Asia. Also called in Greece "nĕrōsĕlinōn" (Sibth.), and possibly the "sĕlinōn" in question eaten by horses: — H. nodiflorum was observed by Forskal, Sibthorp, and Chaubard, frequent in water throughout from the Peloponnesus to Smyrna. Westward, is described by Morison ix. pl. 5; is termed "sium aquaticum ad alas floridum" by Tournefort inst. 308; and is known to grow on river-banks throughout middle Europe as far as Britain (Engl. bot. pl. 639, and Pers.). By European colonists, was carried to the Azores (Wats., and A. Dec.); and before 1788 (Walter) to Carolina, where it has become naturalized around the city of Charleston (Ell., and Chapm.).

Lotus corniculatus of Europe and the adjoining portion of Asia. Called in Britain *birdsfoot clover* (Prior): the "lōtŏs" prevalent on plains "pĕthia lōtĕunta" and eaten by horses around Sparta and Troy — (il. ii. 776 and xii. 284) is referred by Chaubard to "L. Argolicus" observed eaten by cattle and horses in the Peloponnesus, but perhaps not a distinct species: the term "lōtŏ triphullŏ" employed by Dioscorides iv. 110 seems also to imply knowledge of a non-trifoliate kind: L. corniculatus was observed by Forskal, and Sibthorp, from the Peloponnesus throughout the Greek islands to Marmora and Smyrna; by Forskal, and Delile, around Alexandria and Cairo; and by Pallas, along the Caspian. Westward, is described by C. Bauhin pin. 332; is termed "l. sive melilotus pentaphyllos minor glabra" by Tournefort inst. 402; and is known to grow in woods and meads throughout middle and Northern Europe as far as Lapland and Iceland (fl. Dan. pl. 991, Pers., and Hook.). Eastward from the Caspian, was observed by Thunberg frequent in Japan. By European colonists, was carried to South America (Wats.); and to Southeast Australia, where subsequent to the visit of R. Brown it has become extensively naturalized (Corder in phytol. 1845, and A. Dec.).

Lotus major of Europe and the adjoining portion of Asia. The "lōtŏs" growing along the river-brink near Troy — (il. xxi. 351) may be compared with this allied but larger species; observed by Sibthorp in wet situations on mount Hæmus, though not distinguished by (J. E. Smith). Westward, L. major is described by Rivinus tetrap. pl. 76; is termed "l. pentaphyllos flore majore luteo splendente" by Tournefort inst. 403, "l. uliginosus" by Schkuhr; and is known to grow in shaded moist situations throughout middle Europe as far as Britain (Thuill., Pers., and Engl. bot. pl. 2091).

Lotus (Dorycnium) latifolius of the mountains of the East Mediterranean countries. The "lōtōn th' ērsēenta" forming with other flowers a dense soft bed on mount Ida — (il. xiv. 348), may be compared: D. latifolium is termed "d. orientale latifolium villosum" by Tournefort cor. 26,

"tŏtum villosum" by Persoon; is described also by Buxbaum i. pl. 32; and was observed by Sibthorp on the Bithynian Olympus.

Crocus vernus of mountains in the Mediterranean countries and middle Europe. Called in Britain *crocus* (Prior), in Italy "castagnola" or "magnugola" (Lenz), in Greece "agriōs krōkōs," in which we recognize the "krōkōs agriōs" of Galen comp. med. loc. iv. 8: the "krōkōs" of mount Ida — (il. xiv. 347) is referred here by Fraas; and the "glaukēs krōkōu" is mentioned by Empedocles (Plut. def. orac. 41): C. vernus was observed by Sibthorp, and Fraas, on mountain-summits in Cyprus, Crete, and Greece. Westward, the "rubens crocus" is mentioned by Virgil geor. iv. 180; C. vernus is termed "c. orientalis vernus flore subcæruleo (s. violaceo) externe spadiceo-rubente" by Tournefort cor. 25; was observed by Desfontaines on the Atlas mountains; is known to grow in North Italy (Lenz), but according to Gay, does not descend the central mountains of Europe into the plains of Germany and France; is however cultivated and partly naturalized in Britain (Engl. bot. pl. 344, and A. Dec.). By European colonists, was carried to Northeast America, where it continues to be cultivated for ornament.

Sedum altissimum, of the Mediterranean countries. Called in Greece "amarantō" or "staphulaki" or "kŏllŏritha" (Sibth.), and the herb applied to wounds to remove pain — (il.) may be compared: also the "tēlĕphiōn" of Dioscorides ii. 217 resembling in leaves and stem "anthrahnē," growing in vineyards and cultivated places in the Spring and full of thick fleshy leaves used for cataplasms; in the added Synonyms identified with the "ağizōōn agriōn:" S. altissimum was observed by Sibthorp, and Chaubard, frequent on walls and rocks from the Peloponnesus throughout Greece and the Greek islands, and the leaves used for refrigerant cataplasms. Farther South, the "tēlĕphiōn" is identified in Syn. Diosc. with the "anŏth" of the Egyptians. Westward, with the "atirtōpōurīs" of the Numidians: and Pliny xxvii. 110 adds that the "telephion" cures wounds: S. altissimum is termed "sempervivum sediforme" by Jacquin hort. i. pl. 81; was observed by Tenore pl. 41 (Bory) in Italy, and is known to grow in other parts of Southern Europe (Pers.; see also S. stellatum).

Anthylis vulneraria of Europe and the adjoining portion of Asia. Called in Britain *kidney vetch* or *woundwort* from its soft downy leaves having been used as lint for dressing wounds (Prior), in Germany "wundkraut" (Grieb), in Greece "kōkōnōhōrtōn" (Sibth.), and possibly the plant in question: — A. vulneraria was observed by Sibthorp, and Chaubard, from Crete and the Peloponnesus to the Bithynian Olympus. Westward, is described by Dodoens p. 554; is termed "vulneraria rustica" by Tournefort inst. 391; was observed by Munby in Algeria; and is known to grow in Italy and throughout middle Europe as far as Scotland (Scop., Lam. fl. fr., and A. Dec.). The plant in the days of Lyte i. 7 was employed against "strangury and against the payne of the reynes;" and according to Lindley "has had a great reputation as one of the best of styptics."

Cyperus longus of the Mediterranean countries. Called in Italy "cipero" (Lenz), in Greece "kupĕirōs" (Sibth.) or "agriōn kupĕiri" (Fraas); in which we recognize the "kupĕirōn" growing along the river-brink near Troy — (il. xxi. 351), and of Herodotus, and Theophrastus i. 8, termed "ĕlĕiōrizōn" by Hesychius: C. longus was observed by Sibthorp, Chaubard, and Fraas, frequent in marshes from the Peloponnesus throughout Greece; and was received by Vahl from Egypt. Westward, the "cyperos" of Varro iii. 16. 23, and Columella xii. 20, is referred here by Fraas: C. longus is described by Morison iii. pl. 11; is termed "cyperus odoratus radice longa sive officinarum" by Tournefort inst. 527; and is frequent in Italy and other parts of Southern Europe (Pers., and Lenz). Its imported root is called in Britain *galingale* from "having been fraudulently substituted for the genuine" (Prior); and according to Lindley, is employed "as a stomachic."

Cyperus fuscus of the Mediterranean countries. Called in Egypt "sŏŏd" or "nghil" (Forsk.): the "kupĕirōn" growing on the plains, and on which a warrior's body was laid — (il. and od. iv. 603), termed "thrōsŏthē" dewy or tender by Pherecrates, and growing under oaks according to Theocritus v. 45, may be compared: C. fuscus, low and having a subflaccid stem, was observed by Sibthorp, Chaubard, and Fraas, frequent in moist situations from the Peloponnesus to Constantinople and Smyrna: farther South, by Forskal p. 14, and Delile, in Lower Egypt, the most abundant grassy plant in the moist portions of the river-flat. Westward, the "molle cyperon" is mentioned by Petronius; C. fuscus is described by Morison viii. pl. 9; is termed "c. minimus panicula sparsa nigricante" by Tournefort inst. 527; and is known to grow in Carniolia, Barbary, and throughout middle Europe as far as Denmark (Haller helv., Scop. carn., fl. Dan. pl. 179, and Pers.).

Zostera marina of Northern seas. A marine plant rooting and reaching the surface in sheltered situations, called in Britain *grass wrack* (Prior), in Germany "wasserriemen" (Grieb), in Greece "ualōhōrtōn" (Fraas) or "phukia" (Sibth.), and the "phukiōessa" strand — (Hom. il. xxiii. 693) is referred here by Sprengel: the grass-like "phukōs" with a long geniculate root is mentioned by Theophrastus iv. 66, and the "phukia" by Theocritus vii. 58: Z. marina was observed by Sibthorp, Chaubard, and Fraas around Greece, and is known to grow in the Black Sea to its Eastern extreme (Bieb.). Westward, "the sal nigrum" of Pliny has been identified with the salt procured by burning

this plant, places for which purpose are among the debris of the Stone Age in Denmark (Troyon 98): Z. marina is termed "alga angustifolia vitriariorum" by Tournefort inst. 569; is known to grow from the Adriatic outside of the Mediterranean as far as the Baltic (Pers.), Lapland and Iceland (Hook., and Wats.); was observed by myself along the coast of New England; by Pursh, in Delaware Bay; by Chapman, in West Florida. In the Pacific, by Thunberg in Japan; and is known to grow in Australia (Wats.).

1071 B. C. (Hom. il. iv. 327, Hellan., Plut. thes. 32, Clem. Alex., and Euseb.), death at Troy of Menestheus leader of the Athenians. He was succeeded at Athens by Demophon, son of Theseus and now Thirteenth Attic king.

Before the close of the year (= 711 + "1360 — 1000 years" of Ctesias in Diodor. ii. 21 = 1417 — "16 — 8 — 15 — 5 — 68 — 40 — 194 years" of the Armenian Euseb.-Maneth. table = 1280 — "209 years" of the Afr.-Maneth. table, the same table giving 339 + "4 + 3 + 2 + 38 + 20 y. 4 mo. + 6 + 124 y. 4 mo. + 150 y. 6 mo. + 40 + 6 + 89 + 120 + 130 years" = 1072 y. 2 mo.), Troy captured by the Greeks. The event is further placed by Ctesias in the reign of the Assyrian emperor Teutamos. (The date here given is 56 years or fourteen olympiads below the lowest Greek estimate, "1127" of Callimachus, and Africanus: which estimate could not perhaps be conveniently disregarded by Manetho for he has given 991 + "130 + 7 years" of both Maneth. tables = 1128, and 1417 — "32 — 61 — 20 — 60 — 5 — 7 years" of the Afr.-Maneth. table = 1126. The next Greek estimate, "1183" of Eratosthenes, will be observed to be 56 years higher; and the third Greek estimate presents the same difference. The First registered olympiad, "776," is called by Africanus the "Fourteenth;" and the above difference of fourteen full olympiads are found between the Olympiad of Iphitus as placed by Callimachus and Africanus in "828," and by Eratosthenes in "884." Between the Return of the Heraclidæ and the Registered olympiads (according to Clinton i. p. 128 and 139) "fifty-five" years are omitted by Phanias of Eresus; an interval also found between the date "1257" assigned by Callimachus to Cadmus, and "1312" given by Hales as the current Jewish date of the Exodus. The 56 years difference, continually recurring in Greek computations, is possibly derived from the combination of the Great Julian year, for in the Egyptian reckoning, 1539 — 1461 × 2 = 156, of which "100 years" are disposed of under Phiops. See Introd. p. xiv).

After the fall of Troy (Homer il. xx. 308), the Troad ruled by Aeneas. The assertion by later writers of his leaving the country, therefore unfounded.

Ulysses on his homeward voyage driven to the Lybian coast and the Lotophagi, a people living on the "lōtos" that from its sweetness causes him who tastes to forget his country — (Hom. od. ix. 95); found by Artemidorus to be an herb that is eaten entire: clearly the "helbeh" *Trigonella fœnum Græcum*, eaten crude in Egypt and its sprouting seeds often mixed in a ragout with honey (Clot-Bey). The explanation may be found in the "helweh" conserve, once an article of export even to Britain, and to the present day employed by Arabs along the East African coast for child-stealing. By Serapion, the "mĕlĭlōtōs" of the Greeks is referred directly to a species of Trigonella (see T. hamosa, and T. elatior).

Quercus ilex of the wooded portion of the Mediterranean countries. The *holm oak* is called in Germany "steineiche" (Grieb), in France "yeuse" (Nugent), in Italy "leccio" or "elice" (Lenz), in Greece "pōurnari" (Fraas) or "aria" or "arĕōs" (Sibth.); in which we recognize the three "ilices" on the site selected for the city of Tiburtes — (remaining in the days of Pliny xvi. 5 to 87), also the "ilex" in the Vatican bearing an Etruscan inscription and older than Rome, while among the Romans the earliest civic crown was the "iligna:" the "ilex" is also mentioned by Cato v. 7, Terence, Horace, Virgil, Columella, Statius, and Martial: Q. ilex is described by Matthioli valgr. i. pl. 186; is termed "i. oblongo serrato folio" by Tournefort inst. 583; was observed by Forskal in the environs of Marseilles; and is known to grow in Italy, Sicily, Sardinia, Morocco, and Spain (Moris, Guss., Webb, and A. Dec.). Eastward, the "akulōn" of Homer od. x. 242 is regarded by Pliny xvi. 8 as including the acorns of both kinds of "ilicis," that with leaves resembling those of the olive being by some Greeks called "smilaces;" an account derived partly at least from Theophrastus iii. 16. 2, who further identifies the "phĕllōthrun" of the Arcadians with the "arian" of the Dorians: Q. ilex was observed by Sibthorp, and Fraas, from Crete and the Peloponnesus to mount Athos, one of the dominant forest-trees according to Chaubard as throughout the Mediterranean region.

1069 B. C. ("about the end of the Second year after" the fall of Troy, Dionys. Hal.), in Italy, the city of Lavinium founded by the alleged companions of Aeneas. The city of Tiburtes in Italy perhaps as ancient, its founder Tiburtus, contemporary with Aeneas (according to Virgil aen. vii. 671), being a son of Amphiaraus who died at Thebes a generation before the Trojan war" una aetate ante iliacum bellum" (according to Pliny xvi. 87).

The same year (= 1062 + "7 years and 8th year" of Hom. od. vii. 259 to 261), arrival of Ulysses at Ogygia or Calypso's Isle.

Apium graveolens of marshes more or less saline throughout Europe to Caucasus, the seashore of Austral America and as far along the Pacific as California. Called in Britain *smallage* or *small ach*, in France "ache de marais" or "ache rustique" (Prior), in Italy "apio" or "apio palustre" or "seleno" (Lenz), in Greece "agriōsĕlinōn" (Sibth.), in Egypt "kerafs" (Forsk.); in which we recognize the "sĕlinōn" in the meads of Ogygia — (Hom. od. v. 72); mentioned also by Theocritus xiii. 42, Galen ad. fac. ii. 52, the Geopon. xii. 23, or the "ĕlĕiōsĕlinōn" of Theophrastus vii. 6, and Dioscorides: A. graveolens was observed by Sibthorp, Chaubard, and Fraas, in wet ground from the Peloponnesus throughout Greece; and is known to grow on Caucasus (Lindl.). Farther South, the "karafs" is enumerated by Ebn Baitar as both wild and cultivated; its seeds are prescribed by Rhazes, and seeds of A. graveolens were found by Forskal mat. med. employed by the Egyptians to stop sea-sickness; the living plant was seen by him, Alpinus, and Delile, in the gardens of Egypt, and by Hasselquist in Palestine. Westward, the "ĕlĕiōsĕlinōn" or "pĕthinōn" or "uthrōsĕlinōn agriōn" is identified in Syn. Diosc. with the "apiōum rōustikōum" of the Romans; "apio" wild "in humidis" is mentioned by Pliny xix. 37; A. graveolens is described by Turner nom., and Gerarde; is termed "a. palustre et a. officinarum" by Tournefort inst. 305; is known to grow in Italy and throughout middle Europe as far as Denmark (Ludw. ect. pl. 180, fl. Dan. pl. 790, and Pers.), in its wild state according to Lindley "acrid and poisonous." (See A. dulce).

Barbarea vulgaris of Northern climates. Called in Britain *yellow rocket* or *winter rocket* or *winter cress* (Prior p. 58) or *yellow water-cress* or *belders* (Ainsw.), in Italy "crescione" or "lavari" or "lavero" (Anguillar. p. 114); and the accompanying "iōn" in the meads of Ogygia, is read "siōn" — by some writers: the "siōn" is mentioned by Theocritus v. 125; by Cratevas, as an herb with a few roundish leaves larger than those of "ĕthuōsmōu" and very near those of "ĕuzōmō;" the "siōn tō nĕrōkarthamōn," by Nicolaus Myrepsus (Steph. th. ed. Hase); and the "riwas" of Ebn Baitar is translated "wasser-eruca" by Sontheimer: B. vulgaris was observed by Sibthorp in marshes from the Peloponnesus to mount Hæmus; but by Chaubard in moist places in gardens. Westward, the "siōn" or "tharēn iōn" is identified in Syn. Diosc. ii. 153 with the "laōuvĕrthĕ;" the "siōn" with "sapore nasturtii," and "laver" growing "in rivis," are mentioned by Pliny xxii. 41 and xxvi. 32; B. vulgaris is described by Fuchsius pl. 746, Tragus, and Dodoens (Spreng.); is termed "sisymbrium erucæ folio glabro flore luteo" by Tournefort inst. 226, "eruca barbarea" by Lamarck fl. fr.; and is known to grow from North Africa throughout Europe as far as Lapland (fl. Dan. pl. 560, and Wats.). Eastward from the Black Sea, is known to grow throughout Siberia to Kamtschatka (Dec., Cham., and Wats.): farther East, was observed by Chamisso on Unalascha; by Mertens, near the trading-posts on Norton Sound; by myself, frequent along Puget Sound and clearly indigenous; is known to grow at the mouth of the Columbia, and from Lat. 68° throughout Canada (Hook.), along Lake Superior (A. Gray); was observed by Short in Kentucky; by myself, in wild situations along the Atlantic in New England, but more frequently a weed in waste ground. Clearly by European colonists, was carried to the Mauritius Islands, where it continues regularly cultivated (Boj.).

Alnus glutinosa of Europe and Northern Asia. Called in Britain *alder* or *aller*, in Anglo-Saxon "alr" or "aler," in German "erle," in Gothic "erila," in Holland "els," names connected with awl and boring (Prior), in France "aulne" (Fée), in Italy "alno" or "ontano" (Lenz), in Greece "skilithrō" (Forsk.) or "klēthra" (Sibth.), in which we recognize the "klēthrē" growing on Ogygia — (Hom. od. v. 64), mentioned also by Theophrastus iii. 14: A. glutinosa was observed by Forskal, Sibthorp, Chaubard, and Fraas, from Constantinople to the Peloponnesus; by Hasselquist, as far as the Mediterranean border of Egypt; and is known to grow on Caucasus (Bieb.). Westward, the "alnus" is mentioned by Cicero, Vitruvius, Virgil, Juvenal, Silius Italicus, and Statius: A. glutinosa is included in the kinds of wood used by the ancient Irish in constructing crannoges (Troyon p. 458); is termed "a. rotundifolia glutinosa viridis" by Tournefort inst. 587; was observed by Desfontaines in Barbary; and is known to grow in Italy and throughout middle Europe as far as Sweden (Engl. bot. pl. 1508, Pers., and Wats.). Eastward from Caucasus, was observed by Gmelin throughout Siberia; by Thunberg, in Japan and called "iasia," its cone-like fertile aments sold for dyeing black. According to Lindley, "a decoction of the bark is employed as a gargle," and even as a substitute for cinchona.

Ninety-seventh generation. May 1st, 1067, mostly beyond youth: the Hindu astronomer Garga (Bentl. as. res. viii. p. 232); Jesse; the Greek "aoidoi" or bards, Phemius and Demodocus (Hom. od. i. 337, viii. 472, xiii., xvii., and xxii.); the Heraclid chieftain Antiochus, father of Phylas (Apollod. ii. 8. 3, and Pausan. ii. 4. 3).

1064 B. C. (= 1071 — 7 years in the Parian marble, "Demophon ruling Athens"), in Cyprus the city of Salamis founded by Teucer. The fact is mentioned by Aeschylus, Pindar, Strabo, and Pausanias; and confirmation is found in the name being that of Teucer's native island.

Ceterach officinarum of Europe and the adjoining portion of Asia. Called in Britain *stone fern* from growing on stone walls, but originally "spleen-wort" or "miltwaste" (Gerarde, W. Coles, and

Prior), in France "scolopendre" (Nugent), in Italy "cetracea" or "erba dorata" (Lenz), in Greece "skŏrpithi" or "hrusŏhŏrtŏn" (Sibth.); in which we recognize the "teucrion" discovered by Teucer in throwing away entrails from its adhering to and absorbing the spleen, — further identified by Pliny xxv. 20 with the "hemionion," growing according to Theophrastus ix. 18. 7 in stony mountainous places and resembling "skŏlŏpĕnthrŏ:" the "skŏlŏpĕnthriŏn" is mentioned by Andreas, Nicander ther. 684, and is identified in Syn. Diosc. with the "ēmiŏniŏn" or "splēniŏn" or the "asplēnŏn" of Dioscorides growing on shaded walls and rocks, its leaves resembling the "skŏlŏpenthra" animal, incised after the manner of "pŏlupŏthiŏu," green above and fulvous and hairy beneath: the account of swine feeding on "splenion" being destitute of a spleen is further mentioned by Pliny (a similar statement is attributed to Vitruvius by W. Coles): C. officinarum was observed by Sibthorp, Chaubard, and Fraas, frequent on walls and rocks from the Peloponnesus throughout Greece. Farther South, is called in Egyptian "askŏlŏvantĕriŏn" (Edw.); and was observed by Forskal on the mountains of Yemen. Westward, is termed "ceterach" by Matthæus Sylvaticus, "a. sive ceterach" by Tournefort inst. 544; is described also by Tragus f. 209; and is known to grow from Italy to Spain and throughout middle Europe as far as Britain (Engl. bot. pl. 1244, and Bory).

Acrostichum marantæ of the East Mediterranean countries. Possibly the "teucrion" in question, — Pliny's account being in part taken from the "ēmiŏnitis" of Dioscorides, growing in stony places, having neither stem fruit nor flower, but slender roots and a lunate leaf resembling that of "thrakŏntĕiŏ," dissolving the spleen; and in the added Synonyms identified with the "splēniŏn:" the best "asplenum" too, according to Pliny xxvii. 17, came from Crete: A. marantæ is termed "asplenium ramosum" by Tournefort inst. 544; and was observed by Sibthorp on Crete, Cyprus, and mount Athos.

1063 B. C. (= "8th year" after the death of Agamemnon, Hom. od. iii. 306), Mycenæ recovered by his son Orestes, the lawful Argive king. — Who after acquiring Argos and Sparta, became the most powerful chieftain of the Peloponnesus (Pind. pyth. xi. 24, Pausan. ii. 18, and others).

On the very day when Orestes was solemnizing the burial of his mother Clytemnaestra and of Aegisthus (Hom. od. iv. 365, and "8 years after the fall of Troy" Paus. iii. 22. 2), return of Menelaus to Sparta.

Physalis (*Withania*) *somnifera* of Arabia. Called in France "coqueret somnifère (Fée), in Greece "tragia" (Fraas), in Egypt "morgan" coral-fruited or "sakeran" inebriating (Del.), in Yemen "barde" or "ŏbab" or "uarak esschefa" (Forsk.), in Malabar "pevetti," in Tamil "amkoolang," in Telingan "peherroo," in Bengalee "amkoolang" (Drur.): and the "nĕpĕnthĕs" drug brought by Helen from Egypt and causing one to forget trouble — (Homer od. iv. 221): fragments of W. somnifera, unrolled from Egyptian mummies, were identified by Kunth (Lindl.); the plant was observed by Forskal, and Delile, in Egypt, its "leaves steeped in oil" applied "to inflammatory tumours" (Lindl.); again by Forskal, along the base of the mountains of Yemen. Farther North, the "halicacabum soporiferum" or "morion" or "moly" used in prophesying by soothsayers, and medicinally by Diocles, Evenor, and Timaristus, is according to Pliny xxi. 105 "etiam opio velocius ad mortem;" "halicacabi cortex" is prescribed also by Celsus v. 20: the "struhnŏs upnŏthĕs" is described by Theophrastus ix. 11. 5 as growing in clefts and on sepulchres, and having hairy leaves and bright red fruit; by Dioscorides, as growing in stony places near the sea, and the bark of its root placed in wine to procure sleep: W. somnifera was observed by Sibthorp in stony places on the seashore of Cyprus and Euboea; by Forskal, Chaubard, and Fraas, farther inland in other parts of Greece. Westward, is described by Clusius hist. ii. p. 85 (Spreng.); is termed "alkekengi fructu parvo verticillato" by Tournefort inst. 151; and is known to occur in Spain (Cav. ii. pl. 103, and Pers.). Eastward from Arabia, was observed by Graham in "the English burial ground, Bombay," growing also in "both the Concans and Guzerat;" by Hamilton, Roxburgh, and Wight, as far as Travancore and Bengal, its seeds used to coagulate milk (Drur.), its leaves according to Lindley "steeped in oil" and applied in a similar way as in Egypt. By European colonists, was carried to Mexico (Pers.).

1062 B. C. (= "10th year" after the fall of Troy, Hom. od. iii. and xxiv. 322), Telemachus son of Ulysses visiting Nestor at Pylos, and Menelaus at Sparta: before the close of the year, return of Ulysses to Ithaca

Triticum spelta of the Tauro-Caspian countries. Called in Britain, Holland, Denmark, Sweden, and Germany *spelt*, in Spain "espelta," in France "espeautre" (Prior) or "epeautre" (Nugent), in Italy "spelta" or "farro" or "grano farro" (Lenz): the "zĕia" mixed with barley and given to horses in the Peloponnesus — (Hom. od. iv. 41 to 594), mentioned also by Herodotus ii. 36, by Xenophon anab. v. 4. 16 as cultivated in Pontus, by Strabo v. 2. 10 and vii. 5. 4 as cultivated in Illyria and Umbria, by Mnesitheus of Cyzicus as cultivated in cold climates, by Theophrastus caus. iv. 6 as "pŏluhitŏna" many-husked, is referred here by writers: "zĕia" and "tiphē" changing into wheat is mentioned also by Theophrastus ii. 4. 1 and caus. viii. 9. 2, and the "zĕia thikŏkkŏs" two-seeded kind

by Dioscorides: T. spelta was observed by Fraas rare in Greece, and experimentally cultivated: farther South, seeds exhumed in Egypt and regarded as of the time of the Pharaohs, were sent by Ehrenberg to Heer (Lee's edit. Keller, 345), and the living plant was seen in Egypt by Belon. Westward, "far" called "semen" and anciently "adoreum," the only kind of grain eaten by the Romans for "three hundred years" (Verrius) is mentioned also by Varro, Virgil, Valerius Maximus, Columella, by Pliny xviii. 10 to 19 as kept for seed in its envelopes "in vaginulis suis," and the term "farinarius" mealman is employed by Cato: T. spelta occurs in the debris of the ancient lake-villages of Switzerland (Troyon), has been cultivated from ancient times by the Celts and Germans (Reynier p. 421), continues to be cultivated on mount Etna (Gemellar.) and throughout middle Europe (Morison pl. 6, Hall. helvet., and Pers.). In its wild state, was observed by Michaux in Persia near Hamadan, and by Olivier trav. iii. 460 on the Upper Euphrates (A. Dec.).

Cydonia vulgaris of the East Mediterranean countries. Called in Britain *quince*, by Chaucer "coine," in France "coing," in Spain "cotogna" (Prior), in Germany "quitte" (Grieb), in Italy "cotogno" or "melo cotogno" (Lenz), in Greece "kuthŏnia" (Sibth.), in Persia "betana" (A. Dec.), in Egypt "sefargel" (Del.): perhaps the original "mēlŏn" of the Greeks, the same word signifying sheep, agreeing in their woolly coating and aspect on distant hills, and "mēlinŏs" further signifying yellow: the "mēlŏn" was cultivated in orchards on Ithaca — (Hom. od. vii. 115), is mentioned also by Hesiod; "kuthŏnea" from Cydon in Crete or "kuthŏnia mēla" are mentioned by Stesichorus, Solon leg., Theophrastus iv. 8. 11, Dioscorides, Plutarch conj. pr. 1, and Athenaeus: C. vulgaris was observed in Greece by Forskal, Sibthorp, Chaubard, and Fraas, both cultivated and in wild situations; is known to grow also apparently wild in the Crimea and around Caucasus (Ledeb.). Farther South, is called in Egyptian "ōushē" (Kirch.); was observed by Abd-allatif, Schems-eddin, Delilē, and Clot-Bey, under cultivation in Egypt; by myself, the fruit in market at Mocha, and the seeds from the abundant mucilage substituted for flax-seed. Westward, the "cydonia" is identified by Pliny xv. 10 with the "malum cotoneum" of Cato vii. 2, and Varro; C. vulgaris is known to grow in wild situations in Italy and Sardinia (Bertol., Moris, and Lenz), is naturalized in Sicily, Algeria, Spain, and Portugal (Guss., Pers., Munby, and A. Dec.), and is besides cultivated as far as Britain. Eastward from Caucasus, is called in Hindustanee "safargal" or "bih" or "darakht-i-bihī," in Bengali "tahar phal" (D'roz.), and though having no Sanscrit name has been long cultivated in Cashmere and Northern Hindustan (Roxb., and Royle ill. himal.); the seeds are besides "imported in considerable quantities from Persia" and "used medicinally by the natives" (Little, and Graham). By European colonists, was carried to the environs of Bombay (Nimmo); to Japan (Thunb.); and to Northeast America, where it continues under frequent cultivation.

Rubus fruticosus of Europe and the adjoining portion of Asia. Called in Britain *bramble* or *blackberry* (Prior), in France "ronce" (Nugent), in Germany "brombeere," in Italy "rovo" or "more" or "russa de mora" (Lenz), in Greece "vatŏ" or "vatŏs" (Sibth.) and the fruit "mōuris" (Forsk.), in which we recognize the "vatōn" infesting orchards — (Hom. od. xxiv. 230), mentioned also by Pindar olymp. vi. 90, Salmonius, Theophrastus, Nicander, Dioscorides, and Athenaeus ii. 36: R. fruticosus was observed by Forskal, Sibthorp, and Chaubard, abounding from the Peloponnesus to the Dardanelles and Smyrna. Farther South, the "vatŏs" is identified in Syn. Diosc. with the "aimōiŏs" or "amĕtrŏs" of the Egyptians, and "aima titanōu" or "aima ivĕŏs" of the prophets: R. fruticosus was observed by Hasselquist in Palestine; by Delile, on the Mediterranean border of Egypt; and "rubus root from Alexandria" was found by Forskal mat. med. in the Egyptian drug-shops. Westward, the "vatŏs" is identified in Syn. Diosc. with the "mantĕia" of the Dacians, and "sĕntĕs" or "rōuvōum" or "mōra vatikana" of the Romans: the "rubus" is mentioned by Horace, Virgil, Columella, Pliny xxiv. 73, and the morum of the "rubetum" bramble-thicket by Ovid met. i. 104: R. fruticosus is termed "r. vulgaris" by Tournefort inst. 614; was observed by Lenz frequent in Italy, by Forskal near Marseilles, and is known to grow throughout middle Europe as far as Britain (Pers., and Engl. bot. pl. 715).

1054, June 20th (= 1073 y. 302$\frac{18}{36}$ d. — "20 years" of 1 Sam. vii. 2, "wheat harvest" of xii. 17 being determined by Usher to the end of May or beginning of June), Saul anointed king over the Israelites; with his power limited, especially in religious matters, and defined in a *written record* by the prophet Samuel (1 Sam. x. 25, xiii. 9, and xv. 24).

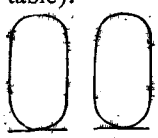
Thamyris, son of Philammon, composing poetry after the fall of Troy — (. . . .). He is mentioned in the addition to Homer il. ii. 595: some of his poetry continued extant in the days of Plato, and two lines have been preserved by Plutarch cohib. ira 5.

Delphinium ajacis of the Mediterranean countries. Called in English gardens *rocket larkspur* (Graham), in Germany "garten rittersporn" (Fraas, and Lenz), on Zacynthus "agriō linarŏ tōu vŏunōu" (Sibth.) or at Constantinople "kapŏutzinŏs," in Egypt "ajakabuh" (Forsk.) or "ayakbouh" (Del.), in which we recognize the "uakinthŏs" flower said to have sprung from the blood of a beautiful youth beloved by Thamyris and accidentally killed by Apollo — (Apollod. i. 3. 3): the name

of Ajax "aias" was substituted before the days of Euphorion, and Theocritus x. 28: the "uakinthōs" is termed "pōluthrēnōs" by Nicander 902; is identified in Syn. Diosc. iii. 77 with the "thĕlphiniōn;" and the "uakinthōs" inscribed with letters is identified by Pausanias i. 35. 4 and ii. 35. 5 with the "kōsmōsanthalōn" having coronary flowers: these letters according to Moschus iii. 5, and Ovid met. x. 211, are the Greek Αἰ, and Lucian xiv. p. 43 speaks of "ĕpaiazōnta" the dead: D. ajacis was observed by Forskal in gardens at Constantinople; by Sibthorp, in fallow ground from Bœotia to the Peloponnesus, its corolla according to Chaubard, distinctly bearing the letters AIA: farther South, was observed by Forskal, Delile, and Clot-Bey, in the gardens of Egypt. Westward, is described by Miller, and Linnæus; is termed "d. simplex" by Salisbury; is known to occur in Switzerland (Pers.), and the flowers according to Sprengel are often red. Eastward from Egypt, was observed by Wight, and Graham, in Tropical Hindustan, "in Deckan gardens" according to Lush, "where it is planted below orange and peach trees to keep down weeds;" was observed by Mason "exotic" in Burmah.

Scilla amoena of Eastern Europe and the adjoining portion of Asia. After the death of Ajax, according to the inhabitants of Salamis, a pale reddish flower made its appearance, smaller in all its parts than the "krinōu" and inscribed with letters like those on "uakinthōis" — (Paus.): the "uakinthōs" is mentioned by Homer il. xiv. 348 and od. vi. 231 as growing on mountains; by Theophrastus vi. 8, as vernal but continuing a long while flowering; by Dioscorides, as a span high and resembling in root and leaves the "vōlvŏ," the green stem more slender than the little finger and terminating in a curved raceme of purplish flowers, the root believed to delay puberty in boys: S. amoena is described by Rudbeck. ii. pl. 7; is termed "ornithogalum cæruleum byzantinum" by Tournefort inst. 380; was observed by Sibthorp in the Peloponnesus, by Chaubard, in ascending Taygetus; is known to grow also in Germany, Austria, and Russia (Jacq. austr. pl. 218), and according to Persoon its petals are marked at base with two white lines.

"1052 B. C. = 1st year of Tchao-wang, of the Tcheou" or Fifth dynasty — (Chinese chron. table).



In this year (= 1078 — "26 years" of both Maneth. tables), Smĕnthēs succeeded by Psōusĕnnēs, second king of the Twenty-first dynasty. Herhor siamun was succeeded by his grandson Pisem or Painetem; whose name has been found on contemporaneous monuments (Leps. k. pl. 43), though not enclosed in royal ovals. He married Rakamat of the Ramessid line, acquiring thus a kind of legitimate title to the throne — (Bisch).

The same year (= 1054 — "2 years" of 1 Sam. xiii. 1), war against the Philistines commenced by Saul.

Picridium Tingitanum of the Desert-margin and the shores of the Mediterranean. Called in Egypt "houeh" (Del.), in which we recognize the חוח hwh among which Israelites now concealed themselves — (1 Sam. xiii. 6), mentioned also in Prov. xxvi. 9, Cant. ii. 2, Isai. xxiv. 13, and Job xxxi. 4: P. Tingitanum, an herb with crowded leaves rejected by all kinds of cattle except donkeys, was observed by Forskal p. 143 not far from Cairo growing in the Desert; by Delile, near Alexandria; by Sibthorp, along roadsides in Asia Minor and on the seashore of Caria and Cyprus. Westward, is described by Hermann lugd. pl 659; is termed "S. tingitanus papaveris folio" by Tournefort inst. 475; and is known to grow on the seashore of Barbary (Pers.).

1041 B. C. (= 1091 — "50 years" after the death of Hyllus, Diodor. iv. 58, see also Oenom. in Euseb. pr. v. p. 210, and schol. Pind. isthm. vii. 18), Second invasion of the Peloponnesus by the Heraclidæ. Repelled, and their leader Cleodaeus, son of Hyllus, slain. (By some writers, the event is placed three years later, see below).

Genista monosperma of the Desert-margin, from the Atlantic to the Sinai Peninsula. Called in Egypt "rĕtam," in which we recognize the coals of רתם rdm alluded to by David while a fugitive. (Psalm cxx. iv): — Elijah on his way to Mount Horeb rested under a "rdm" (1 K. xix. 4), as is often done in the same region by modern travellers (Kitt. bibl. cycl.); the "rdm" is mentioned also in Job xxx. 4, and charcoal procured in the Sinai Peninsula from G. monosperma continues to be carried to Egypt (Forsk., and others): the living plant was observed by Forskal near Suez; by Delile, not far from Cairo growing in the Desert. Westward, is known to grow in Morocco, and in sterile situations in Portugal and Spain (Pers.; see also Atriplex coriacea).

1038 B. C. (= 1037 y. 240$\frac{2}{8}$ d. = 1005 y. 116$\frac{4}{8}$ d. + "40 years" of ten lunations of 1 K. ii. 11 and 1 Chron. xxix. 27 = 1053 y. 302 $\frac{1}{8}$ d. — "20 years" of ten lunations, in Josephus as read by Epiphanius, in Theophilus of Antioch, and in Clemens Alexandrinus), Saul succeeded by David, second Jewish king.

The same year (= 1071 — "33 years" of Castor and Eusebius), Demophon succeeded by his son Oxyntes, as king of Athens. (The Second invasion of the Heraclidæ, according to Eusebius ii. p. 300, is by some writers placed in the "first year of Oxyntes." See above).

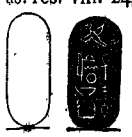
Ninety-eighth generation. Sept. 1st, 1034, mostly beyond youth: Ethan the Ezrahite (1 K. iv. 31, 1 Chron. ii. 6, and Psalm lxxxix), Heman (1 K. iv. 31, 1 Chron. ii. 6, vi. 33, xxv. 4, and 2 Chron. xxxv. 15), Chalcol or Calcol, and Darda or Dara (1 K. iv. 31, and 1 Chron. ii. 6), Asaph (1 Chron. vi. 39, xxv., and 2 Chron. xxxv. 15), the prophets Gad, and Nathan (2 Sam. xxiv. 11 to 18, and 1 Chron. xxix. 29), the compiler of the book of Yshr (quoted in Josh. x. 13, and which contained David's lamentation 2 Sam. i. 18 to 27): among the Greeks, the Heraclid chieftain Phylas, father of Hippotus (Oenom., and Pausan. ii. 4. 3), Tisamenus father of Autesion (Herod. iv. 147, and Pausan. ix. 8).

1032 B. C. (= 1037 y. $240\frac{2}{8}$ d. − "7 years" of ten lunations of 1 K. ii. 11), the Jewish seat of government removed by king David from Hebron to Jerusalem.

The art of *serpent-charming* mentioned in Psalm lviii. 5: the 𓆑𓏏𓈖 fdn or "deaf adder" that "stoppeth her ear," implying the ear-like appendages of the cerastes or *horned viper* (already noticed): — the "fdn" is also mentioned in Psalm xci. 13, and Isai. xi. 8.

Cassia aschrek of Tropical Arabia. Called there "aschrek" (Forsk.), and the 𓇋𓂋𓏏𓄿 azrh of Psalm xxxvii. 35 — may be compared: the "ischrik" is mentioned by Ascha, Firouzabadi, Abul Abbas Elhafits, Elgafaki, and is described by Ebn Baitar as growing "in Arabia" and having the "leaves of senna:" C. aschrek was observed by Forskal p. 86 on the Western margin of the Arabian Desert.

"1022 B. C. = the Ninth manwantara" among the Hindus — (Graha Munjari tables, and Bentley as. res. viii. 244).



1018 B. C. (= 939 y. 8 mo. + "9 + 6 + 9 + 4 years" of both Maneth. tables), Psousennes succeeded by Nephercheres, third king of the Twenty-first dynasty. The name of king Patenankh-Nebkanofre, apparently of this dynasty, has been found on the monuments (Leps. k. pl. 68); the order of succession not given.

"1017 B. C. = 36th year of Tchao-wang" (Chinese chron. table), beginning of the Twenty-eighth cycle.

1015 B. C. (= 1002 y. $116\frac{4}{86}$ d. + "12 years before the building of Solomon's temple" of Jos. a. j. viii. 3. 1, and c. A. i. 18), Abibalus (the earliest Phoenician king known, the first portion of the Lists of Dius and Menander Ephes. being deficient) succeeded by his son Hiram; of the age of ("53 — 34" =) nineteen, and who reigned "thirty-four" years. Hiram (according to Menander Ephes., and Jos.) built in Tyre the first temple to Hercules (Samson).

Hadad, king of the Syrians at Damascus, warring against David (Nicol. Damasc., in Jos. a. j. vii. 5. 1). The Syrians were defeated, and "David put garrisons in Syria of Damascus" (2 Sam. viii. 5 and 6).

1014 B. C. (= 989 y. 8 mo. + "9 + 6 + 9 years" of both Maneth. tables), Nepherheres succeeded by Amenophthis, fourth king of the Twenty-first dynasty. His name and that of his wife Hesiemkheb have been found on the bricks of Kheb in the Heptanomide — (Birch, and Leps. k. pl. 43).

1012 B. C. (Asclep., and Strab. xiii. 1. 3), death of Orestes, after planning the Aeolic Migration. He was succeeded as Argive king by his son Tisamenus.

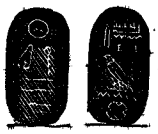
1011 B. C. (= 1071 — "60 years" of Thucyd. i. 12, and Strab. xiii. 1. 3, see also Cinaeth., and Pausan. ii. 18. 5), the Aeolic Migration assembled at Aulis under Penthilus another son of Orestes, and led by sea into the Troad. The expedition consisted in part of Boeotian fugitives from Arne; driven out by the Thessali, who after a long absence were re-occupying the country from this time called Thessaly.

On their way, the city of Orchomenus captured by the fugitives, and annexed to Boeotia — (Thuc. iv. 76, Strab. ix. p. 401, and Sm. geogr. dict.).

About this time (991 + "about 20 years" of Clinton i. p. 108, see also Apollod. ii. 8. 2), Third invasion of the Peloponnesus by the Heraclidæ. Repelled by the Argive king Tisamenus, and their leader Aristomachus son of Cleodaeus, slain.

Not earlier than 1010 B. C., the city of Cumæ South of the Troad founded by a Second expedition of Aeolian Greeks: assembled under Cleues and Malaus at the time of the First expedition, but delayed in sailing at Locris — (Strab. xiii. 1. 3). Aeolian settlements were extended on the North coast of the Troad along the Propontis as far as the half-way promontory by Archelaus or Echelaus, son of Penthilus and grandson of Orestes.

1006 B. C. (= 1037 y. $240\frac{1}{86}$ d. — "40 years" of ten lunations of 1 K. ii. 11, and 1 Chron. xxix. 27), David succeeded by his son Solomon, third Jewish king. Solomon is historically mentioned and called "king of Jerusalem" by the Greek writers Dius, and Menander Ephesius (Jos. a. j. viii. 3. 1, and c. A. i. 18).



1005 B. C. (= 998 y. 8 mo. + "9 + 6 years" of both Maneth. tables), Aměnŏphthis succeeded by Osŏhŏr, fifth king of the Twenty-first dynasty. The name of Hor Petukhanu has been found on contemporaneous monuments — (Leps. k. pl. 43).

"1004 B. C. = the beginning of the Cali Yug or Iron Age" among the Hindus (Graha Munjari tables, and Bentley as. res. viii. p. 244), Bhutagetu reigning not earlier than this date

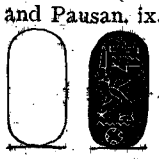
1003, December (= 1005 y. $11\frac{6}{8}$ d. — "4th year" of 1 K. vi. 1 and 2 Chron. iii. 2, Josephus c. A. i. 18 to ii. 2 giving "12th year of Hirom" and "612 years" after the exclusion of the Hyksos = 1002, = Jewish date of the Exodus 1312 — "40 — 8 — 32 — 18 — 62 — 20 — 20 — 7 — 33 — 22 — 3 — 3 — 20 — 40 — 40 — 4 years" of Euseb. i. p. 77 and ii. p. 300 = 372 years of ten months = 310 years of twelve months), the temple at Jerusalem commenced by Solomon. (The above period of "612 years" is also given by Theophilus of Antioch; with slight variation, by Clemens Alexandrinus; and in one instance, even by Eusebius. See Clint. i. p. 306 to 311).

The MNNKTT twkyym brought in Solomon's ships (1 K. x. 22, and 2 Chron. ix. 21) are referred by Hieronymus and Syriac and Hebrew authorities to the *peacock*. The bird has been already noticed; but the word "twkyym," I am informed by Rev. Mr. Hoisington is Tamil; the *Tamil language* therefore already in existence (see cinnamon).

In reference to the MNKMVV "almug trees" brought up the Red Sea in Solomon's ships, — I ascertained, that to this day, the wooden joists for supporting floors and the flat roofs at Mocha, are imported ready-hewn from Zanzibar.

"1001 B. C. = 1st year of Mou-wang, of the Tcheou" or Fifth dynasty — (Chinese chron. table).

Ninety-ninth generation. Jan. 1st, 1000, mostly beyond youth: the prophet Ahijah (1 K. xi. 29 and 2 Chron. ix. 29), Shimei of Bahurim (1 K. ii. 8, and 36 to 46); Rezon king of Damascus and Syria (1 K. xi. 24), Hezion grandfather of Ben-hadad (1 K. xv. 18), Abdemon of Tyre (Dius and Menand. Ephes. in Jos. c. A. i. 17): and among Greeks, the Heraclid chieftain Hippotus, father of Aletes (Oenom., and Pausan. ii. 4. 3), Autesion father of Theras and Argia (Strab. viii. p. 347, and Pausan. ix. 8).



999 B. C. (= 989 y. 8 mo. + "9 years" of both Maneth. tables, the Euseb.-Maneth. table also giving 1128 — "130 yrs" = 998), Osŏhŏr succeeded by Psinahĕs, sixth king of the Twenty-first dynasty. The name of king Petuhanu occurs on contemporaneous monuments — (Leps. k. pl. 43).

Stamped *leather* bands, according to Birch, have been found on mummies of the time of the Twenty-first dynasty. — Similar bands of *morocco* leather, stamped with the name of a king of the Twenty-third dynasty, were found on the mummy recently unrolled in Boston. I procured at Thebes pegged morocco *shoes*, saturated with bitumen and therefore taken from mummies; also, part of a sash of soft leather having the margin cut, as if by machinery, into lace-like fringe.

997 B. C. (= 1003 — "7 years" of ten lunations of 1 Kings vi. 38), completion of Solomon's temple.

992 B. C. (= 1169 — "92 — 85 years" of Diodorus in Euseb. i. 36, and Syncell.), "Third" change in naval dominion; leaving the Pelasgians, the "Empire of the sea" acquired by the Thracians. — Held by them "seventy-nine" years.

991 B. C. (= 1071 — "80 years" of Herodot. ix. 26, Thucyd. i. 12, Eratosth., and Apollod.; compare Hom. il. iv. 40 to 53, and a date probably marking the same event in Egyptian chronological tables, the Egyptian Chronicle giving 1413 — "194 — 228 years" = 991 = 1417 — "32 — 6 — 12 — 12 — 5 — 1 — 19 — 51 — 61 — 20 — 60 — 5 — 7 — 135 = 32 — 6 — 12 — 12 — 5 — 1 — 19 — 209 — 130 years" of the Afr.-Maneth. table), Fourth invasion of the Peloponnesus by the Heraclidæ, led by Temenus, Aristodemus, and Chresphontes, sons of Aristomachus; and Argive power overthrown: an event called also the "return of the Heraclidæ" or the "Dorian conquest." Previous attempts by land having failed, the attack was made by sea; and as the worship of Hercules came from Phoenicia (Herodot.), it is worthy of note, that Hiram and Solomon were now reigning. — Friendly relations between an Arab tribe and the Boeotians and people of the Peloponnesus, on account of Hercules, continued in the days of Agatharchides 95; and a continuous bond of friendship between the Lacedæmonians and Jews, is mentioned by Josephus a. J. xii. 4. 10 and xiii. 5. 8.

Cypselus son of Aepytus, reigning in Arcadia at the time of the Dorian invasion — (Pausan. viii. 5. 3. 4., and Clint. i. p. 92).

The worship of the Pelasgian Juno at Argos, and of the Pelasgian and Lelegian Diana in Laconia, adopted and continued by the Dorian settlers (Pausan. iii. 14. 2, iv. 4. 2, 31. 3, and Clint. i. p. xiii).

990 B. C. (= 989 y. 8 mo. = 332 + "6 + 4 + 6 + 20 + 21 y. 4 mo. + 6 + 120 y. 4 mo. + 163 + 44 + 44 + 44 + 49 + 130 years" of the Euseb.-Maneth. table = 975 y. 8 mo. + "14 years" of the Afr.-Maneth. table, see B. C. 991), Psinahĕs succeeded by Psōusĕnnēs II., seventh king of the Twenty-first dynasty. The name of king Pisem II. occurs on the temple of Khons at Thebes, with evidence that he was at the

same time a priest (Ghd. analect., and Leps. k. pl. 43); but according to Birch, he may belong earlier in the dynasty.

The same year = "12th year of Mou-wang" (of the Li-tai-ki-sse, and Pauth. p. 96), tribute brought by the Western barbarians to China, including large two-edged swords, and cloth by Lie-tseu called "ho-hoan;" according to Pauthier, of *asbestos*. — Cloth made of "asbeston" is mentioned by Anaxilaus, and Pliny xix. 4: a vein of "salamandre" from which cloth is made in the province of Ghinghintalas in Central Asia, is described by Marco Polo 60.

986 B. C. (= "7 + 13 = 20 years" of ten lunations of 1 Kings vi and vii, and 2 Chron. viii. 1), completion of Solomon's palace, or "his own house."

The נתר ndr of Proverbs xxv. 20 — is admitted to be *natron;* an impure carbonate of soda found at the bottom of lakes in Egypt and the neighbouring Desert countries: the "ndr" is also mentioned by Jeremiah ii. 22; the "litrōn" or "nitrōn" by Herodotus ii. 86, and Strabo; the "nitrum," by Columella, and Pliny; and one of the natron lakes of Egypt is described by Forskal p. xlv.

The 9792 zbwb of Ecclesiastes x. 1 — is clearly the *house fly*, Musca . . . . Swarms of flies "muiaŏn" are mentioned by Homer il. ii. 469; the "musca" and "muscarium" or fly-flap, by Varro, Cicero, and Martial. Eastward, the house-fly was observed by myself to be aboriginally introduced throughout the inhabited islands of the Pacific. By Polynesians too, the insect may have been first introduced into America: but numbers were doubtless brought by European colonists.

Sinapis Allionii of Syria and Egypt. A species of *wild mustard* called in Egypt "karilli" (Forsk.) or "qarilleh" (Del.), and the חרול hrwl of Proverbs xxiv. 31, — Job xxx. 7, and Zephaniah ii. 9, may be compared: S. Allionii was observed by Forskal around Alexandria; by Delile, an abundant weed in flax-crops, its leaves sold at Cairo and eaten as cress. As transported to Europe, is described by Jacquin hort. v. ii. pl. 168, and the younger Linnæus (Ait.).

Malus sylvestris of Europe and Caucasus. Called in Britain *apple*, in Anglo-Saxon "æpl" or "æppel," in Welsh "afal," in Sweden "æple," in Denmark "æble," in ancient Danish "epli," in Germany "apfel," in Old High German "aphol," in Lithuanian "obelis" or "obolys," in Lettonian "ahboli" (Prior), in Bretagne and Cornwall "aval," in Polish "gablon," in Russian "jablon," in Illyrian "jabluka," in Biscay "sagara" (Moritz.), in Italy "melo selvatico" or "meluggino" and the cultivated fruit "mela" or "pomo" (Lenz), in Greece "agriōmēlia" (Sibth.) or by the Turks Tartars and Hungarians "alma" (Moritz.), in Egypt "tiffah" (Del.), in which we recognize the תפוח dphwh of Proverbs xxv. 11, — Cant. ii. 3 and viii. 5, and Joel i. 12: M. sylvestris was observed by Forskal, Delile, and Clot-Bey, in the gardens of Egypt; by Forskal, under cultivation on the mountains of Yemen; and fruit was seen by myself at Mocha, worn in turbans for ornament, and as throughout the Arab countries hardly edible, chiefly prized for its odour. Farther North, the "glukumalon" of Sappho, and Theocritus xi. 39, is identified by Dioscorides with the "mēlimēla;" the "mēlea agria" is mentioned by Theophrastus caus. vi. 24, and Dioscorides; and M. sylvestris was observed by Sibthorp, and Fraas, on the mountains of Greece and seldom cultivated. Westward, the "pomum" is mentioned by Cato, by Cicero as pleasant to the sight and taste and also fragrant; a "sanguineus" blood-red variety is mentioned by Pliny xv. 15, also the blushing "appiana" obtained by Appius Claudius grafting on the "cotoneo," and its name continued in the French "pomme d'api" (Pers., and A. Dec.): to the time of Tacitus 28, the Germans lived partly on "agrestia poma;" piles or posts of wild apple occur in the earliest lake-villages of Switzerland, also intermingled larger fruit of a variety that appears to have been cultivated (Troyon p. 16 to 40, and Heer). M. sylvestris is termed "m. s. fructu valde acerbo" by Tournefort inst. 634; is known to grow wild in middle Europe and on Caucasus (Ledeb.), and is cultivated as far as Lat. 64° (A. Dec.). Eastward from Caucasus, is called in Sanscrit "seba" (Pidd.), in Hindustanee "seb" (D'roz.); was observed by Burns under cultivation in Scinde, by Royle at Cashmere, by Graham "in gardens Bombay" but "the Deccan suits better;" by Bunge in Northern China, and according to Loureiro is called in Chinese "pim-po." By European colonists, was carried to Northeast America, where it continues abundantly cultivated throughout our Northern and Middle States.

Solanum cordatum of Tropical Arabia. Called there "hadak" (Forsk.), and the פאה hthk of Proverbs xv. 19, — and Micah vii. 4, is referred to a prickly Solanum by Abulfadli, and Celsius: the "hadak" is mentioned also by A. A. Elnabati, by Ebn Baitar as growing in Yemen, abounding also in a garden at Mataria near Cairo: S. cordatum was observed by Forskal in Yemen, its stem somewhat prickly and berries as large as a pea.

Solanum sanctum of Nubia, Tropical Arabia, and as far as the Dead Sea. Called in Nubia "kaderambes" (Del.), in Yemen "beikaman" or "soræj sahan" (Forsk.); and the tree of Solomon — is identified by Hermes with the "siradsch elkuthrub," mentioned also by Eltamini, and Ebn Baitar: "thēnthra karpōphōra mēlĕais ĕmphĕrē" at the Taricheas lake, are mentioned by Strabo xvi. 2. 45; apples of Sodom fair to the eye but when plucked becoming dust and ashes, are men-

tioned by Josephus b. j. iv. 8, and Tacitus: S. sanctum was observed by Rauwolf 73 (Spreng.), and Hasselquist, in Palestine, is known to be "the species commonly met with at the Dead Sea" (Daub.); was observed by Delile around cultivated land at Syene; by Forskal p. 47, frequent in Yemen and the seeds with the surrounding pulp used to coagulate milk. Farther East, the Brahmans of the mountains in the time of Porphyrius abst. iv. 17 lived on cow's milk coagulated by herbs; and according to Forskal the berries of all species of Solanum have this property.

Rumex roseus of Egypt and the South side of the Mediterranean. Called in Egyptian "jĕjrĕ" (Kirch.), at the present day in Egypt "hommeyd" (Del.) or "hemsis" (Forsk.): the MNHEMP kmshnym of Proverbs xxiv. 31, — or "kymwsh" of Hosea ix. 6, or "kmwsh" of Isaiah xxxiv. 13, may be compared: the "hummadh elbakar" is mentioned by Ebn Baitar: R. roseus was observed by Forskal p. 77, and Delile, in sandy situations near Rosetta; by Sibthorp, on Cyprus; and by Desfontaines i. p. 320, in cultivated ground in Barbary.

985 B. C. = "17th year of Mou-wang" (Lie-tseu, Sse-ma-thsian, the Li-tai-ki-sse, and Pauth. p. 97), journey of Mou-wang to mount Kouen-lun and the "dominions of the mother of the Western king;" the first instance of a Chinese emperor visiting a foreign country.

About this time ("78 to 100 years after the fall of Troy," Eratosth., Crates, Clint. p. 359, and Sm. b. d.), Homer composing poetry. — The tomb of Homer is mentioned in the Scylacean periplus 58, and Strabo x. 5. 1, as on Īos: a small island whose proximity to Cadmean Thera is significant; in consideration of the like proximity of Hesiod's residence to Cadmean Thebes. In pronunciation "Īos" is readily converted into "Hiōs;" the claim to Homer by the inhabitants of the latter island, may therefore be compared.

The ΕΣΟΛΟΕ of Homer il. xviii. 414 and od. xx. 151 — is admitted to be *sponge*, Spongia officinalis: wiping with "spōggŏs" is mentioned by Aristophanes, Plato, Theopompus, Demosthenes, and Athenaeus; "spongia" and "spongiosa," by Cicero, and Pliny; and to the present day, the commercial demand for sponge, I am informed, is in great part supplied from the Mediterranean.

The ΘΕΙΟΝ of Homer il. xiv. 415 and od. xxiii. 50 — is admitted to be *sulphur:* "thĕĭŏn" is also mentioned by Araros, and Dioscorides; and "sulphur," by Vitruvius, Ovid, Seneca, and Martial.

That the Strait betweeen Italy and Sicily was known to Homer, is inferred by Polybius from the capture there of ΔΕΥΦΙΝΑΕ *porpoises* and ΚΥΝΑΕ *sharks* mentioned in od. xii. 95: — in the time of Polybius, the capture was effected from boats by means of a sort of *harpoon;* the wooden shaft falling off, leaving a long line attached to the infixed barb (Strab. i. 2. 15).

Calypso's isle, termed by Homer od. i. 50 "Ogugiē the navel of the sea" — is referred by Callimachus to "Gauthōn" or Gozo (Strab. i. 2. 37); and if the adjacent island of Malta be included, the epithet is at least applicable.

The ΚΑΣΣΙΤΕΡΟΙΟ kassitĕrŏĭo or tin mentioned by Homer il. xi. 25, xviii. 474 and 613, may have come from the Cassiterides: the source in the days of Herodotus iii. 115 of the tin brought to Greece. The Cassiterides are generally admitted to be the Scilly Isles near Cornwall; and as the Thracians held the sea, the report to Artemidorus (Strab. iv. 5. 6) of sacrifices after the fashion of Samothrace to Ceres and Proserpine "on an island near Britain," claims attention; especially, as the sacrifices were in all probability established by Greek traders. Plates of tin have been unrolled in mummies not much later than Homer: as in one at London (. . . . .); and in one belonging to the Twenty-third dynasty, at Boston. (See bronze.)

Papaver somniferum of the Mediterranean countries. Called in Britain *garden poppy* or *white poppy*, and its product *opium* (Prior), in Germany "mohnblume" (Grieb), in Italy "papavero" (Lenz), in Greece "paparŏuna" or "aphiŏni" (Fraas) or by the Turks "casch casch" (Sibth.), in Egypt "abou el-noum" (Del.); in which we recognize the ΜΗΚΟΝ of the gardens with drooping head likened by Homer il. viii. 306 to that of a dying warrior: — the juice of the "mēkŏnōs" extracted solely from its head, is mentioned by Theophrastus ix. 8. 2; "mēkŏniŏn" or "opien" is mentioned by Mnesidemus, is condemned by Diagoras, and Erasistratus, is according to Andreas adulterated at Alexandria and therefore not absolutely blinding, and the process of procuring it from the "mēkŏn kēpĕutē" or "papaveris sativi" is described by Iollas, Dioscorides, and Pliny xx. 76; the two varieties, white-seeded and black-seeded, are also distinguished by Dioscorides, and Galen: P. somniferum was observed by Sibthorp, and Fraas, cultivated and springing up spontaneously in the Peloponnesus. Farther South, the "mēkŏn" is called in Egyptian "nanti" (Syn. Diosc.) or "nĕman" or "phaki" (Kirch.) or "haulan" (Edw.): opium is mentioned by Rhazes, and Abdallatif; continues one of the principal productions of Egypt, and P. somniferum was observed under cultivation there by Delile, Clot-Bey, and myself; by Forskal, under cultivation on the mountains of Yemen. Westward, the "mēkŏn" is identified in Syn. Diosc. with the "papavĕr" of the Romans; Tarquinius Superbus in reply to an envoy seeking advice cut off "papavera in horto altissima" (Plin. xix. 53): P. somniferum is cultivated in Italy and middle Europe for ornament and the bland oil from its seeds, continues springing up spontaneously during several years as far even as Britain; and "P.

setigerum" growing throughout the Mediterranean countries is regarded by Moris, and A. Decandolle, as its indigenous state. Eastward from Syria, the cultivated form is called in Persian "kooknar" (Ainsl.), in Hindustanee "koknar" or "post" or "khash khash" (D'roz.), in Sanscrit "khaskhasa" (Pictet, and A. Dec.); is known to be "cultivated to a great extent in Malwa" in central Hindustan, and was observed by Graham "in gardens" around Bombay; by Bunge p. 4, in Northern China; by Thunberg, in Japan and called "iesoku," or usually "kes." By European colonists, was carried to Northeast America, where it continues a garden flower, and escaping from cultivation has been observed "near dwellings in some places" (A. Gray).

Cicer arietinum of the Mediterranean countries. Called in Britain *chick-pea* or *chiches* (Prior), in France "pois chiche" (Nugent) or "garvance," in Spain "garbanzo," in Illyrian "slanutak" (Mor.), in Germany "kicher," in Italy "cece" or "sisaro" (Lenz), in Greece "rōvizia" (Forsk.) or "rĕvithi" (Sibth.), in Egypt "melan" and the seeds "homos" (Forsk.); and the KVAMOΣ described by Homer il. xiii. 589 as rebounding from the winnowing-floor, — may be compared (a name by later generations transferred to a different plant): the seeds resembling a ram's head, may account for the prejudice of the Egyptians against eating "kuamōs" (Herodot. . . .), and from them adopted by Pythagoras: the "kriōs ĕrĕvinthōs" is mentioned by Sophilus, Diocles, Theophrastus viii. 5. 1, Athenaeus ii. 54, and as a second kind by Dioscorides: C. arietinum was observed by Forskal, Sibthorp, and Fraas, cultivated and springing up spontaneously from Crete to Constantinople; by Forskal, Delile, Clot-Bey, and myself, abundantly cultivated at the present day in Egypt; and is known to grow seemingly wild around Caucasus (Pallas, and Ledeb.). Westward, the "cicer" or "cicer arietinum" is mentioned by Horace, Columella, Pliny, Palladius, and Isidorus Hispalensis: C. arietinum is termed "c. sativum flore candido" by Tournefort inst. 389; was observed by Forskal under cultivation near Marseilles; is known to be abundantly cultivated in Italy and Spain, occurring besides in some instances seemingly wild (Pers., A. Dec., and Lenz). Eastward from Caucasus, the "ĕrĕvinthōs" was unknown in India when visited by Alexander (Theophr. iv. 4. 9): C. arietinum is called in Sanscrit "chennuka" (Pidd.), in Hindustanee "chenna," in Bengalee "chuna" or "bootkaley," in Tamil "kadalay" (Drury), in the environs of Bombay "chunna" or "hurburree" according to Graham and "extensively cultivated in some parts of the Deccan and Goozerat for feeding horses," the acid from all parts of the plant found by Christie journ. mad. 13 collected at Madras and used instead of vinegar in curries: was observed by Mason v. 467 "exotic" and cultivated "extensively by the Burmese," and called "ku-lu-bai." By European colonists, was carried to the West Indies, where it is said to continue under cultivation; and to Northeast America, where I have found the seeds well known in market in our Middle States.

Lupinus termis of the West Mediterranean countries. A *lupine* called in Egyptian "tharmōs" (Kirch.), at the present day in Egypt "termis" (Forsk.), in which we recognize the ΕΡΕΒΙΝΘΟΣ of Homer il. xiii. 589, its seeds rebounding in like manner from the winnowing floor, — mentioned also by Alexis, Polemon, Zeno (Athenaeus ii.), and according to Theophrastus viii. 3. 2 having the most woody stem of all kinds of pulse; "ĕrĕvinthōi lĕukōi" are mentioned by Euryphon 2 morb. 69, Diocles (Athen. ii. 44), and Theophrastus viii. 5. 1 to 6. 5, and the "ĕrĕvinthōs" is further distinguished by him, and Dioscorides, from the "kriōs ĕrĕvinthōs;" L. termis is no longer to be found in Greece, but continues extensively cultivated in Egypt, its seeds eaten, its stems furnishing fuel (Clot-Bey) and the best charcoal for making gunpowder (Forsk., and Del.). Farther East, the seeds imported into Hindustan are called in Hindustanee "turmis" or "baqillae misri," but have no Sanscrit name (Roxb., Pidd., and D'roz.), nor are lupines cultivated (Royle him. 194). Westward from Greece and Egypt, L. termis is known to grow to all appearance wild from Italy and Sicily to Sardinia, Corsica, and Southern Spain (Bertol., Guss., Moris, Boiss., and A. Dec.).

Ranunculus sceleratus of Europe and Northern Asia. Called in Egypt "zaghlil" and its bruised leaves used against "psoram" (Forsk. p. lv), in Italy "sardonia" or "sardoa" or "appioriso" (Targ.): sarcastic smiling ἐΑΡΔΑΝΙΟΝ is mentioned by Homer od. xx. 303, and convulsive imitation in a dying man perhaps already known to be caused by an herb: — the "sarthōniōs gĕlōs" is mentioned by Plato polit. i. 317; the "sardoa herba" by Virgil; the plant in question is described by Pausanias x. 17 as "sĕlinŏ"-like and growing chiefly about springs; is identified by Oribasius exc. 124, and in Delet. pharm. 14 with a kind of "vatrahiōu" that when eaten induces delirium and convulsive movements of the lips like laughter, giving rise to a proverb (compare Atropa belladonna). The fourth kind of "vatrahiōn" is described by Dioscorides as small, its flower "galaktizōn" (in one manuscript "hlōōthĕstĕrōn," and in Pliny "luteo"), and leaves flowers and tender stem applied externally to remove "psŏras:" R. sceleratus was observed by Forskal, and Sibthorp, in wet places around Smyrna and Constantinople and on mount Haemus; by Forskal, and Delile, as far as Cairo; is known to grow also in the Crimea and in Siberia. Westward, is described by Fuchsius . . . , and Gerarde . . . ; is termed "r. palustris apii folio lævis" by Tournefort inst. 291; and is known to grow throughout middle and Northern Europe as far as Sweden and Norway (fl. Dan. pl. 371, Pers., and Wats.).

Eastward from the Caspian, was observed by Roxburgh in Hindustan, and is known to occur in Anam (Dec., Steud., and Lindl.). Across the Atlantic, is known to occur from Lat. 67° (Hook.) to Kentucky (Short), and being semiaquatic possibly indigenous, observed by myself in the outskirts of towns from the Lower St. Lawrence to Philadelphia, and not in wild situations. Clearly by European colonists, was carried to Buenos Ayres and Valparaiso (Hook.). The leaves according to Lindley are "said to be used by beggars to produce ulcers."

Atropa belladonna of Europe and the adjoining portion of Asia. Called in Britain *dwale* or *deadly nightshade* (Prior), in France "belle-de-nuit" (Nugent), in Germany "tollkirsche," in Italy "belladonna" or "solano maggiore" (Lenz); and probably the real origin of the proverb in question: — the "struhnōs manikōs" of Theophrastus vii. 15. 4 and ix. 11. 6 is referred here by Scarlatus: the account by Dioscorides as far as the black flower and soft black berries like those of ivy, seems to correspond: A. belladonna was observed by Sibthorp on mount Athos. Westward, is described by Anguillara p. 90, Dodoens p. 456, and F. Columna phyt. pl. 12 (Spreng.); is termed "belladonna majoribus foliis et floribus" by Tournefort inst. 77; is rare even in Northern Italy (Lenz); but is known to grow in mountainous wooded situations as well as in waste places throughout middle Europe as far as Britain (Jacq. austr. iv. pl. 309, and Pers.). By European colonists, was carried to Northeast America, where it "has escaped from gardens in one or two places" (A. Gray). The berries according to Lindley are "sweetish" and very dangerous, inducing "intoxication accompanied with fits of laughter and violent gestures" and finally "convulsions and death:" the plant is used medicinally as narcotic, and "especially in producing a dilatation of the pupil when its infusion is dropped into the eye."

Phillyrea latifolia of the Mediterranean countries. Called in Italy "fillirea" (Lenz), in Greece "aglanthinia" or "phullika" or "phulliki" (Sibth.), and the ΦΥΛΙΗ shrub of dense woods described by Homer od. v. 477, — is referred here by Hogg: the "philurēa" is enumerated by Theophrastus i. 9. 3 as evergreen; the "phillurēa" of Dioscorides large as the "kuprō" with leaves broader than those of the olive and fruit as in "sbinō," is referred here by writers: and the "utm" of Elbekri, Gafeki, Ebn Joljol, and Ebn Baitar, is referred here by Sontheimer: P. latifolia was observed by Sibthorp, Chaubard, and Fraas 93, frequent from the mountains of Crete and the Peloponnesus throughout the Greek islands; and by Clot-Bey, in the gardens of Egypt. Westward, is figured by Matthioli pl. (Spreng.), and Clusius hist. pl. 51; is termed "ph. folio leviter serrato" by Tournefort inst. 596; was observed by Hogg "not uncommon in the woods of Sicily" (Hook. journ. b. 1834); and is known to grow wild in Italy and other parts of Southern Europe (Pers., and Lenz).

Rhamnus alaternus of the Mediterranean countries. Called in Italy "alaterno" (Lenz), in Greece "kitrinōxulōn" (Sibth.) or "phulliki" or on Crete "elaitrinōs?" (Fraas), and possibly the shrub in question: — the "philukē" described by Theophrastus iii. 3. 3 to v. 7. 7 as an evergreen shrub always leafy, is referred here by Sprengel: R. alaternus was observed by Sibthorp, Chaubard, and Fraas, frequent in bushy tracts in company with the preceding and the wild olive from Zacynthus to Attica. Westward, the "alaternus" is mentioned by Columella vii. 6. 1; by Pliny xvi. 45, among trees bearing no fruit and never planted, regarded as condemned by religion and unpropitious: R. alaternus is described by Clusius hist. i. pl. 50; is termed "alaternus" by Tournefort inst. 595; and is known to grow in Italy, Spain, and on the Balearic Islands (Pers., and Lenz).

Cynodon dactylon of Tropical Eastern Asia. A grass called in Italy "gramigna" or "gramegna" or "capriola" (Lenz), in Greece "agriatha" (Sibth.), in Egypt "nedjil" or "nisjil," in Yemen "ubal" or "sabak" (Forsk.), in Egyptian "makrōsthēn" (transl. Sept.) or "anōuphi" (Syn. Diosc.); in which we recognize the ΑΛΦΟΣΤΙΝ of Homer od. vi. 90, — springing up on the paternal estate of Aristodemus and terminating through his suicide the First Messenian war (Plut. superst. 8), figured by Polygnotus (Paus. x. 31), when in flourishing condition according to Democritus one of the signs of water (geopon. ii. 6), termed "ĕilitĕnēs" creeping by Theocritus xiii. 42, mentioned also by Aristotle an. v. 19, Theophrastus, Polybius, Diodorus i. 43, Athenaeus viii. 4, Apuleius, and Paulus Aegineta: C. dactylon was observed by Forskal, Sibthorp, Bory, and Fraas, frequent from the Peloponnesus to Tenedos, its roots as in the days of Dioscorides employed in decoction as diuretic (Walp. trav. p. 432); is known to occur in waste ground along the Taurian mountains (Bieb.). Westward, the "agrōstis" or "amaxitis" or "aigikōn" is identified in Syn. Diosc. with the "iĕval" of the Numidians, "aparia" of the Spanish, and "gramĕn" of the Romans; the "corona graminea" was bestowed on L. Siccius Dentatus tribune in 454 B. C. and victor in one hundred and twenty battles, subsequently on others enumerated by Pliny xxii. 5; the "gramen" is mentioned also by Livy, Columella vi. 31, and as "vulgatissimum" by Pliny xxiv. 118: C. dactylon is described by Dalechamp, and Lobel; is termed "gramen dactylon radice repente sive officinarum" by Tournefort inst. 520; was observed by Forskal on Malta and near Marseilles; is known to occur also in Barbary and along the Atlantic as far as Cornwall in Britain (Pers., Dec., and Wats.). Farther South, the "agrōstis" is enumerated by Agatharchides as growing in the countries along the Red

Sea: C. dactylon was observed by Forskal, and Delile, in Egypt, employed according to Clot-Bey especially for feeding cattle; by Forskal in Yemen; and is known to occur on Madagascar, the Mauritius Islands, and in Austral Africa (Boj.). Eastward, is called in Bengalee "doorba," in Telinga "gericha," in Tamil "arugam-pilloo," by English residents *huriallee grass* (Drury); was observed by Graham around Bombay and on the Deccan "abundant everywhere and in general use for feeding cattle," and considered by the brahmins "sacred to Ganesha;" by Retz, and Roxburgh, in other parts of Hindustan, according to W. Jones as. res. iv. 242 "the sweetest and most nutritious pasture for cattle;" is enumerated by Mason as indigenous in Burmah; is known to grow also in China and on Luzon (Kunth); but in Australia, I found its progress inland at least encouraged by residents. Farther East, C. dactylon was observed by myself on New Zealand and throughout the rocky clusters in the Pacific, usually along the seashore, but to all appearance introduced by the ancient Polynesians into the Hawaiian Islands. Westward from Europe, may have drifted without human aid to the American shore, but has become "troublesome in light soil," occurring in cultivated and waste ground from Lat. 41° to Georgia, Natchez, and the West Indies (Walt., Pursh, Ell., Nutt., Chapm., and A. Gray).

981 B. C. (= 1002 y. 116$\frac{4}{86}$ d. + "12 — 34 years" of Phoenician annals in Menand. Ephes., and Jos. c. A. i. 18), Hiram succeeded as king at Tyre by his son Baleazar; thirty-six (= "43 — 7") years old, — and who reigned "seven" years.

In or about this year (1 Kings x. 4, and 2 Chron. ix. 3), the queen of Sheba visiting Jerusalem. (She appears to have come from the Abyssinian coast, and is claimed by the Abyssinians as one of their queens).

Brucea antidysenterica of Abyssinia. A shrub growing especially in the valleys of the low country and called "wooginoos," — considered a most valuable remedy in dysentery and severe cases of diarrhœa (Bruce trav. v. pl. 69, and Grev.). Unknown as a remedy in Europe (the "brucine" and "brucea bark" of druggists belonging to Strychnos nux-vomica, according to Guibourt, and Lindley). Botanical specimens have however been brought to Europe, and are described by Miller pl. 25, and L'Heritier pl. 10.

Hagenia Abyssinica of Abyssinia. A Meliaceous? tree twenty feet high and called cusso; indigenous in the high country, — planted besides near churches, and considered a specific against worms (Grev.).

Rosa Abyssinica of the mountains of Abyssinia. — Probably the "sweet-brier" observed by Bruce on the Taranta mountains (Grev.).

Brayera anthelmintica of Abyssinia. A Rosaceous tree called there "cabotz" as early perhaps as this date: — its dried flowers sold in small packets, and according to Brayer are an effectual remedy for tape-worm when all other medicines have failed (Kunth, and Lindl.).

Cordia Africana of Abyssinia. An ornamental tree called "wansey" and about twenty feet high; — to which divine honours are paid by the Seven tribes of Galla, their representatives meeting under the shade to choose a king; who is crowned with a chaplet from this tree, and has carried before him wherever he goes a sceptre of the wood: C. Africana was observed by Bruce, and Salt, "common in Abyssinia and planted in all the towns" (Grev.). And from transported specimens, is described by Lamarck (Steud.).

980 B. C. (= 1071 — "33 — 12 — 1 — 8 — 37 years" of Castor in Euseb.). Not later than this date, the formal change of Dynasty at Athens, Thymoetes, son of Oxyntes and the last of the Theseidæ, succeeded by Melanthus of the fifth generation from Neleus. Melanthus, driven out of his kingdom of Messenia by the Dorians, found refuge with a large body of followers in Athens, and was there elected king (Herodot. v. 65, Strab. ix. p. 393, and Paus. ii. 18. 7).

976 B. C. (= 975 y. 8 mo. = 339 + "6 + 4 + 6 + 20 + 21 y. 4 mo. + 6 + 120 y. 4 mo. + 42 + 25 + 17 + 6 + 45 + 8 + 6 + 7 + 12 + 44 + 44 + 44 + 49 + 35 + 9 + 6 + 9 + 4 + 41 years." of the Euseb.-Maneth. table, the Afr.-Maneth. table giving 1078 — "26 — 46 — 4 — 9 — 6 — 7 yrs" = 978), accession of Sĕsŏghŏsis, Sĕsŏghis, or Shishak, head of the Twenty-second dynasty. The name of king Sesonk occurs on a stela at Silsilis, and on moveable articles — now in the "museums of London, Paris, and Berlin" (Glid. analect.).

The great unfinished hall of the temple at Karnak commenced by king Sesonk.

Jeroboam fleeing to Shishak in Egypt before — the death of Solomon (1 K. xi. 40 and 2 Chron. x. 2).

974 B. C. (= 981 — "7 years" of Phoenician annals in Menand. Ephes., and Jos. c. A. i. 18), Baleazar succeeded as king at Tyre by his son Abdastratus; twenty (= "29 — 9") years old, and who reigned "nine" years.

973 B. C. (= 1005 y. 116 d. — "40 years" of ten lunations of 1 K. xi. 42 and 2 Chron. ix. 30), Solomon succeeded by his son Rehoboam, fourth Jewish king.

After "three days" (1 K. xii. 5 to 20) division of the Jewish nation; Jeroboam becoming king over the revolted portion.

To render himself secure, Jeroboam next sought to make a distinction in religious worship; and "ordained a feast in the eighth month, on the fifteenth day of the month, like unto the feast that" is "in Judah:" called also "the month which he had devised of his own heart" (1 K. vi. 38, and xii. 26 to 33). In ingrafting a calendar *year of twelve lunations* upon the Mosaic institutions, the new festival would be initiated in ("10" + 2½ =) the thirteenth month: — which may perhaps explain the circumstance of the "eighth" month "bwl" having become the Third month of the Muslims.

971 B. C. (= 1071 + "about 100 years" of Clint. i. p. 96 and 134), the Minyae expelled from Lemnos and the island occupied by Pelasgians from Attica. — Pelasgians continued on Lemnos in the days of Darius (Herodot. iv. 145, v. 26, and Pausan. vii. 2).

Not earlier than this date (Graha Munjari tables, Puranas, and Bentley as. res. viii. p. 244), Dipticetu reigning in Hindustan.

969 B. C. (= 972 y. 357⅜ d. — "5th year" of Rehoboam, 1 K. xiv. 25 and 2 Chron. xii. 2), capture of Jerusalem by Shishak king of Egypt. A record of this event, with an accompanying portrait of king Sesonk, has been discovered by Champollion on the walls of the temple at Karnak.

One hundredth generation. May 1st, 967, mostly beyond youth: the prophets Shemaiah, and Iddo (1 K. xii. 22, 2 Chron ix. 29, xii. 15, and xiii. 22).

In the reign at Athens of Codrus son of Melanthus (Euseb., and Clint.), irruption into Asia Minor of Amazons and Cimmerians.

965 B. C. (= 974 — "9 years" of Phoenician annals in Menand. Ephes., and Jos. c. A.), at Tyre, Abdastratus slain by the four sons of his nurse; and succeeded by the eldest of them, — who reigned "twelve" years.

962 B. C. = "30th year after the Return of the Heraclidæ" (of Didym., and Clint.), capture of Corinth by the Heraclidæ or Dorians under Aletes; who established himself there as king (Diod., and Paus. ii. 4. 3).

961 B. C. = "about thirty years after the Return of the Heraclidæ" (of Clint. i. p. 131 and 140, see Herodot. iv. 147, and Strab. viii. p. 347), Eurysthenes and Procles, twin sons of Aristodemus and Argia, having attained majority, installed as kings of Sparta. Their uncle and guardian Theras retiring with a colony to the island of Calliste, from him called "Thera." Theras and his sister Argia were of Cadmean descent, in the "sixth" generation from Oedipus (Callim. h. Ap. 74, and schol. Apollon. iv. 1764).

959 B. C. (= 1071 — "33 — 12 — 1 — 8 — 37 — 21 years" of Castor in Euseb. i. p. 134 = 931 + "8th + 20 years" in Hieronym. vers., see also Conon 26), Codrus king of Athens slain in battle against the Dorians; under the belief, that his own death would cause the defeat of the enemy. He was succeeded by his son Medon, who by a change in the form of government, was made archon for life.

After the war with Codrus (Strab. ix. p. 393), the city of Megara not far from Athens, occupied by the Dorians.

"958 B. C." (according to astronomers) the date implied in Hesiod's remark respecting the rising of the Pleiades. Hesiod of Ascra in Boeotia composing poetry in the Fifth or Iron Age, after the conclusion of the Fourth containing the men who fought at Thebes and Troy (op. 155 to 175). His father may have taken part in founding Aeolian Cuma, but he himself had never crossed the sea, except only as far as Euboea (op. 219 to 648).

Viscum album of Europe and the adjoining portion of Asia. Called in Britain *mistletoe*, in Anglo-Saxon "mistiltan" (Prior), in Germany "mistel" (Grieb), in France "gui" (Nugent), in Italy "visco albo" (Lenz), in Greece "ixia" or in Laconia "mĕlla" (Sibth.), in which we recognize the "mella" growing on the oak according to Hesiod — (Plin. xvi. 11, compare Theophrast. iii. vii. 5): the "upheăr" of the Arcadians growing on pines and spruces, is distinguished from the "ixia" by Theophrastus caus. ii. 17. 1 and 2; is mentioned also by Pliny xvi. 93, and Hesychius; V. album was observed by Sibthorp, Chaubard, and Fraas, on mountains as far as the Peloponnesus growing on Abies picea and sometimes on the oak; by Kotschy, on spruces on the Taurian mountains (Lenz). Westward and Northward, the druids of Gaul when in rare instances the "viscum" was found on the oak, collected it with religious rites on the "sixth day of the moon," the beginning of their months and years (Plin.): V. album is termed "v. baccis albis" by Tournefort inst. 610; is known to grow in Italy and throughout middle Europe as far as Britain (Pers., Engl. bot. pl. 1470, and Pollini).

Loranthus Europæus of the East Mediterranean countries and Siberia. A kind of *mistletoe* called in Italy "visco quercino" (Lenz), in Greece "ōxōs" (Belon, and Sibth.) or "ixōs" (Fraas); possibly the "viscum" growing according to Hesiod together with the preceding on the oak — (Plin.): the "ixōu" whose leaves are prescribed in Int. affect. 93, is mentioned also by Aristotle, and Athenaeus; the "ixia" called in Euboea "stĕlis" and distinguished by its fruit, is described by Theophrastus caus. ii. 17 as growing on the oak, terebinth, and many other trees, and the term "ixōu"

is applied to its juice; "ixŏs" is also mentioned by Dioscorides as the product of a shrub growing on the oak: L. Europæus was observed by Belon i. 59, Sibthorp, and Fraas, from the Peloponnesus to mount Athos, and by Chaubard growing on the oak; by Jacquin pl. 30, on oaks in Austria, is known to grow also in Siberia, its berries yellowish (Pers.). Westward, "viscus" birdlime is mentioned by Plautus, and Juvenal, and the plant producing it by Varro vii. 7, Virgil, and Pliny: L. Europæus is known to grow in Italy (Pollini, and Lenz); *bird-lime* is made from its berries there as well as in Greece, and its wood is sold in the drug-shops under the name of "viscum quernum" (Spreng., and Lenz). Farther South, "viscum quercinum" was found by Forskal employed medicinally in Egypt.

Boletus igniarius of Northern climates. A kind of *spunk* or woody mushroom called in Germany "zunderschwamm" or "feuerschwamm" (translated by Grieb German tinder and "schwammbuchse" tinder-box), in Italy "lingua cattiva" or "esca" (Lenz), in Greece "ĕska" (Fraas) or "iska" (Sibth.), and possibly the "viscum" attributed to Hesiod by Pliny, and the Aeolic "viskŏs;" the verb "iskŏ" to assimilate, seems also connected with this plant: — "mukētĕs" growing on oaks on and near the roots, are mentioned by Theophrastus iii. 7. 5; B. igniarius was observed by Sibthorp in the Peloponnesus, and by Fraas on oaks. Westward, "ignis esca" is mentioned by Livy; B. igniarius is termed "agaricus pedis equini facie" by Tournefort inst. 562; is known to grow in Italy and throughout middle and Northern Europe (Bull. h. fr., and Sowerb. pl. 132).

Marsdenia erecta of the East Mediterranean countries. An Asclepiaceous plant called in Greece "psŏphiŏs" (Fraas); and the "ippŏmanĕs" of Hesiod — is identified through Syn. Diosc. with the "apŏkunŏn," described by Dioscorides as a shrub with long tough branches and pod-like fruit, its leaves full of yellow juice and mixed in bait to kill dogs, foxes, wolves, and panthers, and referred here by writers: in the added Synonyms the "apŏkunŏn" is identified with the "kunŏmŏrŏn" or "kunŏkramvē," and under these three names is mentioned by Galen fac. simpl. vi. p. 835: M. erecta was observed by Sibthorp, Chaubard, and Fraas, frequent from the Peloponnesus throughout Greece; is known to grow also in Syria (Pers.). Westward, the "paralusis" of the prophets, or "kunŏkramvēn" or "kunŏktŏnŏn" or "kunaghŏn" or "parthaliaghĕs" is further identified in Syn. Diosc. with the "vrassika rōustika" or "kanina" of the Romans; the account of the "apocyni" by Pliny xxiv. 58 seems in part taken from Dioscorides, but he adds medicinal uses of the seeds: M. erecta is described by Matthioli p. 774 (Spreng.); and is termed "apocynum folio subrotundo" by Tournefort inst. 92. In experiments made in 1580, the seeds according to Clusius hist. i. p. 126 proved fatal to dogs. (See Doronicum pardalianches and Delphinium peregrinum).

Scolymus Hispanicus of the Mediterranean countries. Called in Germany "golddistel" (Lenz), in Greece "kĕphalaggathŏ" (Forsk.) or "skŏlumvrŏs" or "skŏlumŏs" (Sibth.), in Egypt "lælech" (Forsk.); in which we recognize the ΣΚΟΥΜΟΣ of Hesiod op. 580 flowering in the hot season, — mentioned also by Alcæus, Eratosthenes, Xenocrates; by Numenius, and Athenæus ix. 12, as edible; termed "phullakanthŏs" by Theophrastus vi. 4, its edible root becoming milky; and according to Dioscorides, the young plant eaten as greens: S. Hispanicus was observed by Belon i. 18, and Sibthorp (Walp. p. 245), eaten in Greece; and by Forskal, Sibthorp, and Chaubard, abounding from the Peloponnesus to Constantinople. Farther South, is called "hnŏus" in Egyptian (Syn. Diosc.); and was observed by Forskal p. 145, and Delile, around Alexandria and Cairo. Westward, the "skŏlumŏs" is identified in Syn. Diosc. with the "stŏuvŏulŏum" of the Romans; is described by Pliny xxi. 56 as flowering late and during the remainder of the season successively, its leaves losing in drying the power of pricking: S. Hispanicus was observed by Clusius hist. ii. p. 153 in Spain, the root and young plant eaten; by Desfontaines, in Barbary; is termed "s. chrysanthemus" by Tournefort inst. 480; is known to grow also in Italy and Southern France (Lam. fl. fr., and Pers.).

Scolymus maculatus of the Mediterranean countries. Called in Greece "asprŏagkatha" or "skŏlumvrŏs" (Fraas), in Egypt "lehlah" (Del.), and included perhaps in the "skŏlumŏs" of Hesiod, — for the young leaves were found by Fraas eaten in Greece: S. maculatus was observed by him, and Sibthorp, from Zacynthus throughout Greece and the Greek islands to Smyrna; by Hasselquist, in Palestine; and by Delile, in Lower Egypt. Westward, is included by Clusius with the preceding species, and both observed in Spain, as appears from his figures (Spreng.); is distinguished as "s. chrysanthemus annuus" by Tournefort inst. 480; and is known to grow in Italy, Barbary, Portugal, and Southern France (Pers., and Lenz).

Alcea rosea of the East Mediterranean countries. Called in Britain *rose mallow* (Nugent) or *hollihock*, by Huloet dict. "holy hoke," by old writers "alcea hortulana" (Prior), in France "passe-rose" (Nugent), in Greece "mŏlŏhē ēmĕra" or "thĕnthrŏmŏlŏhē" (Sibth.), and possibly included in the ΜΑΛΑΧΗ of Hesiod op. 41: — the garden kind is mentioned by Diphilus Siphnius (Spreng.); and "malahai" perishing in the garden, by Moschus iii. 106: A. rosea was observed by Forskal, Sibthorp, and Chaubard, from the Peloponnesus and mountains of Crete to the Dardanelles, cultivated besides for its flowers which are used medicinally. Westward, the "malache" or "moloche" whose

top follows the sun, is mentioned by Columella x. 247: the "malahē kēpĕutē" is identified in Syn. Diosc. with the "malva ōrtēnsis" of the Romans: A. rosea is termed "malva rosea folio subrotundo" by Tournefort inst. 94; was observed by Forskal in gardens on Malta; and is cultivated for ornament from Spain throughout middle Europe (Cav. ii. pl. 28 f. 1, and Pers.). Eastward from Syria, was observed by Graham "in gardens" near Bombay; by Mason, "exotic" in Burmah; by Kaempfer, and Thunberg, cultivated everywhere in Japan and called "fujoo," or usually "kibatsisso." By European colonists, was carried prior to 1669 (Joss.) to Northeast America, where it continues a favourite garden flower.

Alcea ficifolia of the East Mediterranean countries. A larger kind of *hollihock* often confounded with the preceding, but called in Egypt "khatmyeh" (Del.) and agreeing better with the "malahē" of Hesiod, — and "malahē kĕpĕutē" of Dioscorides more suitable for food, in the added Synonyms identified with the "anthĕma" of Pythagoras, "thiathĕsma" of Zoroaster, and "aigōs splēn" or "ōura muōs" of the prophets: the "malahē" is described by Theophrastus i. 3. 2 as growing as tall and big as a spear in six or seven months: A. ficifolia was observed by Hawkins, Sibthorp, and Chaubard, wild in Crete and the Peloponnesus; is known to grow also in Siberia (Pers.). Farther South, is called in Egyptian "hŏkōrtēn" (Syn. Diosc.) or "katmis" (Kirch.); "malvas" in Arabia said to furnish a staff in the seventh month, are mentioned by Pliny xix. 22; the "khatmi" is mentioned by Rhazes, Avicenna, and Abd-allatif; and A. ficifolia was observed by Forskal p. lv and mat. med., and Delile, under cultivation in Egypt, its leaves cooked and eaten, and leaves and flowers imported besides from Asia Minor for medicinal use. Westward, the "malope" of the Greeks is identified by Pliny xx. 84 with the larger "malva sativa:" A. ficifolia is termed "a. rosea hortensis maxima folio ficus" by Tournefort inst. 98; and is cultivated for ornament from Spain throughout middle Europe (Cav. ii. pl. 28. f. 2). By European colonists, was carried to Northeast America, where it continues in gardens, accompanying the preceding species.

Phaseolus max of Tropical Arabia and Hindustan. Erect (Pers.), and called in Nubia "kacheryngy" (Del.), in Yemen "koschari," (Forsk.), in Palestine "maseh" (Rauwolf); in which we recognize the ΜΑΣΑ of Hesiod op. 590, — Herodotus, Achaeus, Cratinus, Aristophanes acharn. 835, Xenophon, and the "mikrōn phasiōlōn" from Alexandria mentioned by Alexander Trallianus vii. 2. 8: the "maseh" or "maddj" is mentioned by Maserjawia, Rhazes, Avicenna, Serapion, and Ebn Baitar, is identified by Ebn Batuta with the "koshira," came according to Ebn Djoldjol from Yemen where it is called "aktan," and in the days of Abd-allatif was not sown in Egypt but was imported by druggists from Syria; "Dolichos" seeds imported from "Aleppo" and called "maseh," were seen by Forskal mat. med. in the drug-shops of Egypt: P. max is termed "pisum indicum" by Plempius; is well known in Persia (Del.); was observed by Rauwolf, and rabbi Schwarz ii. 2, under cultivation in Palestine; by Delile, under cultivation at Syene, and by Forskal p 214 also in Yemen. Eastward, the "macha" or "masha" is mentioned in the Institutes of Manu ix. 39, and by D'hanvantari, and Susrutas iv. 6 to 35: the black-seeded variety called *black gram* is less esteemed in Hindustan (Drur.), but according to Crawfurd, and Mason, v. 467, is one of the most common pulses of Burmah. P. max is described by Rumphius v. pl. 140 (Pers.); is perhaps the erect species seen by Blanco on the Philippines, in many places the principal food of the natives, and called in Tagalo "balatong" or "mongos." (See P. mungo).

"957 B. C. = 45th year of Mou-wang" (Chinese chron. table), beginning of the Twenty-ninth cycle.

956 B. C. = "21st year Sesonk;" the latest date in his reign found on the monuments — (Leps. k. tab. p. 19).

The same year (= 972 y. $357\frac{5}{6}$ d. — "17 years" of 1 K. xiv. 21), Rehoboam succeeded at Jerusalem by his son Abijah or Abijam, fifth Jewish king.

Allium roseum of the Mediterranean countries. Called in Greece "agriŏ krĕmmuthi" (Sibth.), the equivalent of חבצלת hbtzld of Cant. ii. 1, — and Isaiah xxxv. 1: A. roseum was observed by Delile on the Mediterranean border of Egypt near Alexandria; by Sibthorp, and Chaubard, in Crete and the Peloponnesus. Westward, the "allium in arvis sponte nascens" or "alum" is mentioned by Pliny xix. 34; A. roseum is described by Magnol xi. pl. 10, and Rudbeck; is termed "a. sylvestre sive moly minus roseo amplo flore" by Tournefort inst. 385; and is known to occur in cultivated ground in Italy, Barbary, and Southern France (Desf., Tenore, and Pers.).

Narcissus Orientalis of Syria and Palestine. The חבצלת hbtsld of Canticles ii. 1, — and Isaiah xxxv. 1, is referred here by Sprengel: N. Orientalis was observed by Chateaubriand trav. ii. 122 abounding in the district of Sharon, between Joppa and Caesarea. Transported to Europe, is described by Rudbeck elys. ii. p. 52 (Pers.).

Juglans regia of Persia and the Himalayan mountains. Called in English gardens *walnut*, in France "noix" (Nugent), in Germany "wallnuss," in Italy "noce" (Lenz), in Greece "karuthia" (Fraas), in Egypt "gios" (. . . .), in which we recognize the אגוז agwz of Canticles vi. 11, —

"jius" of C. E. Luka, and "jauwz" of Ebn Baitar: the "karua" is mentioned by Epicharmus, Sophocles, and Philyllius (Athen. ii. 38); "karua pĕrsikē" by Theophrastus iii. 6. 2 to 14. 4, identified by Dioscorides with "k. vasilika," and the Greek name is quoted by Pliny xv. 24 as evidence that the tree came from Persia: the "thiōs valanōs" is mentioned by Diocles (Athen. ii. 42); "juglandium" shells were employed by Dionysius of Syracuse (Cic. tusc. v. 20. 58), and the "juglans" or "jovis glans" is mentioned by Varro, Virgil, and Palladius: J. regia is described by Bauhin (Pers.); is known to be cultivated from Italy throughout middle Europe as far as "Lat. 56°" (A. Dec.); was observed by Chaubard, and Fraas, cultivated in Greece and perhaps naturalized; by Clot-Bey, in Egypt, recently introduced; by Belon, and Hasselquist, in Palestine. Farther East, the sap is collected and employed medicinally in Circassia (Spencer, and Lindl.); the tree is known to grow wild Southward of Caucasus, and in the mountain forest of Talusch (Ledeb., and C. A. Mey.); and according to Roxburgh on the mountains North and Northeast of Hindustan and in Sanscrit called "ukshadu," or according to Piddington "unkotha;" was observed by Bunge p. 62 here and there in Northern China. By European colonists, was carried to Northeast America, where in our Middle States I have found it producing nuts of good quality.

Lawsonia alba of Hindustan. A shrub called in the gardens of Egypt and Yemen "henna" (Forsk.), in Nubia "kofreh" (Del.), in which we recognize the כֹּפֶר kphr cultivated in Palestine according to Canticles i. 14 and iv. 13: — the "kuprōs" is mentioned by Theophrastus odor. 5 to 6, by Dioscorides as a woody plant growing at Canopus and Ascalon, by Pliny xii. 51 as growing as far as Cyprus: "phōinissan tē nēēn kuprōn" is mentioned by Antipater (Meleag. cor. i. 42); the ointment prepared from the leaves, by Posidonius, Celsus, Paulus Aegineta, by Dioscorides as turning the hair yellow (a practice unknown to Lucan iii. 238, but mentioned by Tertullian c. foem. ii. 6): mummies have been discovered having the finger-nails stained with *henna;* L. alba is described by Abul Fadli (Spreng.); was observed by Forskal, Delile, and myself, under cultivation in Egypt; by Rauwolf, in Palestine; by Forskal, under cultivation in Yemen; by myself, the fresh powdered leaves brought to market at Mocha and universally used by the Arab population. Eastward, Onesicritus, and Nearchus, found the Kathaians staining their beards "white, red, purple, and green" (Strab. xv., and Arr.): L. alba is called in Hindustanee "mayndie," in Telinga "goounta chettoo," in Tamil "maroodanie" (Drury); was observed by Rheede i. pl. 40 in Malabar; by Graham, "very common in gardens as a hedge plant" in the environs of Bombay; by myself, under cultivation there and the powdered leaves used even by the Hindu population; was observed by Roxburgh in other parts of Hindustan: by Mason v. 409 and 513, "exotic" in Burmah and called "dan," extensively cultivated, the "beautiful orange" dye from the leaves beat up with catechu and used by females to stain the finger ends: by Blanco, at Manila, but no native names are given.

Aquilaria agallocha of Tropical Eastern Asia. The imported product is called in English *lignaloes* or *aloes wood* (Lindl.), in Egyptian "tshĕnlavōs" (lex. Oxf.); and the אֲהָלוֹת aĕlwd of Canticles iv. 14, — giving out perfume according to Psalm xlv. 8, or the "alōēn" of John xix. 39, is referred here by writers: "agallōhōn" (a combination of two of its Pali and Sanscrit names "agalu" and "lauha," Royle, and Mason) brought from Arabia and India according to Dioscorides, is mentioned also by Pliny, Galen, Oribasius, Aetius, Isidorus, and Paulus Aegineta; "aghlajoon" or "indian ud," by Rhazes, Serapion, Avicenna, Ebn Baitar, and Persian medical writers: lign aloes was seen by Baumgarten iii. 4 at Damascus, by Alpinus in Egypt, and according to Forskal mat. med. is called there "oud kakaji." Eastward, is called in Hindustanee and Bengalee "ugoor" (Lindl.), is the wood of a large forest-tree in Sylhet on the Eastern border of Hindustan (Roxb.); is called according to Mason v. p. 499 in Burmah "a-kyau," and grows along the Tenasserim coast on the Mergui Isles, but the Selungs "as they profit by the trade endeavour to keep all in ignorance;" was observed by Bontius near Malacca; by Marco Polo 75 "leigne aloe" in Cochinchina, observed there also by Loureiro; and by Rumphius ii. 30, on the Moluccas (Spreng.).

Curcuma longa of the Malayan Archipelago. The imported product is called in English *turmeric* (Lindl.), in Armenian "khekhrym" (Gesen.), and as cultivated in Yemen "kurkum" (Forsk.); in which we recognize the כַּרְכֹּם krkm of Canticles iv. 14: — the "kupĕirōu" of India, resembling ginger according to Dioscorides i. 4, saffron-coloured and bitter when chewed, the ointment removing hair, an account repeated by Pliny xxi. 70, is referred here by writers: imported turmeric was seen by Alpinus iv. 13 in Egypt; and by Forskal, under cultivation among the mountains of Yemen. Eastward, C. longa is called in Hindustanee "zardchob" or "pitras" or "haldi," in Bengalee "halud" or "haridra" (D'roz.), in Telinga "pasoopoo," in Tamil "munjel" (Drury); was observed by Rheede xi. pl. 11 in Malabar; by Gibson and Graham, cultivated "in Bombay" and "the richer villages of the Deccan," the roots "much used for culinary purposes," also medicinally; by Roxburgh, under cultivation around Calcutta; by Mason, "exotic" in Burmah and called "hsa-nwen;" by Loureiro, in Cochinchina; by Blanco, well known to the natives throughout the Philippines and called in Tagalo "dilao," in Bisaya "dulao" or "calavaga" or "quinamboi," in Pampango "angai." An unguent of

the pounded roots according to Rumphius v. p. 166 rubbed by the Javanese all over their bodies as a preservative against cutaneous diseases; a practice among the Polynesians in former times, even among the Hawaiians, and I remarked the plant itself introduced and naturalized throughout the Feejeean, Samoan, and Taheitian groups.

955 B. C. (= 975 y. 8 mo. — "21 years" of both Maneth. tables), Sĕsŏghis succeeded by Osōrthŏn, second king of the Twenty-second dynasty. The name of king Osarkon occurs on the great temple at Bubastis, on a vase (at one time owned by the Roman Claudia family), and on a papyrus. He continued the great unfinished hall at Karnak.

Orpheus according to Pliny xxv. 5 was the first to note the properties of plants (referring to some Orphic poem hardly earlier than this date): the scene of one at least of the poems attributed to Orpheus is clearly Egypt; and the personal existence of such a poet is denied by Aristotle an. i. 5.

Daucus carota of Europe and the adjoining portion of Asia. Called in Britain *carrot*, in France "carrotte" (Prior), in Germany "mohre," in Italy "carota" and the wild kind "pastinaca selvatica" (Lenz), in Greece "karŏtta" or "agria thaukia" (Fraas) or "staphulōna" (Sibth.), in Egypt and Yemen "djazar" (Forsk.); in which we recognize the "staphylino" said to be "amatorium" by Orpheus (Plin. xx. 15): the name seems derived from the ancient use of red chalk, and in the addition to Homer il. ii. 765 "staphulē" signifies a mark: — the "staphulinōs" plant is mentioned by Dieuches, Philistion, Phanias of Eresus, Diocles, Cleophantus, Athenaeus; the "staphulinōs agriōs," by Theophrastus, the purple floret in the centre of its white umbels noted by Dioscorides; and the "karŏtŏn" is mentioned by Athenaeus: D. carota was observed by Forskal, Sibthorp, Chaubard, and Fraas, in fallow ground from the Peloponnesus to Constantinople and Smyrna; by Abd-allatif i. 6, Forskal, Delile, and Clot-Bey, under cultivation in Egypt and the seeds used as aphrodisiac; by Forskal, seemingly wild on the mountains of Yemen; is known to occur also in Abyssinia (A. Rich.). Westward, the "staphulinōs agriōs" is identified in Syn. Diosc. with the "karōtam" or "pastinaka" of the Romans, by Pliny xxv. 64 with the "pastinacam erraticam;" the "pastinaca" is mentioned by Hyginus, by Columella, and Pliny xix. 27, as cultivated, and the "carota" is mentioned by Apicius iii. 21: D. carota was observed by Forskal on Malta, as well as near Marseilles; is known to occur cultivated and seemingly wild in Algeria, Spain, and throughout middle Europe as far as Sweden (Pers., Munby, and Fries). Eastward from Caucasus, is known to occur throughout Siberia as far as Kamtschatka (Ledeb.); is called in Hindustanee and Bengalee "gajar" (D'roz.), was observed in Hindustan by Roxburgh, by Gibson and Graham "a staple article of food in the Eastern parts of the Deccan during the cold season;" is known to occur also in Cochinchina and China (Dec.); in Japan, everywhere cultivated and called "kofuk," or usually "nisji" or "iabu nensin" (Kaempf., and Thunb.); on the Loo Choo Islands (Beechy); on Timor (Decsne); and may therefore have been carried by Malays and Polynesians to Australia, New Zealand, and the Hawaiian Islands. Clearly by European colonists, was carried to Madeira and the West Indies (A. Dec.); to Northeast America, where it continues abundantly cultivated and in the dry-rooted form naturalized; to Patagonia and Chili (observed by myself); and to the Mauritius Islands (Boj.). Sown in rich soil according to Vilmorin, the root after successive generations becomes fleshy and edible, and in this form transferred to barren soil relapses in the course of generations into its original dry-rooted state. The root and seeds are enumerated by Lindley as employed medicinally.

Mentha aquatica of Europe and the adjoining portion of Asia. Called in Britain *water mint* (Bacon), in Germany "wasserminze," in Italy "menta" (Lenz), in Greece with other species "ēthiasmō" or "ēthuōsmōs" (Fraas), in Egyptian "tis" or "phĕrthrōumōnthōu" or "pĕrxŏ" or "makithŏ" (Syn. Diosc.); in which we recognize the "minthē" changed according to Orphic poems from a fruit-bearing large tree to a barren plant — (etym. gud. p. 395), identified in Syn. Diosc. with the "ēthuōsmōs," the name changed by the Greeks (according to Pliny xix. 47) on account of the fragrance: "ēthuōsmōu rizan" is prescribed in Int. affect. 33; and the "ēthuōsmōn" of Theophrastus vii. 7. 1 may also be compared: M. aquatica was observed by Sibthorp, Chaubard, and Fraas, frequent along streams from the Peloponnesus to Smyrna; is enumerated by Clot-Bey Figari as long known in Egypt (i. e. in gardens). Westward, the "ēthuōsmōs" is identified in Syn. Diosc. with the "mĕntha" or "nĕpĕtam" of the Romans; "the "nepetam" whose root is used medicinally is placed in the same genus with the "mentam" by Pliny xix. 47 and xx. 56: M. aquatica is termed "m. rotundifolia palustris seu aquatica major" by Tournefort inst. 189, "m. palustris" by Miller, "m. hirsuta" by Linnæus (Steud.); and is known to grow wild in Italy and throughout middle Europe as far as Denmark (fl. Dan. pl. 638, Engl. bot. pl. 447, and Pers.). According to Bacon in his essay on gardens, the flowers "which perfume the air most delightfully" on "being trodden upon and crushed are three, that is burnet, wild thyme, and water mints, therefore you are to set whole alleys of them:" M. aquatica is among the species enumerated by Lindley as having "been in repute as stomachics and emmenagogues." (See M. rotundifolia and M. arvensis).

953 B. C. (= 955 y. $357\frac{5}{8\,6}$ d. — "3 years" of 1 K. xv. 2 and 2 Chron. xiii. 2), Abijam succeeded at Jerusalem by his son Asa, sixth Jewish king.

The same year (= 965 — "12 years" of Phoenician annals in Menand. Ephes., and Jos. c. A.), accession at Tyre of Astartus son of Delaiastartus; aged forty-two (= "54 — 12"), and who reigned "twelve" years.

952 B. C. (= 972 y. $354\frac{5}{8\,6}$ d. — "22 years" of twelve lunations of 1 K. xiv. 20), Jeroboam succeeded at Tirzah (1 K. xiv. 17) by his son Nadab, second king of Israel.

950 B. C. (= 951 y. $228\frac{11\,0}{3\,6\,0}$ d. — "2 years" of twelve lunations of 1 K. xv. 25), Nadab slain; and succeeded at Tirzah by Baasha, third king of Israel.

The same year (= 959 — "9 years" of Castor in Armen. vers. of Euseb.), Medon succeeded by his son Acastus, second hereditary archon of Athens. "Thirty-six" years are assigned to his rule by both Castor, and Eusebius.

Elæagnus angustifolia of middle Europe. A small tree called by the Turks "idæ" (Forsk.): the "kōtinōn" brought from the country of the Hyperborei (according to Pindar ol. 3, and Pausanias v. 7, by Hercules) to Athens, where it was planted in the temple of Erechtheus on the acropolis — and called "kallistĕphanōn," the tree afterwards burned by the Persians, a sucker surviving (Herodot. viii. 55), the leaves according to Aristotle mirab. 52 white on the upper surface instead of the under, is referred here by Camus: the "kōtinōs" is mentioned also by Theophrastus ii. 3, Theocritus v. 100, Moschus vii. 2, and is identified by Dioscorides with the "agriĕlaia:" E. angustifolia is described by Tournefort cor. 53 as having the fruit "olivæformi subdulci;" was observed by Forskal under cultivation on Tenedos and at Constantinople, its yellow edible drupe as large as an olive and the flowers said to be strongly odorous; by Sibthorp, on Samos and near Smyrna; and by Hasselquist, in Palestine. Westward, is known to grow in somewhat moist situations among the Alps and Pyrenees (Pers.; see E. Orientalis).

949 B. C. (= 1071 — "80 — 42 years" of Apollod., Diodor., and Euseb. i. p. 166), Eurysthenes succeeded by his son Agis as one of the two kings of Sparta.

While Sous son of Procles was reigning jointly with Agis (Plut. lyc. 2, see also Ephorus in Strab. viii. p. 560), the revolted citizens of Helos subdued and reduced to *slavery:* apparently, the beginning in Greece of this institution "thoulĕia." The Lacedæmonians (according to Theopompus) "when they conquered the Achæans, and the Thessalians when they conquered the Perrhoebi and Magnetes, were the first who reduced to slavery the former occupiers of the country." — (See also Simonid., Cic. div. ii. 43, Pausan., Athen. vi. p. 265, and Clint. i. p. 144 and 333).

The address of Mou-wang (quoted in the Chou-king iv. 27, Pauth. p. 196) contains an allusion to "black" marks made on the face of criminals; evidently *tattooing.*

"946 B. C. = 1st year of Koung-wang, of the Tcheou" or Fifth dynasty (Chinese chron. table).

943 B. C. (= 952 y. $357\frac{5}{8\,6}$ d. — "10 years" of 2 Chron. xiv. 1 to 8), end of "ten years" of peace; employed by Asa in fortifying cities and preparing against invasion.

Hardly earlier than this date (Graha Munjari tables, Puranas, and Bentley as. res. viii. p. 244), Dyutimah reigning in Hindustan.

941 B. C. (= 953 — "12 years" of Phoenician annals in Menand. Ephes., and Jos. c. A.), Astartus succeeded as king at Tyre by his brother Aserymus; ("54 — 9" =) forty-three years old, — and who reigned "nine years."

The same year (= "130 years after the fall of Troy" of auct. vit. Hom., and Clint. i. p. 140, and "in the reign of Agis" of Pausan. iii. 2. 1., see also Strab. xiii. 1. 3), the outlying island of Lesbos, between Cumæ and the Troad, occupied by Aeolian Greeks under Grais, son of Archelaus and great grandson of Orestes.

940 B. C. (before the "third month in the 15th year of the reign of Asa," 2 Chron. xiv. 9, xv. 11, and xvi. 8), Osarkon or Zerah and his army of Ethiopians and Lubims, defeated at Mareshah by Asa king of Judah. Many "out of Israel" now placed themselves under the rule of Asa.

The same year (= 954 y. 8 mo. — "15 years" of both Maneth. tables), Osarkon succeeded by the third king of the Twenty-second dynasty. The name of king Takelut occurs on contemporaneous monuments — (Leps. k. pl. 44).

939 B. C. (= "third month in the 15th year of the reign of Asa," 2 Chron. xv. 10 to 15), a covenant among the people assembled at Jerusalem; prohibiting change of religion under penalty of death.

The same year (. . . . .). The accession of Osarkon II., fourth king of the Twenty-second dynasty, hardly earlier than this date. His name occurs on contemporaneous monuments, and on a statue — now in London (Glid. analect, and Leps. k. pl. 44).

"934 B. C. = 1st year of Y-wang, of the Tcheou" or Fifth dynasty — (Chinese chron. table).

The Li-ki, or Chinese Ritual,* is regarded as belonging to the "Tenth century B. C." — (A. Dec.).

One hundred and first generation. Sept. 1st, 934, mostly beyond youth: the prophet Jehu (1 K. xvi, and 2 Chron. xix. 1 and xx. 34).

932 B. C. (= 941 — "9 years" of Phoenician annals in Menand. Ephes., and Jos. c. A.), Aserymus slain, and succeeded as king at Tyre by his brother Pheles; forty-nine (= "50 — 0 y. 8 mo") years old, and who reigned "eight months."

931 B. C. (= 1071 — "80 — 60 years" of Philochorus, Eratosth., Aristarch., and Apollod. = 776 + "267 years" of Castor — 56 — 56, and "in the archonship of Acastus" at Athens, Cast. in Euseb. i. p. 131), the Ionic Migration. Colonists principally from Attica led by Neleus son of Codrus into Asia Minor; where they founded the cities of Ephesus, Miletus, and Teos, adopting however the worship of Diana anciently established "by the Amazons," and the other deities of the country. (The date is confirmed by Mimnermus, and by the silence of Homer respecting the Ionian cities of Asia; the addition to the Second book of the Iliad being clearly by a later poet). — During the next few years, other cities were built or occupied by the Greek colonists, as Smyrna, Colophon, Erythræ, and Phocæa.

The same year (= 932 — "8 months" of Phoenician annals in Menand. Ephes., and Jos. c. A.), at Tyre, Pheles slain and succeeded as king by a priest of Astarte or Ashtoreth named Eithobalus; aged ("68 — 32" =) thirty-six, — and who reigned "thirty-two" years.

"In the reign of Eurypon" or Eurytion, son of Sous and third Proclid king at Sparta, "a long war against the Arcadians of Mantinea;" who were living "under a popular government" — (Aristot. rep. ii. 6. 8, and Polyæn. ii. 13; see also Simonid., Herodot., Pausan. iii. 7. 1, and Plut. lyc. 2).

927 B. C. (= 949 y. $250\frac{220}{880}$ d. — "24 years" of twelve lunations of 1 K. xv. 33), Baasha succeeded by his son Elah, fourth king of Israel.

925 B. C. (= 926 y. $146\frac{14}{880}$ d. — "2 years" of twelve lunations of 1 K. xvi. 8 to 24), Elah slain and succeeded by Zimri; who, after reigning "seven days in Tirzah," was himself slain and succeeded by Omri, sixth king of Israel.

923 B. C. = "24th of Choiak in the 15th year of Osarkon II.," an *eclipse* of the moon expected or happened — (inscript. by his successor, and Birch).

919 B. C. (= 924 y. $167\frac{220}{880}$ d. — "6 years" of twelve lunations of 1 K. xvi. 23), the city of Samaria founded by Omri, for a new seat of government.

In the Peloponnesus, the Cynurians, a remnant of the Pelasgians and Ionians, subdued by Echestratus son of Agis and one of the two kings of Sparta; the third in the Agid line — (Pausan. iii. 2. 2 to 7. 2, see also Herodot. viii. 73),

"918 B. C." (Hieronym. and Clint. i. p. 23, Diodorus' numbers giving 1169 — "92 — 85 — 79 years" = 913), "Fourth" change in naval dominion; leaving the Thracians, the "Empire of the sea" acquired by the Rhodians. — Held by them "twenty-three" years.

Hardly earlier than this date (Graha Munjari tables, Puranas, and Bentley as. res. viii. 244), Medhatithi reigning in Hindustan.

917 B. C. = "23d year of Osarkon II.," death of an Apis or sacred bull; the latest date in his reign found on the monuments — (Leps. k. tab. p. 19, and Birch).

The accession therefore of Sesonk II., fifth king of the Twenty-second dynasty, not earlier than this date. His name occurs on contemporaneous monuments — (Leps. k. pl. 45).

The same year (= 949 — "1 — 31 years" of Apollod., Diodor., and Euseb. i. p. 166), and "not long after the conquest of Cynuria" (Pausan. iii. 2. 2), Echestratus succeeded by Labotas as one of the two kings at Sparta; the fourth in the Agid line.

915 B. C. (= 939 y. 8 mo. — "25 years" of the Afr.-Maneth. table), accession of Takĕlōthis, sixth king of the Twenty-second dynasty. The name of king Takelut II. occurs at Karnak, and on a tablet — now in Turin (Glid. analect.).

While the Rhodians held the sea, "Elpias" (towards the Southeastern extremity of Italy) founded by them and the Coans; and by themselves unaided, "Parthĕnōpēn" (Naples), and "Rōthōn" (beyond the mouth of the Rhone): also according to some accounts, they colonized the

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* *Amygdalus Sinensis* of China. The *scarlet-flowered peach* is clearly a distinct species; and the "tao" of the Chinese Ritual — (A. Dec.), and Book of Odes, quoted by Khoung-tseu ta hio ix. 6, may be compared. Eastward, the "tao" as appears from the Japanese Encyclopedia lxxxvi. 7 was brought from China to Japan: the "too" or "momu" was seen by Kaempfer v. 798 in Japan, and with var. "flore rubro pleno" is according to Thunberg planted in almost every garden. "ob elegantiam florum." By European colonists, A. Sinensis was carried to Australia, and a tree observed in a garden there was said to produce fruit of good quality.

"Gumnēsias" or Balearic Islands (Strab. xiv. 2. 10). The Rhodians were skilled in the use of the *sling*—(Sil. Ital. iii. 364): but in this particular their reputation was eventually eclipsed by the Balearic Islanders (see Lycophr., Diodor., Flor., and others).

913 B. C. (= 924 y. $160\frac{23}{38}$ d.—"12 years" of twelve lunations of 1 K. xvi. 23 to 31), Omri succeeded by his son Ahab, seventh king of Israel. Who married Jezebel, daughter of Eithobalus or "Ethbaal, king of the Zidonians"

Cuscuta Europæa of Europe and the adjoining portion of Asia. Called in Britain *dodder* (Prior), in Egypt "hamoul" (Del.); the "hamul elkattan of Egypt" is identified by Ebn Baitar with the "kuschut," and the +ΊΟΝΓ~Ρ ktsyowd of Psalm xlv. 8—may be compared: "keschut" seeds imported from Syria and taken internally as a cosmetic, especially by the Jews, were seen in Egypt by Forskal mat. med.; the living C. Europæa was observed by him, and Delile, around Cairo, and by Hasselquist in Palestine. Northward and Westward, is described by Linnæus; is termed "c. vulgaris" by Persoon, "c. major" by Decandolle (Steud.); is known to grow in middle Europe and as far as Denmark (Thuil., Lam. fl. fr., Engl. bot. pl. 378, and fl. Dan. pl. 199).

Cuscuta epilinum of Europe and the adjoining portion of Asia. Called in Germany "flachsseide" (Grieb, and Fraas), and from the name given by Ebn Baitar perhaps the species in question:—the "angina lini" is mentioned by Pliny xvi. 44: C. epilinum is described by Weihe; but in the absence of flax crops, was not seen by Fraas in Greece. By European colonists, was carried to Northeast America, where it was observed by Engelmann "sparingly introduced with flax-seed into the Northern States."

Cuscuta monogyna of the East Mediterranean countries. Possibly the species in question:—the "kathutas" is described by Theophrastus caus. ii. 17. 3 as a little Syrian herb growing upon trees, thorns, and other plants; twining around them, according to Pliny xvi. 92: a species of Cuscuta is distinctly described by Serapion (according to F. Adams): "cuscuta" seeds from the Thebaid are distinguished by Forskal mat. med.; and the living C. monogyna was observed by Berthe in gardens not far from Gizeh. Farther North, is termed "c. orientalis viticulis crassissimis convolvuli fructu" by Tournefort cor. 45; and was observed by Sibthorp on tamarisks near Smyrna.

912 B. C. (= 952 y. $357\frac{5}{38}$ d.—"41 years" of 1 K. xv. 10), Asa succeeded at Jerusalem by his son Jehoshaphat, seventh Jewish king.

The same year (= "1182"—a break of about 270 years, Lassen i. 473, and Buns. iv. 7. 1), accession of Gonarda III., the initial point of the Cashmere chronicle, hardly earlier than this date.

910 B. C. (= 911 y. $357\frac{5}{38}$ d.—"3d year" of 2 Chron. xvii. 7), by order of Jehoshaphat, "the book of the law" carried by a commission of princes, Levites, and priests, "throughout all the cities of Judah, and taught the people."

"909 B. C. = 1st year of Hiao-wang, of the Tcheou" or Fifth dynasty—(Chinese chron. table).

907 B. C. (= 1071—"165th year" of Cyrill. adv. Jul. p. 11), Laosthenes reigning in Assyria; Silvius, at Alba in Latium; Agelas, at Corinth; and Labotas with a colleague, at Sparta. (The statement is however shown by Clinton to be taken from Eusebius' table).

In the joint reign at Sparta of Labotas with Prytanis son of Eurypon, war against the Argives (Aristot. rep. ii. 6. 8, and Pausan. iii. 2. 3 to 7. 2).

905 B. C. = "11th year of Takelut," mention of a deceased prince Uasarkan. "Towards the close of the same year," death of queen Karumamma, a statue of whom—is now in the Louvre at Paris (Birch).

"904 B. C." (Euseb., and Clint. i. p. 23, Diodorus' numbers giving 1169—"92—85—79—23 years" = 890); "Fifth" change in naval dominion. Leaving the Rhodians, the "Empire of the sea" acquired by the Phrygians.—Held by them "twenty-five" years.

Ervum ervilia of the Mediterranean countries. Called in Britain *ers* or *bitter vetch*, in France "ers" (Prior), in Germany "erve" (Fraas) or "linsenwicke," in Greece "rōvithia" or "rōvi" or "ōrōvi," in which we recognize the "ōrōvŏn," a medimnus-measure (bushel and a half) constituting the price of blood among the citizens of Tralles for killing either a Lelegian or Minyan—(Plut. quaest. gr. 46): the "ōrōvŏs" is mentioned also in the Hippocratic treatises Vict. acut. 11, 3 Morb. 30, 6 Morb. pop. 4, Int. affect. 1 and 25, and by Polemon diæt. 13, Demosthenes 598. 4, Aristotle h. an. iii. 21, Phanias of Eresus, Theophrastus, Dioscorides, and Galen: E. ervilia was observed by Sibthorp, and Fraas, frequent in Greece, cultivated as well as growing spontaneously in cultivated ground. Farther South, the "ōrōvŏs" was known to Athenaeus in Egypt; and E. ervilia as appears from Alpinus has been sometimes cultivated there. Westward, the "ōrōvŏs" is identified in the Syn. Dioscor. with the "ōrōvōum" of the Romans: the "ervum" is mentioned as an ingredient in the theriac of Antiochus Magnus, as having cured Augustus according to one of his own letters, and as cultivated in Italy (Plin. xviii. 38 and xx. 100); is mentioned also by Virgil ecl. iii. 100, Columella, and Palladius: E. ervilia is described by C. Bauhin pin. 346; is termed "e. verum" by Tournefort inst. 398; and is known to occur as a weed or sometimes cultivated throughout middle Europe as far

as Britain (Pers., Wats., and A. Dec.). According to Virey, the seeds are poisonous, producing weakness of the extremities when mixed with flour and made into bread (Lindl.).

902 B. C. = "14th year of Takelut II.," on the monuments — (Leps. k. tab. p. 19).

901 B. C. = "15th year of Takelut II.," death of an Apis or sacred bull — (Birch).

The same year (914 y. 8 mo. — "13 years" of both Maneth. tables, giving 902), Takĕlōthis succeeded by the seventh king of the Twenty-second dynasty. The name of king Sesonk III. occurs on contemporaneous monuments (Leps. k. pl. 46).

One hundred and second generation. Jan. 1st, 900, mostly beyond youth: the prophet Elijah.

899 B. C. (= 931 y. 4 mo. — "32 years" of Phoenician annals in Menand. Ephes., and Jos. c. A.), end of the reign of the Phoenician king Eithobalus or Ethbaal. (On comparing the biblical account, the deficit of 18 or 19 years between Eusebius' numbers and their given sum, seems to fall after this event, rendering the dates of the succeeding reigns uncertain to the same amount). The List makes Eithobalus succeeded at Tyre by Badezar; aged thirty-nine (= "45 — 6"), and who reigned "six" years.

"897 B. C. = 13th year of Hiao-wang" (Chinese chron. table), beginning of the Thirtieth cycle.

Ornithogalum umbellatum of Europe and the adjoining portion of Asia. Called in Britain *star-of-Bethlehem* (Prior) translated into Welsh "seren Fethleem" (Davies), in Germany "vogelmilch" (Grieb), in France "ornithogale" (Nugent), in Italy "latte di gallina" (Lenz), in Greece "mōuliklia" or "agriōs krinōs" (Fraas); and the מְעָרַת־בָּקָר thbywnym sold in Samaria besieged by Ben Hadad — (2 K. vi. 25) is referred here by Linnæus: the "ōrnithōs gala" is mentioned by Nicander (Athen. ix. 12); the "ōrnithōgalōn" by Dioscorides as having an edible bulbous root, umbelled flowers herbaceous outside and milky within; and is identified by Ebn Baitar with the "sasali" of Elgafaki: O. umbellatum was observed by Hasselquist in Palestine; by Sibthorp, Chaubard, and Fraas, frequent in cultivated and fallow ground from the Peloponnesus throughout Greece. Westward, the account of the "ornithogale" by Pliny xxi. 62 seems chiefly taken from Dioscorides; O. umbellatum is described by Dodoens pl. 221; is termed "o. u. medium angustifolium" by Tournefort inst. 378; is known to occur in fallow ground from Italy throughout middle Europe as far as Sweden (Hall., Pers., and A. Dec.); was already in Britain in the days of Gerarde p. 133, but is regarded by Ray, Babington, and Watson, as exotic and only naturalized. By European colonists, was carried to Northeast America, where it has become naturalized, occurring especially in the grass-grown clearings of New England.

"894 B. C. = 1st year of I-wang, of the Tcheou" or Fifth dynasty — (Chinese chron. table).

"The same year" (. . . . . Wilk. theb. and eg. p. 514), "money first *coined* of gold and silver at Argos" in Greece.

893 B. C. (= 899 y. 4 mo. — "6 years" of Phoenician annals in Menand. Ephes., and Jos. c. A.), not earlier than this date, the accession at Tyre of Matgenus; aged twenty-three (= "32 — 9"), and who reigned "nine" years.

892 B. C. (= 912 y. 291$\frac{149}{160}$ d. — "22 years" of twelve lunations of 1 K. xvi. 29), Ahab and Jehoshaphat warring against the Syrians, and Ahab slain in battle. He was succeeded by his son Ahaziah, eighth king of Israel.

By Jehoshaphat, ships built at Ezion-geber on the Red Sea: servants of king Ahaziah were refused admittance; and "the ships were broken," and "went not" on the proposed voyage "to Ophir for gold" — (1 K. xxii. 48, and 2 Chron. xx. 36).

890 B. C. (= 891 y. 165$\frac{312}{360}$ d. — "2 years" of twelve lunations of 1 K. xxii. 51), Ahaziah succeeded by his brother Joram, ninth king of Israel.

The war with the revolted Moabites brought to a close by the besieged king of Moab offering "upon the wall" his own son for "a burnt offering" — (2 K. iii. 4 to 27).

Cucumis? prophetarum of the Tropical Sahara from the Atlantic to Arabia. The פַּקֻּעַת phkowd gathered for Elisha — (2 K. iv. 39) is referred here by Linnæus: the "lifiyat" according to Abul Abbas Elhafits is called "alkam" in the Hedjaz, grows also in Phoenicia and Upper Egypt with fruit like that of Momordica but prickly, and according to Ebn Baitar is frequent in Upper Egypt and called "damahir." C. prophetarum is described by Linnæus, and Jacquin hort. pl. 9; is known to grow in Africa and Arabia (Pers.); was observed by myself in Upper Egypt, spreading on the soil of the Desert, its fruit covered with soft prickles. "C. anguria" observed by Forskal p. 168 near Mocha, may be compared; also the plant carried to the West Indies under that name (Mill. dict. pl. 33, and Pers.).

887 B. C. (= 911 y. 357$\frac{5}{8}$ d. — "25 years" of 1 K. xxii. 42), Jehoshaphat succeeded at Jerusalem by his son Jehoram, eighth Jewish king. He married a daughter of Ahab (2 K. viii. 18).

In the reign of Jehoram (2 K. viii. 20), revolt of the Edomites. Who succeeded in establishing their independence, and "made a king over themselves."

"880 B. C." (Euseb. and Clint i. p. 23 and 166, Diodorus' numbers giving 1169 — "92 — 85 — 79 — 23 — 25 years" = 865, a difference that would carry back these numbers to one of the false-dates for the fall of Troy), "Sixth" change in naval dominion. Leaving the Phrygians, the "Empire of the sea" acquired by the Cyprians. — Held by them "thirty-three" years.

The same year (= 917 — "37 years" of Apollod., Diodor., and Euseb. i. p. 166), Labotas succeeded by his son Doryssus, as one of the two Spartan kings; the fifth in the Agid line.

879 B. C. (= 886 y. $357\frac{5}{86}$ d. — "8 years" of 2 K. viii. 17 and 2 Chron. xxi. 5), Jehoram succeeded at Jerusalem by his son Ahaziah, ninth Jewish king.

In company with Joram king of Israel, he warred against Hazael king of the Syrians at Damascus (2 K. viii. 28, and 2 Chron. xxii. 5).

"878 B. C. = 1st year of Li-wang, of the Tcheou" or Fifth dynasty — (Chinese chron. table).

The Chinese characters containing the sign for *silk* not found beyond the Tcheou dynasty — by Hiu-chin: silk is alluded to in the *Chinese inscription* on the Heng-chan mountain, erroneously attributed to Yu (Pauth. p. 48 and 54); and is mentioned in the Chou-King. Westward, "sērika" or silk stuffs were seen in Hindustan by Nearchus (Strab. xv. 1. 20): and were known in the Mediterranean countries to Horace, Propertius, Suetonius, and Martial; though the Chinese manufacture continued so rare and costly, that the emperor Elagabalus is accused of being the first Roman who wore a silken dress.

Morus alba of China and Japan. Called in English gardens *white mulberry*, in Egypt "tout" (Del.); and the "mulberry" mentioned in one of the three odes complaining of the cruelty of the emperor Li-wang — (preserved in the Chi-King, Pauth. p. 101), and in connexion with "silk-worms" in the Chou-King, may be compared: M. alba was observed by Bunge p. 60 "as though spontaneous" on the mountains of Northern China; by Kæmpfer, and Thunberg, in Japan, regarded as indigenous and called "iammagua" or "kago kadsura." Westward, occurs growing spontaneously in the region South and Southwest of the Caspian (Mey., Hohen., and A. Dec.), but was unknown in the Mediterranean countries in the days of Pliny xv. 29, who asserts that the berries of the "moris" in the end turn black: seeds or cuttings according to some authorities accompanied the living silk-worms that were brought from Central Asia in the reign of Justinian; but Targioni found the opinion prevailing in Italy, that cuttings were "brought from the East in 1434 by Fr. Buonvicini:" the tree has become naturalized in Armenia, Asia Minor, Thrace, Greece, and Italy (Fraas, Griseb., and Poll.); was seen by Forskal in gardens at Constantinople; by him, Delile, and Clot-Bey, in the gardens of Egypt; and is known to be cultivated throughout middle Europe. By European colonists, was carried to Northeast America, where it continues in gardens; to the Tropical islands of the Pacific, observed by myself on the Tahéitian and Hawaiian Groups; and to Hindustan (Royle him. 337, and Graham), but I was informed at Bombay that the cultivation does not succeed.

The same year (= 877 y. $317\frac{444}{860}$ d. = 889 y. $187\frac{428}{860}$ d. — "12 years" of twelve lunations of 2 K. iii. 1, the line of Judah giving 878 y. $357\frac{5}{86}$ d. — "1 year" of 2 K. viii. 26 = 877 y. $357\frac{5}{86}$ d.), Ahaziah, with Joram and his mother Jezebel, all slain by Jehu. Whose accession therefore synchronous with that of Athaliah, mother of Ahaziah.

The name of Jehu king of Israel occurs in cuneiform letters in an inscription at Nineveh — (according to . . . . . and Layard). This therefore the earliest inscription in *Assyrian* or *cuneiform writing* whose date is ascertained.

The deity on the Assyrian monuments having the human face and feet and the body of a fish, is clearly Oannes, already mentioned.

The two-humped or *Bactrian camel*, Camelus Bactrianus, is figured on the Nimroud obelisk and other monuments at Nineveh: — also at Persepolis, and on the Etruscan vases (Layard pl. 53 and 55, Bonom. pl. 178, and Mon. inediti pl. 50). The two-humped camel is described by Aristotle; and is the kind employed by the Tartars of Northeastern and Central Asia, to the Crimea and Caucasus. Though unknown farther South, in Arabia; the animal has probably been sometimes brought as a curiosity into Egypt.

"876 B. C. About this time" (Clint. i. p. 206 and 214), Second irruption of the Cimmerians into Asia Minor.

875 B. C. = "28th year of Sesonk III.," birth of an Apis or sacred bull; the latest date in his reign found on the monuments — (Leps. k. tab. pl. 19, and Birch).

872 B. C. (= 877 y. $357\frac{5}{86}$ d. — "6 years" of 2 K. xi. 3), queen Athaliah slain. Succeeded at Jerusalem by Joash or Jehoash, son of Ahaziah and now eleventh Jewish king.

870 B. C. (= 991 — "121 yrs" of the Egyptian Chronicle = 989 y. 8 mo. — "120 "yrs" of the Afr.-Maneth. table, the Euseb.-Maneth. table giving 822 y. 8 mo. + "49 yrs" = 871 y. 8 mo., and the monuments 875 — "26 + 20th" = 869), Sesonk III. succeeded by Pekhi or Pamai, eighth king of the Twenty-second dynasty. His name — has been found only on the tablet of the Apis or sacred bull at the Serapeum (Birch).

869 B. C. = "2d year of Pekhi" or Pamai, on the monuments — (Leps. k. tab. p. 19).

One hundred and third generation. May 1st, 867, mostly beyond youth:

865 B. C. (859 y. 4 mo. + "7th year" of Phoenician annals in Jos. c. A.), accession at Tyre of Pygmalion as Phoenician king; aged nine (= "56 — 47"), and who reigned "forty-seven" years.

About 861 B. C. (= 981 — "120 years" of Vell. Paterc. i. 7), a date for Hesiod, possibly marking that of some of the Hesiodic poems. The Theogony at least seems included in the alleged derivation of *Greek mythology* from Homer and Hesiod not more than "four hundred" years before Herodotus ii. 53.

859 B. C. (= 1002 y. 116⅔ d. — "143 y. 8 mo." of Phoenician annals in Jos. c. A.), Carthage founded by Elissa also called Dido, a fugitive sister of Pygmalion. (The date is confirmed by the silence of Homer respecting Carthage, and by the Phoenicians under Cambyses refusing to make war against their Carthaginian descendants, Herodot. iii. 19).

Glaucium luteum of the seashore of the Mediterranean and Atlantic as far as the Baltic. Called in Britain *sea poppy* or *horned poppy* (Prior), in Italy "papavero marino" or "papavero cornuto" (Lenz), in Greece "ualópikra" (Fraas); in which we recognize the "mēkŏn kĕratitis" identified in Syn. Diosc. with the "sisimaka" of the Numidians: — the "mēkŏn kĕratitis" is mentioned by Theophrastus ix. 12; by Dioscorides, as growing on the seashore, the flowers yellowish, and the fruit long and curved like a horn; G. luteum was observed by Sibthorp, Chaubard, and Fraas, frequent on the seashore of Greece and the Greek islands. Westward, the "mēkŏn kĕratitis" or "paraliōn" or "agrian mēkŏna" or "thalassiōn" is further identified in Syn. Diosc. with the "pavōulōum marinōum" of the Romans; the wild "papaver" called "ceratitin" or "parałion" or "glaucion" is mentioned by Pliny xx. 78 as growing on the seashore; G. luteum is described by Tragus 46; is termed "g. flore luteo" by Tournefort inst. 254; and is known to grow in Italy, and along the Atlantic as far as Sweden (fl. Dan. pl. 585, Wahl. p. 1082, and A. Dec.). By European colonists, was carried to Northeast America, where according to A. Gray it continues in "waste places, Maryland and Virginia, not common."

Erodium malachoides of the Mediterranean countries. A species of *heron's bill* called in Egypt "djarna" or "garna" (Forsk.), the seeming origin of the Greek word "gĕraniŏn:" the "gĕraniŏn ětĕrōn," identified in Syn. Diosc. with the "iĕgk" or perhaps "iĕsk" of the Numidians, — and described by Dioscorides as of no medicinal use, having projections resembling a crane's head and bill, and "malahē"-like leaves, is referred here by Sibthorp: E. malachoides was observed by Sibthorp, Chaubard, and Fraas, frequent from the Peloponnesus to the Greek islands and Cyprus; by Forskal p. 123, and Delile, in Egypt, extending into the Desert and sought as feed by sheep, goats, and camels. Westward, the account of the "geranion" of the Greeks with leaves somewhat "candidioribus" than those of "malvae" seems chiefly taken from Dioscorides: E. malachoides is described by Matthioli p. 624 (Spreng.); is termed "g. folio althæa" by Tournefort inst. 268; was observed by Forskal near Marseilles; is known to grow also in Italy, Spain, and on the Canary Islands (Cav. iv. pl. 91, and Pers.).

Geranium tuberosum of the Mediterranean countries. Called in Greece "kālōgĕrōs" (Fraas), and the "gĕraniōn" identified in Syn. Diosc. with the "iĕskĕ" of the Numidians, — mentioned also by Theophrastus, . . . Athenaeus, Paulus Aegineta, by Dioscorides as having a roundish sweet edible root and "anĕmōnē"-like leaves, is referred here by writers: G. tuberosum was observed by Sibthorp, and Fraas, from the Peloponnesus to Cyprus, a frequent weed in cultivated ground. Westward, the "geranion" with "anemones" leaves is mentioned together with additional medicinal properties by Pliny xxvi. 68 and 90; G. tuberosum is described by Matthioli, Anguillara, Dodoens, and Lobel; is termed "g. tuberosum majus" by Tournefort inst. 267; and is known to occur in Dalmatia and Italy (Cav. iv. pl. 78, Pers., and Sprang.).

Tragium Columnae of the Mediterranean countries. The "tragiōn allō" identified in Syn. Diosc. with the "ahōiōsim" of the Numidians or "sōvĕr" of the Egyptians, — growing according to Dioscorides in mountainous and precipitous situations, its leaves in autumn emitting a goat-like odour, is referred here by Columna, and Sprengel: T. Columnae was observed in Greece by Link, and Gittard (Bory). Westward, the "tragiōn allō" or "tragōkĕrōs" or "skōrpiōn" or "gārganōn" is identified in Syn. Diosc. with the "salia" of the Dacians, and "kōrnōulaka" or "vitōuĕnsa" of the Romans; T. Columnae was observed by Columna phyt. pl. 17 in Italy, and by Villars ii. p. 605 in Southern France (Pers.).

Bunium ferulaceum of the East Mediterranean countries. Called by the Turks "tōpana," a name adopted by the Greeks (Sibth.), and the "giggithiōn" identified in Syn. Diosc. with the "tirikta" of the Numidians or "thōrusastrōu" of the Egyptians or "athōriōu" of the Syrians, — produced according to Dioscorides chiefly in Syria and Cilicia, a little herb resembling "staphulinŏ agriŏ," its whitish and bitterish root eaten both crude and cooked; mentioned also by Galen fac. alim. ii. p. 640, and Paulus Aegineta, may be compared: B. ferulaceum is termed "bulbocastanum

creticum ferulæ folio semine oblongo" by Tournefort cor. 21; was observed by Sibthorp in cultivated ground on Cyprus, its root cooked and eaten. Westward, the "giggithiōn" or "lĕpithiōn" is identified in Syn. Diosc. with the "visakōutōum" of the Romans; but seems known to Pliny xx. 16 only as cultivated in Syria, much resembling "staphylino" and possessing the same properties.

Euphorbia apios of the Mediterranean countries. Called in Greece "hamaĭputhia" (Belon) or "phlōmaki" (Sibth.): the "apiōs" or "ishas" identified in Syn. Diosc. with the "thōrphath sathē" of the Numidians, — and mentioned by Theophrastus ix. 9. 5, by Dioscorides as a low plant with a pear-shaped root whose upper portion is emetic and the lower purgative, the whole producing combined effects, is referred here by writers: E. apios was observed by Sibthorp, Chaubard, and Fraas, on the mountains of Crete and Greece, its root to the present day employed among the peasantry for the purposes described by Dioscorides. Westward, the "apiōs" or "hamaĭvalanōn" or "linōzōstin" is identified in Syn. Diosc. with the "rathix silvĕstris" of the Romans; the account by Pliny xxvi. 46 of the "apios ischas" or "raphanos agria" or "raphanum silvestrem" seems chiefly taken from Dioscorides; E. apios is described by Clusius hist. ii. pl. 190; and is termed "tithymalus tuberosa pyriformi radice" by C. Bauhin pin. 292, and Tournefort inst. 87.

Thelygonum cynocrambe of the Mediterranean countries. Called in Greece "tzingaki" or "xinkōhōrtōn" (Sibth.) or "xungiōhōrtōn" (= axungia, Fraas); and the "kunia" identified in Syn. Diosc. with the "armas" or "asōuměslavōn" of the Numidians, — and described by Dioscorides as two span high, tender and whitish, with small round fruit close to the leaves, is referred here by Honorius Bellus: the "kunia" is further identified in Syn. Diosc. with the "kunōkramvē" or "linōzōstis agria arrēn:" T. cynocrambe was observed by Sibthorp, Chaubard, and Fraas, in shaded rock-clefts in Crete and Southern Greece. Westward, is described by Bauhin prodr. 59, and Barrelier pl. 335; is termed "cynocrambe Dioscoridis" by Tournefort cor. 52, "t. alsinoideum" by Lamarck fl. fr.; was observed by Forskal near Marseilles; and is known to grow in other parts of Southern Europe (Pers.). Eastward from the Mediterranean, is said to occur also in the East Indies (Pers.).

Crepis biennis of Europe and the adjoining portion of Asia. The "sithilĕas" of the Numidians — identified in Syn. Diosc. with the "sōghitēn" of the Greeks and "lampōuka" of the Romans; also the kind of wild "lactuca" called "hieraciam" by Pliny xx. 26, and the "lactuca sylvatica" of Apuleius Barbarus, are referred here by Fuchsius pl. 319, and Matthioli: C. biennis was observed by Matthioli pl. frequent in Italy; is termed "hieracium maximum chondrillæ folio asperum" by Tournefort inst. 470; is known to grow throughout middle Europe as far as Britain (Pers., and Engl. bot. pl. 149). Eastward, was observed by Forskal, and Sibthorp, in the district around Constantinople.

Scorzonera laciniata? of the Mediterranean countries. The "sithilĕsathĕ of the Numidians, — also called "sōghitēn" by the Greeks, and further identified through Syn. Diosc. with the "ĭĕrakiōn miktōn" of Dioscorides and "intuvōum agrĕstĕm" of the Romans, is referred here by Fuchsius pl. 320, and Matthioli: S. laciniata was observed by Matthioli pl. frequent in Italy; is termed "s. laciniatis foliis" by Tournefort inst. 477; and is known to grow throughout middle Europe (Lam. fl. fr., Jacq. austr. pl. 356, and Pers.). Eastward, was observed by Sibthorp from the Peloponnesus to Constantinople.

Chrysocoma linosyris of Europe and the adjoining portion of Asia. Called in Britain *goldilocks* (Prior), in Germany "goldhaar," in Italy "spilli d'oro di foglia stretta" (Lenz); in which we recognize the "hrusōkōmē" identified in Syn. Diosc. with the "thōuvath" or "vōurhōumath" of the Numidians, — and described by Dioscorides as a span high, growing in stony and shaded places: C. linosyris was observed by Sibthorp in the environs of Constantinople. Westward, the "hrusōkōmē" or "hrusitis" or "hrusanthĕmōn" or "amarantōn" or "thiōs pōgōn" is identified in Syn. Diosc. with the "iovis varva" of the Romans; the "chrysocome" or "chrysitis" is said by Pliny xxi. 26 and 85 to have no Latin name; C. linosyris was observed in Italy by Columna ecphr. i. p. 81; is described also by C. Bauhin; is termed "conyza linariæ folio" by Tournefort inst. 455; and is known to grow throughout middle Europe as far as Britain (Pers., and Engl. bot. pl. 2505).

Plantago psyllium of the Mediterranean countries. Called in Greece "psullōhōrtōn" (Sibth.); in which we recognize the "psulliōn" identified in Syn. Diosc. with the "ōuargōugōum" of the Numidians, — and described by Dioscorides as growing in waste and cultivated ground, its seeds resembling fleas, mentioned also by Galen: P. psyllium was observed by Forskal, Sibthorp, Chaubard, and Fraas, a frequent weed in vineyards and cultivated ground from the Peloponnesus throughout the Greek islands to Constantinople. Farther South, seeds were observed by Forskal mat. med. p. 167, and Delile, in the drug-shops of Egypt and called "qotneh," in which we recognize the "kutuna" of Rhazes, and "kuthuna seeds" of Ebn Baitar. Westward, the "psulliōn" or "psullĕris" or "kataphusis" or "krustalliōn" or "kunokĕphaliōn" or "kunōmuna" or "sikĕliŏtikōn" is identified in Syn. Diosc. with the "konithiis" of the Sicilians, and "silvakiōum" or "ĕrva

pōulikaria" of the Romans; the "psyllium" is mentioned by Celsus v. 2, and is identified by Pliny xxv. 90 with the "cynoides" or "cynomyiam" or "sicelicon" growing in vineyards; P. psyllium is termed "p. majus erectum" by Tournefort inst. 128, and is known to grow in Barbary and in various parts of Southern Europe (Pers.). The seeds according to Lindley, "are peculiarly mucilaginous" and "a good substitute for linseed or marsh mallows."

Potamogeton densus of Europe and the adjoining portion of Asia. Called in Britain *frog's lettuce* (Prior): the "astirkōk" of the Numidians, — identified in Syn. Diosc. with the "thursiōn" or "alimōktōnōn" or "pōtamōgĕitŏn ĕtĕrōs" having leaves resembling those of the beet but thinner, more elongate, and more numerous, and slender stems loaded with reddish fruit astringent to the taste, may be compared: P. densus was observed by Sibthorp, Chaubard, and Fraas, in the streams of the Peloponnesus. Westward, the "pōtamōgĕitŏn ĕtĕrōs" is identified in Syn. Diosc. with the "kōathama" of the Dacians, "taurōuk" of the Gauls, and "vēnai phōliōum" or "ĕrvagŏ" or "glathiatōriam" of the Romans; P. densus is described by Linnæus, and is known to grow throughout middle Europe as far as Britain (Lam. fl. fr., Pers., Engl. bot. pl. 397. See P. crispus).

851 B. C. (= 880 — "29 years" of Apollod., Diodor. and Euseb. i. p. 166), Doryssus succeeded by his son Agesilaus as one of the two Spartan kings; the sixth in the Agid line.

The same year (= 877 y. $317\frac{244}{365}$ d. — "28 years" of twelve lunations of 2 K. x. 36), Jehu succeeded by his son Jehoahaz, eleventh king of Israel.

Anacyndaraxes or Acrazanes, father of Sardanapallus, reigning in Assyria — (Anchial. inscript., Euseb. i. and ii., and Syncell.).

At Nineveh, a gate of the Khorsabad palace fastened by "a huge wooden *lock*," — which is further described by Bonomi nin. iv. 1 as "like those still used in the East." The "mfth" of Isaiah xxii. 22 is further identified with the Egyptian "muftah," the large wooden *key* belonging to these locks.

In the sculptures at Khorsabad, an *umbrella* is figured — (Botta pl. 113). Umbrellas are also figured at Nimroud (Bonom. nin. iv. 2); and were observed by myself in paintings on the walls of the ancient caves at Adjunta in Hindustan.

At Khorsabad also, a *battering-ram* is figured, in use against a city wall — (Bonom. nin. iv. 1).

Also at Khorsabad, the punishment of *impalement* is represented — (Botta pl. 55, and Bonom. nin. iv. 1). This barbarous punishment was sometimes employed by Darius (Herodot. thal. 159); and continues in use among the Persians and Turks.

Pinus sylvestris of Northern Europe and Asia, and mountains farther South. Called in Britain *Scotch fir* from growing on the mountains of Scotland (Prior), in Germany "kiefer" (Grieb), in France "pin sauvage" (Fée), in Italy "pino montano" or "pino selvatico" (Lenz); occurring in the buried submarine forests along the coast of France and Britain (Austen geol. soc. vi. p. 97); and "in Assyrian sculptures a fir-cone is the symbol of fire" — (Prior): the "pitus agria" growing according to Theophrastus iii. 1 on the mountains of Macedonia, is referred here by writers; and the "pinus silvestris" of Pliny xvi. 17 may in part belong here: P. sylvestris occurs in the débris of ancient lake-villages in Switzerland (Troyon); is termed "p. s. vulgaris Genevensis" by Tournefort inst. 586; was observed by Forskal on mountains not far from Marseilles; is known to grow in North Italy and throughout Northern Europe as far as Lat. 70° (A. Dec., and Lenz), also in Siberia (Pers.); was observed by Sibthorp on the Bithynian Olympus; and by Thunberg, in Japan.

The same year = "20th year of Pamai" death of the Apis or sacred bull that was born in the "28th year of Sesonk III.," aged "26 years" — (Birch).

The accession therefore of Sesonk IV., ninth and last king of the Twenty-second dynasty, not earlier than this date. His name occurs on contemporaneous monuments — (Leps. k. pl. 46).

848 B. C. (= 1071 — "80 — 49 — 49 — 45 years" of Apollod., Diodor., and Euseb. i. p. 166), accession of Charilaus grandson of Prytanis, as sixth Spartan king in the Proclid line; under the guardianship of his uncle Lycurgus.

The same year = "4th year of Sesonk IV.," death of an Apis or sacred bull — (Birch).

841 B. C. (= 827 + "14 years," Pauth. p. 104), the Chinese emperor Li-wang, on account of his cruelties, expelled from the throne, and the government conducted by ministers.

The same year (= 822 + "19 years" of Castor, Euseb., and Syncell.), at Athens, Diognetus succeeded by his son Pherecles, eighth archon for life.

The same year = "11th year of Sesonk IV.," death of an Apis or sacred bull — (Birch).

"837 B. C. = 42d year of Li-wang" (Chinese chron. table), beginning of the Thirty-first cycle.

836 B. C. (= 816 + "20 years" of Euseb. i. and ii., and Syncell.), accession of Sardanapallus, son of Anacyndaraxes, as Assyrian emperor.

The city of Anchiale, not far from Tarsus, founded by Sardanapallus; according to a monument there bearing his sculptured portrait with an inscription in Assyrian letters (described and quoted

by Choerilus, Hellanicus, Amyntas, Callisthenes, Aristobulus, Cleitarchus, Apollodorus, and Strabo xiv. 5. 9).

The *dulcimer* figured on the Assyrian monuments at Nineveh; — and is regarded by Bonomi nin. iv. 3 and pl. 202 as the "swmfnyh" of Daniel iii. 5, and the "sumphŏnia" of the Greeks.

The *cymbals* also figured on the Assyrian monuments — (Bonom. pl. 201); and are found to have continued essentially the same to the present day.

The *tambourine* also figured on the Assyrian monuments — (Bonom. pl. 201); clearly the same musical instrument in use to the present day.

The *tamboura* or long guitar, figured on Assyrian monuments at Nimroud, — is identified by Bonomi iv. 3 pl. 114 and 115 with the "sbka" or *sackbut* of Dan. iii. 5; the same instrument continuing in use along the Euphrates and Tigris to the present day.

The *fallow deer*, Cervus dama, figured on the Assyrian monuments at Nimroud — (Bonom. pl. 150): the "dama" is mentioned by Horace, Pliny viii. 79; and as semidomestic, "timidi venient ad pocula damae," by Virgil. At the present day, the fallow-deer is chiefly known as kept in parks throughout Europe; but was seen wild in Palestine by Hasselquist, and Schubert (Kitt. bibl. cycl. ii. p. 464).

834 B. C. (= 850 y. $257\frac{158}{364}$ d. — "17 years" of twelve lunations of 2 K. xiii. 1), Jehoahaz succeeded by his son Jehoash or Joash, twelfth king of Israel.

One hundred and fourth generation. Sept. 1st, 834, mostly beyond youth:

832 B. C. (= 871 y. $357\frac{5}{365}$ d. — "40 years" of 2 K. xii. 1, and 2 Chron. xxiv. 1), Jehoash succeeded at Jerusalem by his son Amaziah, twelfth Jewish king.

The Edomites defeated and their city Selah captured by Amaziah. The name Selah was changed to "Joktheel" — (2 K. xiv. 7): but from the time of the Romans, the city has been called "Petra," at least by Europeans.

Amaziah next invited Joash king of Israel to battle, and was himself defeated. A portion of the wall of Jerusalem was now broken down by Joash — (2 K. xiv. 7 to 13), and the calendar of the conquerors (as will appear presently) was imposed on Judah.

831 B. C. (= 931 — "100 years after the Ionic Migration" of Apollodorus, Clem. Alex. i. p. 327), Agesilaus one of the two Spartan kings.

The same year (= 1071 — "240 years" of Apollod.), a date given for Homer, possibly that of some of the Homerid hymns (see Hesiodic poems).

Eryngium campestre of Europe and the adjoining portion of Asia. Called in Britain *eryngo* (Prior), in France "panicaut" (Nugent) or "chardon roulant" or "herbe à cent têtes" (Fée), in Denmark "hundred hoved" (Spreng.), in Germany "mannstreu," in Italy "eringio" or "calcatreppo" (Lenz), in Greece "aggathia" or "phithaggathŏn" (Sibth.); the ΕΚΑΤΟΝ ΚΑΡΑ of the Hymn to Ceres 12 — may be compared; also the "centum capita" or "eryngion candidam" celebrated among the Magians, Pythagoreans, and in the Sapphic legend respecting Phaon (Plin. xxii. 9): E. campestre was observed by Forskal around the Dardanelles, and by Sibthorp in Greece, but by Fraas only on high mountains. Westward, the "ĕruggiōn" or "ĕruggēn" or "ĕrmiōn" or "mŏlu" is identified in Syn. Diosc. with the "sĭkōupnŏĕx" of the Dacians, "kartĕrai" or "kapitoulōum karthŏus" of the Romans, "kiōtōukapĕta" of the Spanish, and "hĕrthan" or "hitha" or "mountain herb" of the Numidians: E. campestre is termed "e. vulgare" by Tournefort inst. 327; was observed by Forskal near Marseilles; is known to grow from Italy, Morocco, and Portugal (Schousb., and Pers.) throughout middle Europe, in some instances clearly introduced, as far as Denmark (Ray, fl. Dan. pl. 554, Wats., and A. Dec.). Has been long used medicinally, and according to Lindley "a good deal of the candied root is still sold."

Eryngium viride of the East Mediterranean countries. An allied species called in Greece "agkathia" or "phithagkathra," more abundant (Fraas), and possibly the plant in question; as well as the "krōvusŏs" of the Egyptians — identified with the "ĕruggiŏn" in Syn. Diosc.: the "ĕruggiŏn" of Theophrastus vi. 1. 3, Heraclides, Apollodorus, Nicander ther. 645, Plutarch sympos. vii. 2, its young leaves edible according to Dioscorides, is referred here by Fraas: E. viride is described by Link; was observed by Chaubard, and Fraas, abounding in Attica and the Peloponnesus; and the "E. campestre" called in Egypt "schakakel" and observed near the Mediterranean border by Forskal, and Delile, may also be compared.

Mentha pulegium of Europe and the adjoining portion of Asia. Called in Britain *penny-royal*, by old writers "puliol royal," in Holland "poley" (Prior), in Germany "polei" (Grieb), in France "pouliot" (Nugent), in Italy "pulegio" (Lenz), on Malta "poleg" (Forsk.), in Greece "gluphŏni" or "vlēhŏni" or by the Turks "filis cun" (Sibth.), in Egypt "hoboq" (Del.); in which we recognize the "vlēhŏna" identified by Dioscorides with the ΛΥΗΧΟΝΙ of the Hymn to Ceres 209, — Heraclitus, Aristophanes, Polemon diæt. ii, 1 Mul. morb. 606, Theophrastus ix. 16. 1, Theocritus, Nicander ther. 877, Plutarch garrul. 17, or the "vlēhŏn" of Aristophanes pac. 712, Aristophon, and Athenaeus:

identified further in Syn. Diosc. with the "vlēhrōs" of Theophrastus caus. i. 7. 5, and others: M. pulegium was observed by Sibthorp, Chaubard, and Fraas, abounding in vineyards and fallow ground from the Peloponnesus throughout the Greek islands; by Alpinus, and Delile, in Egypt; is known to grow also as far as Caucasus (Lindl.). Westward, the "glēhŏn" or "vlēhrōn" or "arsĕnikanthōn" is identified in Syn. Diosc. with the "alvŏlōn" or "gallis ōpsis" of the Gauls, "apŏlĕiōum" of the Numidians, "pōlĕjōum" of the Romans; and the "pulejum" or "pulegium" is mentioned by Varro, Cicero, and Pliny: M. pulegium is termed "m. aquatica seu pulegium vulgare" by Tournefort inst. 189; was observed by Forskal under cultivation on Malta; is known to grow wild in Italy (Lenz), and from Teneriffe and Gibraltar throughout middle Europe as far as Britain (Pers., Engl. bot. pl. 1026, and Lindl.). By European colonists, was carried to Northeast America before 1669 (Jossel.), but has disappeared (excluded by substituting the medicinal use of the indigenous Hedeoma pulegioides); to Chili, where it has become naturalized (Lindl.). As in the days of Dioscorides, the plant continues in high repute as emmenagogue (Spreng., and Pereir.).

Gladiolus communis of the Mediterranean countries. Called in English gardens *corn flag* or *corn sedge* or *sword-grass* (Ainsw.), in France "glayeul" (Nugent), in Germany "siegwurz," in Italy "pancaciulo" or "gladiolo" (Lenz), in Greece "spathōhōrtōn" (Fraas) or "agriŏkōrkōrōs" (Sibth.); and the ΑΛΑΛΗΔΑΞ of the Hymn to Ceres, — or "agallis" of Nicander fr. 2, may be compared: the "phasganōn" called "xiphōs" from resembling a sword, its root edible, is mentioned by Theophrastus vi. 8. 1 and vii. 13. 1; by Dioscorides, as growing mostly in cultivated ground, having nerved sword-shaped leaves, and a row of purple flowers; by Athenaeus xv. 31, as planted on graves of virgins: G. communis was observed by Sibthorp, Chaubard, and Fraas, frequent in cultivated ground at the opening of spring from the Peloponnesus to Cyprus. Westward, the "xiphiōn" or "phasganōn" or "mahairŏniōn" is identified in Syn. Diosc. with the "sĕgĕtalĕm" or "glathiōlōum" of the Romans; the "gladiolus" is mentioned by Pliny xxi. 38 to 68, Isidorus, and in the Ortus Sanitatis 211: G. communis is termed "g. floribus uno versu dispositis, major et procerior, flore purpurorubente" by Tournefort inst. 365; was observed by Forskal near Marseilles; and is known to occur in Barbary, Italy, and other parts of Southern Europe (Mill., and Pers.).

830 B. C. (= 848 — "18 years" of schol. Plat. rep. x. p. 419 and of Suidas, Eusebius' numbers placing the event two years later), end of the regency of Lycurgus.

"828 B. C." (Callim., Jul. Afr., and Clint. i. p. 140 and ii. p. 500 = 803 + "25 years" of the Euseb.-Maneth. table = 1417 — "194 — 172 — 130 — 49 — 44 years" of the Armenian Euseb.-Maneth. table = "51 — 61 — 20 — 60 — 5 — 7 — 135 — 130 — 120 years" of the Afr.-Maneth. table), at the command of the Delphic Oracle, and after sending an embassy to Egypt (Herodot. ii. 160), the Olympian games restored by Iphitus king of Elis: co-operating with Lycurgus, then or recently regent at Sparta (see Hermipp., Plut., and Athen. xiv. p. 635).

The "disk of Iphitus" bearing an *inscription* — was preserved for some centuries; and is referred to by Aristotle and others, as an example of "ancient writing."

Anagallis arvensis of Europe and Northern Asia. Called in Britain red *pimpernell* or from its flowers closing before rain *poor man's weather-glass* (Prior), in Germany "gauchheil," in Italy "centonchio" or "erba grisettina" or "anagallide" (Lenz), in Greece "pĕrthikōulĕ" (Sibth.) or "kōrhēstra" (Fraas), by the prophets "aima ōphthalmōu" or "hĕlithōniōn" (Syn. Diosc.); and the "kōrhōrōs" from its bitterness the subject of a proverb — according to Theophrastus vii. 7. 2, its leaves "ŏkimŏthĕs," may be compared: the "anagallis" is mentioned in Ulc. 879; is described by Dioscorides as "kĕhumĕna ĕpi gēs" diffuse, and the red-flowered kind is distinguished: A. arvensis was observed by Forskal, Sibthorp, and Chaubard, frequent in cultivated and fallow ground from the Peloponnesus to Constantinople, and according to Fraas eaten as greens; was observed by Forskal, and Delile, in Egypt; was received from both Egypt and Abyssinia by Decandolle; is known to grow also on mount Sinai (Decsne), and about Caucasus (Ledeb.). Westward, the red-flowered "anagallis" is identified in Syn. Diosc. with the "kĕrkĕraphrŏn" of the Dacians, "sapana" of the Gauls, "masitipŏs" of the Tuscans, and "makia" of the Romans; the "anagallida mas flore phoeniceo" is distinguished by Pliny xxv. 92: A. arvensis is described by Lyte; is termed "a. phoeniceo flore" by Tournefort inst. 142; was observed by Lenz in Italy, by Forskal near Marseilles; and is known to occur in cultivated ground as far as Sweden (Vill. dauph. ii. 461, Pers., and Fries). Eastward from Caucasus, is known to grow in Siberia (Ledeb.); also in Persia, employed there to prevent cataract in eyes of horses (S. G. Gmel. trav. iii. 349, and Spreng.); along the Himalayan mountains to Cashmere and Nepaul (A. Dec.); was observed by Thunberg in Japan, purple-flowered; and by Beechey, on the Loo Choo Islands (Hook.). By European colonists, was carried to Madeira and the Azores (Barcl., and Wats.); to Northeast America, where it has become naturalized in open situations in our Atlantic States; to Mexico (Berland.) and California, observed by myself naturalized around San Francisco Bay; to Brazil, Buenos Ayres, and Chili (Saint-Hil., A. Dec., and Poepp.); to Austral Africa (Dec.), the Mauritius Islands (Boj.), Australia (Dec.), and New Zealand (Raoul). The plant as appears from Lindley continues in medicinal use.

Anagallis latifolia of the Mediterranean countries. Called in Yemen "choda" (Forsk.), by the prophets "nukteritis," in Egyptian "mikiēi" (Syn. Diosc.); and the "kōrhōrōs" of the proverb — is identified through Syn. Diosc. with the blue-flowered "anagallis:" the "kōrkōrōn" is mentioned by Aristophanes vesp. 239 as cooked and eaten; is also mentioned by Nicander ther. 626 to 864, and Hephaestion: the blue-flowered "anagallis," said to differ in some of its medicinal properties, is mentioned by Dioscorides, Archigenes, and Galen comp. med. ix. 2; A. latifolia was observed by Forskal on the mountains of Yemen as well as in Egypt; by myself on the river-flat of the Nile, the flowers larger and more showy and always blue; is perhaps the blue-flowered species seen by Forskal, and Sibthorp, as far as Constantinople. Westward, the blue-flowered "anagallis" is identified in Syn. Diosc. with the "asirrisōi" of the Numidians, and "mĕkiatō" of the Romans; is distinguished by Pliny xxv. 92 as flowering earlier and avoided by cattle, but he includes both kinds under "anagallida" called "corchoron:". A. latifolia is described by Linnæus; is known to grow in Spain (Pers.), and in general according to A. Decandolle p. 572 farther South than the preceding species. (See Gladiolus communis).

Anagallis tenella of Europe and the adjoining portion of Asia. The "kōrhōrōs" — according to the scholiast of Nicand. having leaves always reclining on the ground, seems to agree better with this species: the "kōrhōrōs" mentioned separately from the "anagallis" by Galen simpl. vi, may also be compared: A. tenella was observed by Sibthorp on Crete. Westward, is termed "lysimachia humifusa folio rotundiore flore purpurascente" by Tournefort inst. 141; and is known to grow from Italy throughout middle Europe as far as Britain (Curt. lond. iii. pl. 15, Schmidt, and Pers.).

"In this year" (. . . . Lacharme note to Chi-King iii. 3. 9), war carried on by Suen-ouang against the barbarians of the country called Hoai or Hoai-Siu.

"827 B. C. = 1st year of Siouan-wang, of the Tcheou" or Fifth dynasty (Chinese chron. table).

Stone monuments of the time of the emperor Siouan-wang — are preserved in a college at Pekin (Pauth.).

Mespilus Germanica of Eastern Europe and the adjoining portion of Asia. Called in Britain *medlar* (Prior), in France "neflier" or "nespel," in Old French "melier" or "mesplé," in Old German and Danish "mespel" or "mispel" (A. Dec.), in current German "mispel," in Italy "nespolo" and the fruit "nespola" (Lenz), in Greece "mĕskoulĕa" (Fraas); and the "neflier" is mentioned in a Siao-ya ode* — (Chi-King ii. 1. 2) according to Pauthier. Westward, the "mĕspilou ĕtĕrōn" is identified through Syn. Diosc. with the "satanĕiōs" of Theophrastus iii. 12. 5 bearing larger and more spongy fruit, and one of the three kinds distinguished by the inhabitants of mount Ida: the "mĕspilou ĕtĕrōn" is described by Dioscorides as resembling the "mēlŏ" even in its leaves but a smaller tree, its fruit edible subastringent round with a wide umbilicus and ripening slowly; is identified in the added Synonyms with the "ĕpimēlitha" or "sētaniōn;" and directions for the cultivation of "mĕspilōn" are given by Didymus (Geopon. x. 71): M. Germanica was observed by Sibthorp in woods in the environs of Constantinople, and besides cultivated; is known to grow wild also in Thrace and as far as Germany (Spreng.). Farther West, of the three kinds of "mespilis" the "setania" was not in Italy in the days of Cato (Plin. xv. 22), but had arrived before the time of Dioscorides, and the cultivation of "mespilus" is mentioned by Palladius iv. 10. 19: M. Germanica is termed "m. germ. folio laurino non serrato sive m. sylvestris" by Tournefort inst. 641; was observed by Lenz cultivated and seemingly wild in Italy; and is known to occur throughout middle Europe (Pers., and Wats.). By European colonists, was carried to Northeast America, observed by myself under cultivation in our Middle States.

825 B. C. = "27th year of Sesonk IV.," death of an Apis or sacred bull — (Birch).

"In this year" (Hieronym. and Clint. i. p. 166, Diodorus' numbers giving 787 + "45 years" = 832), "Seventh" change in naval dominion. Leaving the Cyprians, the "Empire of the sea" acquired by the Phoenicians. — Held by them "forty-five" years.

From the time of the Phoenician occupation, the Balearic islanders celebrated as slingers; their skill in the art derived originally from their Rhodian ancestors — (see Strab.).

Schoenus nigricans of Europe and the adjoining portion of Asia. A sort of *rush;* and the "mĕlagkrainas" of which some Balearic slings were made — (Strab. iii. 5. 1, and Sil. Ital. iii. 64), used besides for cinctures according to Philetas (schol. Strab.), and according to Theophrastus iv. 12 named from its black fruit, is referred here by Sprengel, and Fraas: the account by Pliny xxi. 69 seems taken from Theophrastus, but Dioscorides adds, that the fruit is round: S. nigricans is described by Morison iii. 8. pl. 10; is termed "gramen spicatum junci facie lithospermi semine" by Tournefort inst. 518; was observed by Sibthorp, Chaubard, and Fraas, frequent in the marshes of the

* *Populus dero* of Eastern Asia. A *poplar* called by the Ainos "dero" (Sieb.); and the "peupliers, yang," growing on Northern mountains according to a Siao-ya ode — (Chi-King ii. 2. 3, transl. Pauth.) may be compared: P. dero was observed by Siebold on the island of Yeso.

Peloponnesus; and is known to grow in marshes more or less maritime as far as Britain (Pers., and Engl. bot. pl. 1121).

822 B. C. (= 802 + "20 years" of Castor, Euseb., and Syncell.), at Athens, Pherecles succeeded by his son Ariphron, ninth archon for life. The same date, possibly marking the same event (= 991 — "121 — 48 years" of the Egyptian Chronicle = 1417 — "194 — 178 — 130 — 49 — 44 years" of the Euseb.-Maneth. table, the same table giving 339 "+ 6 + 4 + 6 + 20 + 21 y. 4 mo. + 6 + 120 y. 4 mo. + 42 + 25 + 17 + 6 + 45 + 8 + 6 + 7 + 12 + 44 + 44 + 44 years" = 822 y. 8 mo., and the Afr.-Maneth. table + "4 + 3 + 2 + 38 + 20 y. 4 mo. + 6 + 124 y. 4 mo. + 150 y. 6 mo. + 40 + 6 + 89 years" = 822 y. 2 mo., also 1417 — "209 — 135 — 130 — 120 years" = 823 = 1413 — "209 — 135 — 130 — 21 — 15 — 25 — 13 — 42 years").

819 B. C. (= 818 y. $251\frac{238}{360}$ d. = 834 y. $77\frac{141}{360}$ d. — "16 years" of twelve lunations of 2 K. xiii. 10, or by the line of Judah 831 y. $357\frac{50}{360}$ d. — "15th year" of 2 K. xiv. 23 = 817 y. $357\frac{50}{360}$ d., or — "15th year" of twelve lunations = 818 y. $144\frac{18}{360}$ d.), Joash succeeded by his son Jeroboam II., thirteenth king of Israel.

818 B. C. (= 865 y. 4 mo. — "47 years" of Phoenician annals in Menander Ephes., and Jos. c. A.), at Tyre, end of the reign of Pygmalion.

About this time (Herodot. iv. 15 . . .), Aristeas visiting the countries North of the Black Sea as far as the Issedones: — the Issedones are described by Herodotus iv. 24 as eating their dead parents; a custom extant in various parts of the East Indies.

From the Issedones, Aristeas obtained accounts of more distant tribes, Arimaspi, Grypi, and Hyperborei, of a nation "dwelling along the Northern Ocean on terms of peace with their neighbours" (a description applicable only to the Laplanders and Samoyedes). — On his return Aristeas embodied his observations in an Epic poem, which appears to have long continued among the Greeks their principal source of information respecting Northern countries. Accounts of the Polar night reached Greece as early at least as the days of Herodotus, who speaks of a people reported to "sleep six months of the year."

In or about "817 B. C." (Thucyd., and Clint. i. p. 141 and ii. p. 408), the Laws of Lycurgus, derived (according to Aristotle rep. ii. 10) "from those of Minos," adopted at Sparta: with the concurrence of Charilaus (according to Plutarch 5), and of Agesilaus (according to Pausanias iii. 2. 4, possibly like Herodotus and Justinus, referring the adoption to the time of the regency). *Written laws* were prohibited by Lycurgus.

Lupinus hirsutus of the Mediterranean countries. Called in Greece "lōupinia" and its seeds "lōupini" (Fraas), on Zacynthus "agriō lōupoundŏ" (Sibth.), in Egyptian "vrĕhōu" (Syn. Diosc.); the only species found by Fraas cultivated in Greece, and there only in the district around Sparta, in seeming connexion with the diet of the ancient inhabitants: — "thĕrmōkuamōus" are mentioned by the poet Diphilus (Athen. ii.): the "thĕrmŏs" as esculent, in the Hippocratic treatises, and by Alexis, Polemon, Timocles, Zeno; by Theophrastus viii. 1. 3 to 11. 8 as a cultivated pulse; and the "thĕrmŏs ēmĕrŏs," by Dioscorides, and in Geopon. ii. 37: L. hirsutus was observed by Sibthorp, Chaubard, and Fraas, wild from the Peloponnesus throughout the Greek islands; by Castagne, as far as Constantinople (A. Dec.); by Forskal, and Delile, in Egypt, in some instances intermingled in crops of L. termis, but whether purposely was not ascertained. Westward, is described by Bauhin hist. ii. 289, and Cupani i. pl. 156; is termed "l. latifolius humilis hirsutus" by Tournefort inst. 392; is known to grow wild in Portugal and Spain (Pers., Boiss., and A. Dec.); was observed by Shaw 393 in Barbary, and by Forskal near Marseilles.

Lupinus pilosus of the Mediterranean countries. Called in Greece "lupōuni" (Sibth.), and possibly included with the preceding: — the "agriōs ĕrĕvinthōs" of Dioscorides ii. 126 may also be compared: L. pilosus was observed by Fraas near Sparta, not known to be cultivated; by Sibthorp, on the Greek islands. Westward, is termed "l. peregrinus major vel villosus cæruleus major" by C. Bauhin pin. 348, is described also by Tournefort inst. 392; and is known to grow in various parts of Southern Europe (Pers.).

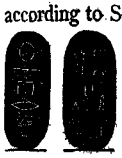
Pisum elatius of the countries around the Black Sea. A species of *pea*, possibly the green ΦΑΕΗΛΟΕ forming the supper of the Spartan warriors — (Polemon, and Athen. ii. 46): P. elatius is however unknown in the cultivated state; is described by Steven, and Bieberstein, and according to Ledebour is indigenous around the Black Sea (Steud., and A. Dec.): the "P. arvense" seen by Sibthorp pl. 687 in cultivated ground about Constantinople, and by Moris in Sardinia, is referred to P. elatius by Grisebach spicil. i. p. 69. (See P. arvense).

Poterium spinosum of the East Mediterranean countries. A bushy spinescent plant called in Greece "aphanna" or "astŏivĕ" (Sibth.) or "stŏivatha" (Fraas), in which we recognize the ΕΤΙΒΑΕΙ beds of the Spartans — (Plut. 16): "stivatha" are mentioned in the Cyclic epigon., also by Herodotus, Euripedes, Xenophon, Plato pol. ii. 372; and the "stŏivĕ" plant, by Aristophanes ran. 1178, Dioscorides, by Theophrastus vi. 1. 3 as prickly separate from the leaves and by some called "phĕŏs:"

P. spinosum was observed by Honorius Bellus in Crete (Clus. ii. p. 303); by Sibthorp, Chaubard, and Fraas, abounding and occupying tracts of country from the Peloponnesus throughout the Greek islands; and is known to grow on Lebanon (Pers.). Westward, the "stōivē" or "stōviōn" is identified in Syn. Diosc. with the "stipam" of the Romans; but the account by Pliny xxi. 54 and xxii. 13 of the "stoebe" or "phleos" seems taken from Theophrastus and Dioscorides: P. spinosum is described by Pena and Lobel (Spreng.); is termed "pimpinella spinosa seu sempervirens" by Tournefort inst. 157; and is known to grow in North Italy (Lenz).

Lycopodium denticulatum of the Mediterranean Countries. A delicate moss-like species. The ΛΥΚΟΦΩΝΑΣ mingled in ΣΤΙΒΑΣΙ in winter in accordance with the Laws of Lycurgus — (Plut. 16), may be compared: L. denticulatum is termed "muscus denticulatus minor" by Tournefort inst. 556; is described also by Dillenius pl. 56 f. 1, and Linnæus; was observed by Sibthorp, and Chaubard, on rocks abounding from the Peloponnesus to Cyprus; is known to grow also in Italy, Corsica, Spain, Tunis, Tangier, and Teneriffe, its alleged presence in Poland being a mistake (Bory).

816 B. C. (= 776 + "40 years" of Euseb. i. p. 46, Diodorus ii. 21 giving 1820 — 1000 years or "thirty generations" = 820), death of the Assyrian emperor Sardanapallus, defeated by Arbaces the Mede and Belesis. Ariphron being at the time archon at Athens; a well-known synchronism, according to Syncellus; and admitted even by Eusebius i. p. 137.



815 B. C. (= "37th year of Sesonk IV.;" the latest date in his reign found on the monuments — (Leps. k. tab. p. 19).

811 B. C. (= 753 + "10 + 8 + 40 yrs" of the Afr.-Maneth. table), accession of Pětōuvatēs or Pětōuvastis, head of the Twenty-third dynasty. The name of king Petsibast occurs on contemporaneous monuments — (Prisse, and Leps. k. pl. 46).

Acacia gummifera of the Tropical Sahara as far as Arabia. Its exudation is called in English *gum arabic*, in Egyptian "kōmē" — (peripl. Erythr., and Kirch.); in which we recognize the "kōmmi" of the Egyptian "akanthē" mentioned by Herodotus ii. 96, the "gummi optimum ex Aegyptia spina" of Pliny xxiv. 65, and the "qwma" of the Talmud (Buxt. lex. talm.): the "samgh turi" brought from Tor into Egypt is identified by Forskal mat. med. with "gummi arabicum," said by other authorities to be procured in small quantities in the Sinai peninsula. The tree is called in Upper Egypt "toull" (Del.), in Yemen "talah" (Forsk.), in which we recognize the "těil" tree of Isaiah vi. 13, and the "talh" loaded from top to bottom with its produce according to Mohammed kor. 56, mentioned also by Abd-allatif: A. gummifera was observed by Delile in Upper Egypt; by Forskal, in Tropical Arabia and its gum collected, but at Mocha I learned that the principal part of the gum arabic of commerce comes from the Somali country. Westward, A. gummifera is known to grow in Barbary as far as Mogador (Lindl.; see Inga sassa).

"806 B. C." (argum. Chi-King i. 7. 1), Hoang-long prince of Tching.

804 B. C. (= 804 y. $49\frac{122}{360}$ d. = 818 y. $251\frac{122}{360}$ d. — "15 years" of twelve lunations of 2 K. xiv. 17), Amaziah slain, and the accession at Jerusalem of his son Azariah or Uzziah, thirteenth Jewish king: (the "15 years" allotted to Amaziah = 14 Julian years and 202 days, implying knowledge of the *Cycle of thirty lunar years* = 10,631 days. — This Cycle continues in use among the Muslims, and is sometimes termed the "Muslim Cycle").

Caucalis daucoides of the Tauro-Caspian countries. Called in Greece "vělōni" (Sibth.), and the ילון lonĕ of Amos v. 7, Deut. xxix. 18, — Prov. v. 4, Jeremiah ix. 15. and xxiii. 15, and Lam. iii. 15 to 19, or the "apsinthōs" of Rev. viii. 11 rendering water bitter and deadly, may be compared; the frequent association of the "lōnĕ" with the "rash" suggesting some compound like the Greek "kōnĕiōn," and the allusion in Hebr. xii. 15 being figurative: the herb "balin" is said by Xanthus of Lydia to have restored a slain dragon to life (Plin. xxv. 5): C. daucoides was observed by Sibthorp, and Chaubard, in cultivated ground from the Peloponnesus to Constantinople; by Hohenacker p. 96 in the Suwant or Talysch country; and was received by Reichard from Egypt (Del.). Farther West, is regarded by A. Decandolle as introduced later than the Roman Period, the plant continuing unknown in Sicily and Sardinia; is described by Bauhin hist. iii. 2. p. 80, and Morison ix. pl. 14; is termed "c. dauci sylvestris folio echinato magno fructu" by Tournefort inst. 323, "conium Royeni" by Linnæus (Steud.); was already in Britain in the days of Ray, was observed by Desfontaines in Barbary, is known to occur also in Italy and throughout middle Europe, everywhere confined exclusively to cultivated ground (Jacq. austr. pl. 157, Pers., Guss., and A. Dec.).

Papaver dubium of the East Mediterranean countries. A kind of *poppy* called in Greece "paparōuna" (Lenz), in Egyptian "nantī" (Syn. Diosc.): the שׂרק rash of Amos vi. 12, Deut. xxix. 18 to xxxii. 32, — Job xx. 16, Psalm lxix. 21, Jeremiah ix. 15, and Lam. iii. 19, springing up in the furrows of the field and flowering beautifully as appears from Hosea x. 4, and yielding a juice according to Jer. viii. 14 to xxiii. 15, may be compared with the "mēkŏn rōias" of Dioscorides having an oblong capsule with reddish seeds and flowers sometimes white, referred here by Sprengel: P. dubium was observed by Sibthorp, and Fraas, on the hills of the Peloponnesus and Attica; by Visiani iii. p. 99,

on grassy hills in Dalmatia; and is known to grow on the plains of the Crimea (Bieb.). Westward, the "mēkŏn rōias" or "ōxutōnōn" is identified in Syn. Diosc. with the "papavĕralis" of the Romans: P. dubium is regarded by A. Decandolle as introduced from Greece Westward, continuing unknown in 1837 in Sardinia, and in 1847 in Algeria; but had reached Britain before the days of Gerarde; is termed "p. erraticum capite longissimo glabro" by Tournefort inst. 238; was observed by Forskal near Marseilles; and is known to occur in Italy and throughout middle Europe as far as Denmark, always in cultivated ground (fl. Dan. pl. 902, Jacq. austr., Pers., and Lenz). By European colonists, was carried to Northeast America, where it has been observed in cultivated ground in our Middle and Southern States (A. Gray, and Chapm.).

Papaver rhoeas of the Tauro-Caspian countries. Called in Britain *corn poppy* or *redweed* or *cop-rose* (Prior), in Germany "klapperose" or "klatschrose" (Grieb.), in France "coquelicot" (Nugent), in Italy "rosolaccio" or "papavero erratico" or "p. selvatico" (Lenz), in Greece "paparōuna" or on Cyprus "pĕtēnōs" (Sibth.), and possibly the plant in question: — the "mēkŏn rōias" is described by Theophrastus ix. 12. 4 as an "agria" kind springing up in cultivated ground and bearing a red flower, the capsule as large as a finger-nail; the "mēkŏn agria" by Dioscorides iv. 65 as having black seeds and by some called "pithitis," or from its flowing juice "rōias:" P. rhoeas was observed by Sibthorp, Chaubard, and Fraas, in cultivated ground from the Peloponnesus to Cyprus, colouring whole tracts of country with its flowers at the opening of spring; by Bieberstein, in waste places and cultivated ground in the Crimea; by C. A. Meyer, in wild situations near Baku, Southeast of Caucasus; and by Delile, on the Mediterranean border of Egypt. Westward, the "rhoeam" of the Greeks is identified by Pliny xix. 53 and xx. 77 with the "papaver erraticum" growing in cultivated ground: P. rhoeas was already in Britain in the days of Gerarde; is termed "p. erraticum majus" by Tournefort inst. 238; was observed by Gussone naturalized on Sicily, but elsewhere occurs throughout Western Europe only as a weed in grain-fields (Pers., and A. Dec.). Eastward from Caucasus, is regarded as the "lala" of the Persian poets and is called "lala" by the Muselmen of Hindustan, as observed by Law "in gardens at Surat and Broach" (Graham); was observed by Kaempfer, and Thunberg, in flower-vases in Japan or sometimes springing up spontaneously, and called "reisjun" or usually "bidsinsoo." By European colonists, was carried to Northeast America, where it continues under cultivation as a garden flower. The plant according to Pereira, and Lindley, "is not known to be narcotic," the *syrupus rhoeados* made from the petals being "useful merely as a colouring matter."

802 B. C. (= 795 + "7 yrs" of Castor in Euseb. = 350 + "18 + 39" + erased 6 + "124 + 177 + 44 + 44 yrs" of the Egyptian Chronicle, the Eg. Chronicle also giving 822 — "19 yrs" = 803 = 759 + "44 yrs" of the Eg. Chron. and Euseb.-Maneth. table = 828 — "25 yrs." of the same table), at Athens Ariphron succeeded by his son Thespieus, now tenth archon for life.

Aegys on the frontier of Arcadia, conquered by Charilaus and his colleague Archelaus, seventh Spartan king in the Agid line. An oracle delivered to the two kings jointly, is preserved by Oenomaus (in Euseb. pr. v. 32 p. 226).

One hundred and fifth generation. Jan. 1st, 800, mostly beyond youth: the prophet Zechariah (2 Chron. xxvi. 5).

"799 B. C." (= 758 + "25 + 16 years" of Diodor., Euseb., and Clint. i. p. 130 and 160), Telestes being as yet a boy, death of his father Aristomedes or Aristodemus, and the accession of Agemon as ninth king of Corinth.

In the reign of Uzziah, an important change in warfare, through the invention of the *catapult:* described in 2 Chron. xxvi. 15 as "engines to shoot arrows and great stones."

795 B. C. (= 778 + "17 years" of Castor in Euseb. i, p. 137, and of Syncell.), at Athens, Thespieus succeeded by his son Agamestor, eleventh archon for life. "Twenty" years are however assigned to Agamestor by Eusebius.

The Spartans prospering under the Laws of Lycurgus became desirous of extending their authority over the Arcadians, and on consulting the Oracle were informed, That they could measure the territory of Tegea with a "shŏinŏ" rope. Accordingly under the lead of Charilaus they attacked Tegea, and were defeated; but the Oracle was fulfilled through captive Spartans being bound with the rope brought for the above purpose. Part of this rope — was preserved in the temple of Minerva at Tegea to the time of Herodotus i. 66 (Pausan. iii. 2 to viii. 48, and Sm. b. d.).

Scirpus (*Isolepis*) *holoschoenus* of the seashore along the Mediterranean and adjoining portion of the Atlantic. A sort of *rush* called in France "scirpe jonc" (Fée), in Greece "kōphō vrōulō" (Forsk.) or "kōuphōvrĕlōs" (Sibth.) or "kōuphōvōurlōs" (Fraas); and probably furnishing the "shōinŏ" rope in question: — "shōininōs" made of rushes, is mentioned by Euripedes cycl. 268; and "shōiniōn" cord, by Aristophanes acharn. 22, and Demosthenes 1145. 6: the "ōlōshōinōs" is described by Theophrastus iv. 12. 1 to ix. 12. 1 as sharp-pointed, fleshy and soft and therefore more useful for textile purposes, is enumerated by Dioscorides iv. 52 as the third kind of "shōinōs ĕlĕia:"

S. holoschoenus was observed by Forskal, Sibthorp, Chaubard, and Fraas, frequent in the sands of the seashore from the Peloponnesus throughout the Greek islands. Westward, "vincla juncea" are mentioned by Ovid . . . ; the "ōlōshōinōs" is identified through Syn. Diosc. with the "iōugkōum marinōum" or "manualĕm" of the Romans; and the "holoschoenos" is enumerated by Pliny xxi. 69 to 71 as a kind of "iuncus:" S. holoschoenus is termed "iuncus acutus maritimus" by C. Bauhin theatr. 174, "s. maritimus capitulis rotundioribus glomeratis" by Tournefort inst. 528; is known to grow in Italy, Algeria, and along the Atlantic as far even as Britain (Pluk. pl. 40, Jacq. austr. pl. 448, Pers., Spreng., and Engl. bot. pl. 1612). "S. Romanus" having a slender stem, and known to grow from Siberia to Rome and Southern France (Pers.), observed by Forskal, and Sibthorp, from the Dardanelles throughout the Greek islands, is regarded as not distinct.

Fumaria parviflora of Europe and the adjoining portion of Asia. Called in Greece "staktĕri" or "kapnōhōrtō" or "kapnō" (Sibth.), in which we recognize the "kapnōs" identified in Syn. Diosc. with the "knux" or "tōukin" of the Egyptians: — F. parviflora was observed by Delile around Cairo in Egypt. Farther North, the "kapnōs" is described by Dioscorides as a little bushy herb resembling coriander, altogether tender, the flower purple, juice improving vision and inducing tears, and hence the name; is mentioned also by Galen, and Paulus Aegineta: F. parviflora was observed by Sibthorp, and Chaubard, abounding everywhere in cultivated ground from the Peloponnesus throughout the Greek islands. Westward, the "kapnōs" or "kapnōgōrgiōn" or "hĕlithŏniōn mikrōn" or pĕristĕriōn" or "kōruthaliōn agriōn" is identified in Syn. Diosc. with the "apiōum" of the Romans; the description by Pliny xxv. 99 of "capnos fruticosa" is chiefly taken from Dioscorides; F. parviflora is described by Clusius hispan. p. 375, and Tournefort inst. 422; is known to occur in cultivated ground in Italy, and throughout middle Europe as far as Britain (Engl. bot. pl. 590, Pers., and Lenz). Eastward from Egypt, is called in the environs of Bombay "pitpatra," and was observed there by Lush, and Gibson (Graham); by Roxburgh, Royle, and Wight, in other parts of Hindustan, having according to Drury "long been acclimatised" as far even as the Neilgherries, Bengal, and Nepaul, and employed medicinally.

Sedum amplexicaule of the East Mediterranean countries. Called in Greece "amarantōn" (Fraas); the "aĕizōōn tō mikrōn," identified in Syn. Diosc. with the "ĕtiĕikĕlta" of the Egyptians, —and according to Dioscorides growing on walls and rocks, its root giving out many stems full of small terete sharp-pointed leaves, the central flower-stem a span high bearing a cyme of greenish-yellow flowers, is referred here by Fraas: S. amplexicaule was observed by Sibthorp, Chaubard, and Fraas, frequent on walls and in stony places in Attica and the Peloponnesus. Westward, the "aĕizōōn tō mikrōn" or "pĕtrōphuĕs" or "vrōtiōn" or "thĕōvrōtiōn" or "krōvussōn" or "hĕimĕrinēn" or "kĕraunia" is further identified in Syn. Diosc. with the "vitalis" or "ĕrva sĕmpĕrviva" of the Romans; the account by Pliny xxv. 102 of the "aizoum" or "sempervivum minus" seems taken from Dioscorides, but he adds that the root is useless; and S amplexicaule was observed near Naples by Tenore (Bory).

Peucedanum cervaria of the mountains of Southern Europe. Called in Germany "hirschwurz" (Lenz): the "ĕlaphōvōskōn" identified in Syn. Diosc. with the "hēmis" of the Egyptians, — and according to Dioscorides cropped by deer as an antidote against snake-bites, its stem resembling that of "marathrŏ" or "livanŏtithi," leaves "tĕrĕvinthōu"-like and roughish, umbels of yellowish flowers and "anēthŏ"-like seeds, its white sweet root three fingers long by one thick esculent as well as the young stem, is referred here by Delarbre p. 429: P. cervaria is known to grow in Greece (Lenz). Westward, the "ĕlaphōvōskōn" or "ĕlaphikōn" or "nĕphriōn" or "ōphigĕniōn" or "ōphiōktōnōn" or "ĕrpuxē" or "lumē" is identified in Syn. Diosc. with the "askaōukau" of the Numidians, and "kĕrvi ōkĕllōum" or "kĕrvina" of the Romans; the "elaphoboscon" pointed out by deer is described by Pliny xxii. 37 and xxv. 52 as an esculent ferulaceous plant with leaves of "olusatri," and medicinal properties not mentioned by Dioscorides are enumerated: P. cervaria is described by Tragus, and Lobel (Spreng.); was observed by Viviani in North Africa (Steud.); by Lenz, throughout Italy; and is known to grow in fallow ground in mountainous situations from Austria and Switzerland to the Pyrenees (Jacq. austr. pl. 69, Roth, Scop., Hall., and Lapeyr.).

Seseli annuum of the mountains of Southern Europe. A kind of *wild parsley* called in Germany "bergsilge," in Greece "agriōs maithanōs" (Fraas): the "ōrĕōsĕlinōn" identified in Syn. Diosc. with the "anōnim" of the Egyptians, — and described by Theophrastus vii. 6. 4 as having a slender root, leaves like "kŏnĕiŏ," fruit "anēthōn"-like but smaller and emmenagogue, by Dioscorides as a span high growing in stony mountainous situations, and having oblong aromatic "kuminŏ"-like fruits, mentioned also by Paulus Aegineta, is referred here by Fraas: S. annuum was observed by Sibthorp, and Fraas, on the mountains of Attica and Cyprus. Westward, the "ōrĕōsĕlinōn" or "pĕtrōsĕlinōn agriōn" is identified in Syn. Diosc. with the "apiōum" of the Romans; but the account of the "oreoselinon" by Pliny xx. 46 seems taken from the Greek: S. annuum is described

by Morison iii. 9. pl. 8, and is known to grow in Pannonia and Southern Germany and France (Villars delph., Jacq. austr. pl. 55, Crantz, and Poll.).

Ambrosia maritima of the Mediterranean seashore. Called in Egypt "demsyseh" (Del.): the "amvrōsia" identified in Syn. Diosc. with the "mĕrsĕō" of the Egyptians, — and according to Dioscorides branchy and three span high from a slender root, with small "pēganōu"-like leaves around the shooting of the stem, grape-like racemes never flowering but full of seed, wine-scented and entwined in garlands in Cappadocia, is referred here by writers: A. maritima is known to grow on the seashore of Cappadocia (Pers.); was observed by Chaubard around the Peloponnesus and Greek islands; by Forskal p. 160 and Delile, from Alexandria to river-islands near Cairo, and employed medicinally. Westward, the "amvrosia" or "vōtrus" or "vōtrus artĕmisia" is identified in Syn. Diosc. with the "kaprōum silvatikōum" or "apiōum rōustikōum" of the Romans; but the account of the "ambrosia" by Pliny xxvii. 11 to 31 seems chiefly taken from Dioscorides: A. maritima is described by Lobel obs. p. 442, and Dodoens p. 35 (Spreng.); and is known to grow on the seashore of Etruria (Pers.).

Convolvulus arvensis of middle Asia. Called in Britain *bindweed* or *withwind*, in Anglo-Saxon "withwinde" (Prior), in Germany "acker-winde," in Italy "viticcio" or "vilucchio minore" (Lenz), in Greece "pĕriplokatha," or by the Turks "sarmasjik" (Forsk.), in Egypt "o'lleyq" (Del.); in which we recognize the "ĕlxinē" with long "pĕriplĕkōmĕna" branches identified in Syn. Diosc. with the "apap" of the Egyptians, — further described by Dioscorides as growing in hedges and cultivated ground, its leaves ivy-like but smaller, juice somewhat purgative, and referred here by writers: the "pĕriplokatha" is mentioned by the scholiast of Theocritus v. 128: the "ullaik," by Ishak ben Amran, Gafeki, Edrisi, and Ebn Baitar: C. arvensis is known to occur around Caucasus (Ledeb.); was observed by Forskal, Sibthorp, Chaubard, and Fraas, frequent in cultivated ground from Constantinople to the Peloponnesus; by Delile, around Rosetta and Cairo; was received by Choisy from Arabia and Abyssinia. Westward, the "ĕlxinē" or "amĕlxinēn" or "mĕlampĕlōn" or "kissampĕlōn" or "kissanthĕmōn" is further identified in Syn. Diosc. with the "vōlōutōu laparōu" of the Romans: C. arvensis is described by Valerius Cordus, Fuchsius, Matthioli, and Dodoens (Spreng.); is termed "c. minor arvensis flore roseo" by Tournefort inst. 83; was observed by Munby in Algeria; by Forskal, on Malta and near Marseilles; and is known to occur in cultivated and fallow ground as far as Sweden (Boec. mus. pl. 53; fl. Dan. pl. 569, and Fries). Eastward from Caucasus, was observed by Malcolm in Persia; by Gibson "common" on the Deccan and "flowering during the rains" (Graham), naturalized as observed by myself; is known to grow along the Altaian mountains and as far as Daouria and Northern China (Ledeb., and Bunge). By European colonists, was carried to Madeira and the Azores (Choisy, and Wats.); to Northeast America, where it has become a frequent weed; to Mexico, Buenos Ayres (Choisy), and Chili (C. Gay); to the Mauritius Islands, and Southeast Australia (Corder, and A. Dec.).

Scrophularia peregrina of the East Mediterranean countries. A species of *brownwort* called in Greece "vrōmōhōrtōn" (Sibth.): the "galiōpsis" identified in Syn. Diosc. with the "aithōpi" of the Egyptians, — and described by Dioscorides as growing in court-yards and along hedges and footpaths, resembling in stem and leaves the nettle but the leaves smoother and heavy-scented if bruised, flowers slender and purplish, is referred here by writers: S. peregrina was observed by Sibthorp, and Chaubard, throughout Greece precisely in the situations described by Dioscorides. Westward, the "galiōpsis" or "galĕōvthōlōn" or "galĕphōs" is further identified in Syn. Diosc. with the "ōurtika lavŏnĕm" of the Romans; but the account by Pliny xxvii. 57 of the "galeopsis" or "galeobdolon" seems taken from Dioscorides (including the name "galion" transferred by mistake from the succeeding article): S. peregrina is described by Anguillara, and Camerarius hort. pl. 43 (Spreng.); is termed "s. folio urticæ" by Tournefort inst. 166; and is known to grow in Bosnia, Illyria, Italy, and as far as France (Lam. fl. fr., Pers., and Spreng.).

Ballota nigra of Europe and the adjoining portion of Asia. Called in Britain *black horehound* (Prior), in Italy "cimicciotto" or "marrubio bastardo" or "ballota" or "ballota nera" (Lenz), in Greece "pispĕritza" (Sibth.); in which we recognize the "vallŏtē," identified in Syn. Diosc. with the "aima Isiŏnōs" of the prophets, and "asphōs" or "ĕskĕ" of the Egyptians, — and described by Dioscorides as having several somewhat hairy tetragonal stems from a single root, and at intervals roundish leaves "prasiō"-like but larger and hairy, strong-scented and resembling "mĕlissōphullōu," the flowers rotate around the stem: B. nigra was observed by Forskal, Sibthorp, and Fraas, in waste places from Greece and the Greek islands to Constantinople and Smyrna. Westward, the "vallŏtē" or "mĕlan" or "mĕga prasiōn" or "prasiōn ĕtĕrōn" is further identified in Syn. Diosc. with the "apniōum" or "mĕlitam" or "ōulkĕraria" or "marrŏuviōum" or "kanthērinōum" of the Romans; the "marrubium nigrum" is mentioned by Castor, but the account by Pliny xx. 89 and xxvii. 30 of the "balloten" seems taken from Dioscorides: B. nigra is described by Fuchsius p. 154 (Spreng.); is termed "ballote" by Tournefort inst. 185; was observed by Forskal near Marseilles; and is

known to occur in waste ground from Italy throughout middle Europe as far as Britain (Engl. bot. pl. 46, Pers., and Lenz). By European colonists, was carried to Northeast America, where it continues in waste places in New England.

Hordeum murinum of Europe and the adjoining portion of Asia. Called in Britain *wall barley* or *mouse barley*, in Germany "maus-gerste" (Prior), in Greece "agriōstakus" (Sibth.), in Egypt "abu stiri" (Forsk.); in which we recognize the "rōun stahuōs" identified in Syn. Diosc. with the "athnōn" of the Egyptians, — and "phōinix" of Dioscorides, growing in cultivated ground and upon freshly-daubed roofs, its leaves shorter and narrower than those of barley, and spike "aira"-like, mentioned also by Paulus Aegineta: H. murinum was observed by Forskal, Sibthorp, and Chaubard, frequent from the Peloponnesus to Constantinople and Smyrna; by Hasselquist, and Forskal, on the Mediterranean border of Egypt at Alexandria and Damietta. Westward, the "phōinix" or "phōinikōptĕrōn" or "rōun" or "aghinŏpa" or "ōsthalēn" is further identified in Syn. Diosc. with the "palōlōu kōupinōum" of the Romans; and the "herba phoenicea," by Pliny xxii. 65 with "hordeum murinum:" H. murinum is described by Tragus (Prior); is termed "gramen spicatum vulgare secalinum" by Tournefort inst. 517; was observed by Forskal on Malta, and near Marseilles; and is known to occur throughout middle Europe as far as Denmark (fl. Dan. pl. 629, and Pers.).

788 B. C. (= 848 — "60 years" of Apollod., Diodor., and Euseb. i. p. 166), Charilaus succeeded by his son Nicander as one of the two Spartan kings; the seventh in the Proclid line.

"787 B. C." (Hieronym., and Clint., = 1169 — "92 — 85 — 79 — 23 — 25 — 33 — 45 years" of Diodorus in Euseb.), "eighth" change in naval dominion. Leaving the Phoenicians, the "Empire of the sea" acquired by the Egyptians.

783 B. C. (= 793 — "10 years" of both Maneth. tables), end of the reign of Psammōus. In the Afr.-Maneth. table, he is succeeded by "Zēt;" but no such king has been found on the monuments (see below, Vōhhŏris).

"782 B. C. About this time" (Scymn., and Clint. i. p. 206), Sinope on the Black Sea founded or occupied by Greek colonists under Ambron of Miletus. Ambron was slain by the Cimmerians; who, with the Amazons, were making a Third irruption into Asia Minor.

Raphanistrum maritimum of the seashore from the Caspian along the Mediterranean and Atlantic as far as Britain. The *black radish* or *Spanish radish* is called in Germany "rettig" (Grieb), in Italy "radice" or "rafano" or "ramoraccio" (Lenz), in Greece when growing spontaneously "agria rapania" (Fraas sec. Gay); in which we recognize the "raphanum silvestre" or "agrion" identified by Pliny with the "armon" of the people of Pontus, — also the "amŏrĕan" kind of "raphanithōs" mentioned by Theophrastus vii. 4. 2, and the "armōrakian" of the Romans identified in Syn. Diosc., and by Pliny xix. 26 and xx. 12, with the "raphanis agria:" "raphanithas" are mentioned by Epicharmus, Cratinus, Pherecrates, Eupolis, Metagenes, Amphis, Aristophanes, Antiphanes, Diocles of Carystus, Androcydes, Dioscorides, Galen, Athenaeus ii. 48, and are identified in Syn. Diosc. with the "thōrpath" of the Numidians, and "rathix nōstras" of the Romans: the "raphanus" is mentioned by Varro, Horace, Columella, and Pliny: the "raphanis agria," by Theophrastus . . ., by Dioscorides as medicinal and its leaves and slender root eaten as potherbs, and is identified by Galen fac. alim. ii. p. 622 with the "rapiam" of the people of Asia: R. maritimum is described by J. E. Smith, as observed on the seashore of Britain (Engl. bot. pl. 1643); is known to grow at Gibraltar (Gay); was observed by Moretti in Italy; seems frequent in Greece (Fraas, and Gay); is known to grow on the shores of the Caspian (A. Dec.); and according to Gay is cultivated in Siberia and Southern France, in the second year developing a fleshy root. (See Raphanus sativus).

"781 B. C. = 1st year of Yeou-wang, of the Tcheou" or Fifth dynasty — (Chinese chron. table).

"779 B. C. About this time" (742 to 740 + "38 years" of Apollod., Diodor., and Euseb. i. p. 166, see also Ephor., Pausan. iii. 2. 6 and 7. 4, and Clint. i. p. 338), the first difficulty with the Messenians: Teleclus, son of Archelaus and one of the two Spartan kings, slain in an affray at a temple of Diana. He was succeeded by his son Alcamenes, ninth king in the Agid line; and his colleague Nicander at once led an army into Argive territory. Of three extant sayings of Nicander (Plut. mor. p. 230), one refers to the Argives.

"778 B. C." (. . . . Clint. i. p. 150), at Athens, Agamestor succeeded by his son Aeschylus, twelfth archon for life.

Asclepiadae, hereditary priests of Aesculapius, continuing in the practice of the healing art at Cnidus — (Sm. b. d.).

Daphne Gnidium of the Mediterranean countries. A low shrub called in France "garou" (Fée), in Greece "kausa" or "kapsa" (Fraas); in which we recognize the "casiam of Hyginus" identified by Pliny with the "cneoron" producing "granum Gnidium;" employed by the Asclepiadae of Cnidus, — and hence the name (Ruf. Ephes., and Orib. vii. 26): "kōkkōu knithiōu" of Int. affect. 8, and Theophrastus ix. 20. 2, "knĕōrōu" of Democritus (geop. xv. 2. 37), Nat. mul. 29, Int. aff. 23, 1 Morb.

mul. 45, Apollonius Memphites, and "knēstrōn" of 1 Morb. mul. 111, are all identified in Syn. Diosc. with the "thumĕlaia" of Dioscorides, a shrub growing in rough mountainous situations and producing "knithĕiōs kōkkōs," its leaves also collected and dried and specially called "knĕŏrōn:" the "thumĕlaia" or "purōs ahnēa" is further identified in Syn. Diosc. with the "apōlinōn" or "linōn" of the Syrians, named from the resemblance; the "thymelaeam" or "pyros achnen" or "cnestron" or "linum" of Greece and Asia is described from Dioscorides by Pliny xiii. 35 and xxi. 29; and "habb Cnidijeh" are mentioned by Ebn Baitar: D. Gnidium was observed by Sibthorp, Chaubard, and Fraas, from the Peloponnesus throughout Greece frequent in the situations indicated by Dioscorides. Westward, is described by Matthioli, and Clusius (Spreng.); is termed "th. foliis lini" by Tournefort inst. 594; and is known to grow in Italy, Barbary, Spain, and Southern France (Pers., and Lenz). Its properties according to Lindley are "like those of Mezereum" (see D. cneorum).

"777 B. C. = 5th year of Yeou-wang" (Chinese chron. table), beginning of the Thirty-second cycle.

"776 B. C." (= "2d year of the Athenian archon Aeschylus and in the reign of Uzziah," Euseb. and Clint., = 1413 — "51 — 61 — 20 — 60 — 5 — 7 — 135 — 130 — 120 — 40 — 8 years" and in the reign of "Pĕtōuvatēs" of the Afr.-Maneth. table, the Euseb.-Maneth. table giving 332 + "6 + 4 + 6 + 20 + 21 y. 4 mo. + 6 + 120 y. 4 mo. + 163 + 44 + 44 + 10" = 776 y. 8 mo.), the First registered Olympiad: Coroebus declared victor.

"Sept. 6th" = "winter, on the first day of the tenth month in the 6th year of Yeou-wang" (Li-tai-ki-sse, Gaubil, and Pauth. 106), *eclipse* of the sun.

As early probably as this date, products of the Moluccas brought to China.*

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* *Cocculus crispus* of the Equatorial portion of the Malayan archipelago, from Java to the Moluccas. A woody climber spreading over trees, called in Malay "putra-wali" (Lindl.), and from early times employed medicinally: — termed "funis felleus" by Rumphius v. pl. 44; and known to grow on Java, Baley, and Amboyna, the whole plant exceedingly bitter, a powerful febrifuge employed by the Malays in intermittents (Roxb., and Lindl.).

Hedera umbellifera of the Moluccas. A woody Araliaceous plant — termed by Rumphius ii. pl. 12 "pseudosantalum amboinense" as observed on the mountains of Amboyna, yielding according to Lindley "a blackish or dull brown resin with a very powerful aromatic or camphorated odour." The plant from transported specimens is described by Lamarck dict. i. 225.

Strychnos ligustrina of Timor and neighbouring islands. Having the aspect of the orange tree and called "caju-ular" or "caju-nassi" or "caju-bidara-pait" or "caju-bidara-laut" (Lindl.); and from early times in the Malayan archipelago its wood employed medicinally: — described by Rumphius ii. pl. 38 and termed "lignum colubrinum caju ular;" furnishing according to Blume rum. i. 68 the *lignum colubrinum* of Timor, formerly in the highest estimation, but omitted from modern practice (Lindl.).

Soulamea amara of the shores of the Moluccas. A Polygalaceous shrub or small tree, from early times used medicinally: — termed "rex amaroris" by Rumphius ii. pl. 41 from the "horrenda amarities" intense bitterness of all its parts, especially the roots and fruit. In the Malayan archipelago, according to Lindley, employed "with extraordinary success in cholera, and pleurisy, and most valuable as a febrifuge."

Sandoricum Indicum of the Eastern portion of the Malayan archipelago. An elegant Meliaceous tree called in Burmah "theet-to" (Mason), in Malay "santoor" (Graham), in Tagalo "santol" (Blanco); and from early times, its fruit eaten and sweet-scented wood valued: — observed by Rumphius i. pl. 61 on the Moluccas (Pers.); by Blanco, well known on the Philippines. Westward, by Blume on Java, its root aromatic, stomachic and antispasmodic, employed in combination with bark of the root of Xylocarpus obovatus against leucorrhœa (Lindl.); by Mason v. 457 to 525, "exotic" in Burmah, affording "good timber" and the "fleshy acid pulp" of its mangosteen-like fruit highly relished by the natives; was observed by Roxburgh in Hindustan; and by Nimmo has been recently introduced into the environs of Bombay (Graham).

Cicca disticha of the Eastern portion of the Malayan archipelago. The *country gooseberry* is a small Euphorbiaceous tree called in the environs of Bombay "harparewree" (Graham), in Hindustanee "harfaroorie," in Telinga "rassa useriki," in Tamil "arunelli," in Bengalee "nubaree" (Drur.), in Burmah "them-bau-hzee-phyu" (Mason); and from early times, its fruit eaten: — termed "cheramela" by Rumphius vii. pl. 33; and probably one of the species seen on the Philippines by Blanco. Westward, was observed by Mason v. 454 to 479 "exotic" in Burmah, planted all over the country, its fruit "highly" valued by the natives, and seeds employed as purgatives; was observed in Hindustan by Roxburgh, and Buchanan; by Rheede iii. pl. 47 and 48, in Malabar; by Graham, "pretty common in gardens, Bombay," its fruit of the "size of a gooseberry," having "an acid flavour," and "sometimes sold in the bazar."

Cæsalpinia nuga of the Moluccas. Woody, unarmed, when growing among trees climbing, and

"775 B. C." (Euseb., and Clint.), Arctinus, the earliest poet of the epic Cycle, at this time writing. One of his verses is important in Greek Mythology, from representing Jupiter dancing.

"774 B. C." (Euseb., and Clint.), in Italy, the two cities of Pandosia and Metapontum founded by Greek colonists.

771 B. C. (= 753 + "10 + 8 yrs" of the Afr.-Maneth. table, the Euseb.-Maneth. table giving + "10 + 9 yrs" = 772), Pětōubatēs succeeded by Osōrhŏ or Osŏrthŏn, second king of the Twenty-third dynasty. By the Egyptians, he was "called Hercules." The name of king Osarkon III. occurs on contemporaneous monuments — (Leps. k. pl. 46).

The mummy recently unrolled in Boston proved to be that of a person who died in this king's reign: the ovals of "Osorkon III." being stamped on leather bands.

Cyperus rotundus of Tropical and Subtropical Asia. The *nut-grass* is called in Greece "kupĕirē" (Sibth.), in Egypt "sa'ed," in Nubia "magysseh" (Del.), and tubers unrolled from this mummy — appeared to me to belong here: the living C. rotundus was observed in Egypt by Delile. Farther North, the "kupĕirōn" having a fragrant root is mentioned by Hippocrates vict. acut. 409; by Theophrastus iv. 10. 5 and od. 28 as difficult to extirpate, producing at intervals underground swellings, an ointment from its roots imported from the Cyclades; by Dioscorides, as occurring in cultivated ground and producing a plexus of olive-like roots; is identified in the added Synonyms with the "iōunkōum" or "iōunki radikĕm" of the Romans, and the "iunci trianguli" by Pliny xxi. 69 with the "cyperon:" C. rotundus is described by Morison viii. pl. 11; is termed "c. r. vulgaris" by Tournefort 527; was observed by Sibthorp, Chaubard, and Fraas, from the Peloponnesus throughout the Greek islands, troublesome in vineyards and its roots according to Hawkins placed on account of their fragrance among clothing; is known to occur also in Italy and other parts of Southern Europe (Gouan, Targ., and Steud.). Eastward from Egypt, is called in Bengalee "moothoo," in Telinga "shaka-toonga," in Tamil "koray" (Drury); was observed by Graham in the environs of Bombay, its roots "used both as a perfume and medicine;" by Rottler, and Roxburgh, in other parts of Hindustan, and according to Drury "is perhaps the most common species" as far as Bengal; is described also by Rumphius vi pl. 1; roots of a Cyperus that "taste like filberts" were seen by Mason v. p. 473 in Burmah; and C. rotundus by Thunberg in Japan, and called "kobusi" or "sanrio." By European colonists, was carried to America, probably to the West Indies or Florida, and extending thence has become exceedingly troublesome in cultivated ground in our Southern States; is termed "c. hydra" by Michaux. (See Lathyrus amphicarpus).

"In this year" (Lacharme note to Chi-King i. 6. 1) the Chinese emperor Yeou-wang defeated and slain by the prince of Chin assisted by the Western Tartars. Succeeded by his son Y-kieou, who took the name of Ping-wang.

"770 B. C. = 1st year of Ping-wang, of the Tcheou" or Fifth dynasty — (Chinese chron. table).

A vase inscribed with a decree of Ping-wang, ceding territory to the prince of Thsin, has been discovered in the province of Chĕn-si — (Pauth. 107).

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from early times employed medicinally: — observed by Rumphius v. pl. 50 on Amboyna (Pers.), a decoction of the root used according to Lindley in calculous and nephritic complaints.

Nipa fruticans of the Eastern portion of the Malayan archipelago. A stemless palm with long hard loosely-pinnate fronds, called in Burmah "da-ne" (Mason), in Tagalo "sasa" or "nipa" (Blanco), and known from early times: — observed by Rumphius i. pl. 16, and Thunberg . . .; by Blanco, and myself, wild on the seashore of the Philippines. Westward, by Mason "exotic" in Burmah, "very extensively cultivated" in Tavoy for its crude sap or toddy, which is boiled down into sugar, its leaves also used for thatching.

Eurycles Amboinensis of the Eastern portion of the Malayan archipelago. A fragrant white-flowering bulb called in Burmah "la-men" (Mason); in Tagalo "catongal," in Bisaya "catangal" or "abur" or "panabor" or "tonuar" or "talaonor" or "dausun" (Blanco), and from early times employed medicinally: — known to grow on Amboyna (Pers.); observed by Blanco in the sand of the seashore of the Philippines, its root used by the natives as emetic and purgative. Westward, was observed by Mason v. 431 to 807 "exotic" in Burmah, cultivated by the natives for ornament. Transported to Europe, the "pancratium amboinense" is described by Rudbeck elys. ii. 238. f. 17, and Linnæus (Pers., and Steud.).

Pachyma tuber-regium of the Moluccas. A tuberculated underground fungus large as the fist or even a child's head and called on Java "djamor bonkang," by the Malays "uba radja" or "culat batu," on Amboyna "ulathatu" (Lindl.), and from early times employed medicinally: — observed by Rumphius 120 pl. 57 on Amboyna; and used in the medicine of Eastern nations against diarrhœa, pains in the face, fevers, etc. (Fries ii. 243, and Lindl.).

Artemisia Indica of Eastern Asia. Called in Persian "arlemasaya," in Sanscrit "dana" or "dona" (Lindl.), in the environs of Bombay "doona" or "mustaroo" (Graham), in Hindustanee "mastaru" or "majtari," in Telinga "machipatri," in Tamil "machipattiri," in Bengalee "mastam" (Drur.), in Tagalo "tinisas" or "ca Maria" or "Santa Maria" (Blanco), in Japan "gai" or usually "iamogi" or "motjigusa" or "furs" (Thunb.); and perhaps the "armoise" collected, according to an ode of the time of Ping-wang*—(Chi-King i. 6. 8): the "ai" herb of Meng-tseu ii. 1. 9 dried for three years before being used medicinally, is referred to this genus by Stanislaus Julien: A. Indica is known to grow in China and Nepal (Lindl.); was observed by Kaempfer, and Thunberg, in Japan, and *moxa* made of the leaves; by Blanco, on the Philippines, long known and much used medicinally among the native women, and moxa made by the Chinese of the dried leaves. Westward, the "dona" flower was worshipped by the Hindus in the Festival of spring (Puranas, and H. H. Wils. ind. dram. ii. 264); and the "d'hyama" or "maruvaka" of Susrutas sutr. 28 to chikits. 22 and kalp. 7, is referred here by Hessler: A. Indica was observed by Roxburgh, and Wight, and Drury, on the high lands of Mysore and other parts of Hindustan; by Rheede x. pl. 45, in Malabar; by Graham, at "Poorundhur Fort" and "common on high lands in the Deccan;" by myself, at the Karli cave-temple; and according to Lindley, is considered "a powerful deobstruent and antispasmodic." (See A. vulgaris)

768 B. C. (= 804 y. $49\frac{223}{360}$ d. — "38th year" of twelve lunations of 2 K. xv. 8), Jeroboam II. succeeded by his son Zachariah, fourteenth king of Israel. Who reigned "six months" only.

767 B. C. (= 767 y. $97\frac{236}{360}$ d. = 804 y. $49\frac{223}{360}$ d. — "39th year" of twelve lunations of 2 K. xv. 13), Zachariah slain and succeeded by Shallum. Who, after reigning "a full month," was slain and succeeded by Menahem, sixteenth king of Israel.

The Assyrian emperor Pul invading the land, "a thousand talents of silver" paid him by Menahem, to be confirmed in the kingdom of Israel (2 K. xv. 19, and 1 Chron. v. 26). The emperor Pul or Phulus is mentioned by Alexander Polyhistor (in Euseb. i. 4 p. 18).

One hundred and sixth generation. May 1st, 767, mostly beyond youth: Jeiel the scribe (2 Chron. xxvi. 11), the prophet Hosea: the Greek poets Cinaethon, Eumelus, Antimachus of Teos, Cercops of Miletus, Creophilus, and Stasinus of Cyprus.

After the affray at the temple of Diana (Heraclid. p. 214, Strab. vi. p. 257, and Clint. i. p. 251), Rhegium in Southern Italy founded by Greek colonists from Chalcis in Euboea. The expedition was accompanied by fugitive Messenians from the Peloponnesus.

Clematis vitalba of Europe and the adjoining portion of Asia. A woody vine called in Britain *traveller's joy* (Prior), in Germany "teufelswirn" (Grieb), in Italy "vitalba" or "clematitide" (Lenz), in Greece "agriōampĕli" (Sibth.); in which we recognize the "ampĕlōn arsĕnōthēlun" investing a wild fig-tree on the site selected for the new city, in fulfilment of the "arsĕna thēlus ōpuiĕi" of the Oracle—(Diodor. viii. 25); also the "klēmatitis" mentioned confusedly by Pamphilus (Galen simpl. med. vii. 31), by Dioscorides iv. 179 as climbing around trees like "smilax," and having acrid ulcerating leaves; C. vitalba was observed by Forskal, Sibthorp, and Chaubard frequent in hedges from the Peloponnesus throughout the Greek islands to Constantinople; is known to grow also in the Crimea (Lindl.). Westward, the account of the "clematida" by Pliny xxiv. 49 seems taken from Dioscorides: but C. vitalba is described by Lobel pl. 626; is termed "virgin's bower" by Gerarde (Prior), "c. sylvestris latifolia" by Tournefort inst. 293; was observed by Lenz in Italy, by Forskal near Marseilles, and is known to grow throughout middle Europe as far as Britain (Jacq. aust. pl. 308, Curt. lond. iv. pl. 37, and Pers.). Its "fruit and leaves" according to Lindley are "acrid and vesicant, dangerous taken internally; the latter have been used as a rubefacient." (Compare Tamus Cretica, dioecious but unknown in Italy).

"766 B. C." (argum. Chi-King i. 11. 3), war declared by Sian-kong, first king of Tsin, against the barbarians on the Western frontier. †

"764 B. C." (Pausan., Euseb., and Clint.), Polychares of Messenia declared the Fourth Olympic victor.—The injuries received by him twenty years later were the immediate cause of the First Messenian war.

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* *Artemisia moxa* of China. About two feet high, hoary, branching, and shrubby, the proper *moxa weed* (Lindl.), and probably the "armoise" in question:—A. moxa was received by Besser. abr. 3 from China; is described also by Decandolle prod. vi. 121. Moxa according to Lindley is procured "from many other plants," and serves as a convenient mode of applying the actual cautery.

† *Prunus Kaempferi* of Eastern Asia. The *sour plum*: the "mœi" tree growing according to an ode of this period on mount Tchong-nan—(Chi-King i. 11. 5) is referred by Lacharme to a kind of plum with fruit altogether acid. A Prunus apparently differing from P. domestica was observed by Bunge under cultivation in China (A. Dec.); and the "malus persica" seen by Kaempfer, and Thunberg, in Japan, may also be compared.

"The same year = end of the Cali Yug, or Iron Age," among the Hindus (Graha Munjari tables, and Bentley as. res. viii. 244). The authorship of the First table not earlier therefore than this date.

763 B. C. (= 753 + "10 yrs" of both Maneth. tables), Osōrhŏ succeeded by Psammōus, third king of the Twenty-third dynasty. The name of king Psimut occurs on the temple at Karnak, and on the ruins of a small building in the immediate vicinity — (Leps. k. pl. 46, and Glid. analect.).

759 B. C. (= 803 — "44 years" = 715 + "44 years" of the Egyptian Chronicle and Euseb.-Maneth. table = 753 + "6 years" of the Afr.-Maneth. table), accession of Vŏhhŏris the Saite, only king of the Twenty-fourth dynasty. The name of king Bokenrenf occurs on contemporaneous monuments — (Leps. k. pl. 46).

Echinops spinosus of the Desert and its borders from the Atlantic to Hindustan. A species of *globe thistle* called in Egypt "khachyr" or "sjok edsjemmel" camel thorn or thistle (Del., and Forsk.); and the Egyptian "sarshamōul" — (ms. Par.) may be compared; also the "akantha lĕukē" of Hellanicus, Theophrastus, and Dioscorides: E. spinosus was observed by Forskal, Delile, and myself in the Egyptian Desert, sought for by camels according to Forskal although so full of thorns. Farther North, is termed "echinopus creticus capite magno aculeato" by Tournefort cor. 34; was observed by Sibthorp on Cyprus and the Greek islands, by Chaubard, in arid open situations in the Peloponnesus; and Westward, by Desfontaines ii. p. 310 in Barbary (Pers.). Eastward from Egypt, the "E. echinatus" of Roxburgh, and Graham, as growing on the Deccan, appeared to me identical.

"758 B. C." (= 746 + "12 years" of Diodor., Euseb., and Clint.), and (according to Diodorus' numbers) forty-one years after the death of his father Aristodemus, accession of Telestes as eleventh king of Corinth. Telestes was in the fifth generation from Bacchis.

757 B. C. (= 804 y. $49\frac{22}{60}$ d. — "50th year" of twelve lunations of 2 K. xv. 23), Menahem succeeded by his son Pekahiah, seventeenth king of Israel.

"The same year" (Aristot., Euseb., and Clint. i. p. 338), Ephori instituted, or at least invested with political importance by Theopompus, one of the two Spartan kings; the ninth in the Proclid line. (The accession of Theopompus, is however placed by Apollodorus' numbers seven years later). A saying of Theopompus is extant — (Plut. pol. præc. p. 816).

"756 B. C." (. . . . argum. Chi-King i. 5. 1), death of Ou-kong, king of Ouei.

"In this year" (Euseb., and Clint. i. p. 156), on the Black Sea, Trapezus or Trebizond founded by Milesian Greeks from Sinope.

755 B. C. (= 804 y. $49\frac{22}{60}$ d. — "52d year" of twelve lunations of 2 K. xv. 27 = 756 y. $217\frac{44}{60}$ d. — "2 years" of twelve lunations of 2 K. xv. 23), Pekahiah slain and succeeded by Pekah, eighteenth king of Israel.

Isaiah i. 1 prophesying before the accession of Jotham. — and as late as the reign of Hezekiah.

Cuminum cyminum of Abyssinia. Called in English gardens *cummin* (Ainsw.), in French "cumin" (Nugent), in German "Romischer kummel," in Italian "comino" or "cymino" (Lenz), in Greece "kuminō" (Fraas), in Egypt "kammoun" (Del.), in Egyptian "thapĕn" or "tapĕn" (transl. Matth.) or "tapn" (ms. Par.); in which we recognize the כמן kmn cultivated in Palestine in the days of Isaiah xxviii. 25 to 27, — the "kuminōn" of Matthew xxiii. 23, and the Egyptian kind of Hippocrates (Plin.), and Dioscorides: C. cuminum was observed by Abd-allatif, Delile, Clot-Bey, and myself, a favorite object of cultivation in Egypt. Farther North, the "kuminōn" is mentioned by Aristophanes, Theophrastus, Nicander; "kuminōn ēmĕron" by Dioscorides as cultivated especially in Asia Minor; and "kuminō" seeds imported from Smyrna were found by Fraas much used in Greece. Westward, the "cuminum" or "cyminum" is mentioned by Horace, Persius, Columella, and Apicius, doubtless the imported seeds, but a kind brought from Africa is enumerated by Pliny xx. 37: C. cyminum is described by Morison ix. pl. 2; and is occasionally seen in gardens in Italy and middle Europe (Cav. iv. pl. 360, Pers., and Lenz). Eastward from Palestine, was observed by Graham at Bombay, "cultivated in gardens" and called "zeera;" by Roxburgh, and Wight, in other parts of Hindustan, the seeds throughout according to Drury "being much in use as a condiment:" by Mason v. 496, "exotic" in Burmah and called "zee-ya," said to be "occasionally cultivated," the seeds "a common article in the market." As imported into Britain, the seeds according to Lindley although "carminative" are "chiefly used in veterinary surgery."

Pulicaria odora of the Mediterranean countries. Called in Greece "agriōskarphi" (Fraas), in Egypt "ghobbeyreh" (Del.), in Yemen "chaa" or "munis" or "neschusch" (Forsk.), by the prophets "krŏnōs" (Syn. Diosc.); in which we recognize the נצנץ notzwtz of Isaiah vii. 19, — and lv. 13: P. odora was observed by Lippi in Egypt, by Delile in the Desert environs of Suez, and by Forskal p. 150 under cultivation everywhere in Yemen for its pleasant odour, edible leaves, medicinal use, and its flowers worn in garlands. Farther North, the "kōnuza arrĕn" of Theophrastus vi.

2. 6 is described by Pliny xxi. 32 as coronary, its root called by some "libanotis;" the "livanŏtis" is identified through Syn. Diosc. with the "kōnuzēs lĕptōthriōĭō" of Nicander ther. 875, and "kōnuza lĕptē" of Dioscorides; and the "ĕmĕrōu kōnuzēs" is mentioned by the scholiast Nic. ther. 70: P. odora was observed by Sibthorp, Chaubard, and Fraas, frequent from the Greek islands to the Peloponnesus and Constantinople. Westward, the "conyzam" sown for bees is mentioned by Pliny xxi. 41; P. odora is described by Columna ecphr. pl. 253; is termed "aster luteus radice odora" by Tournefort inst. 482, and is known to grow in Italy and Southern France (All., and Pers.). "P. undulata" known to grow in Egypt and as far as Senegal, is regarded by Decandolle as probably not distinct.

"In the autumn" (= 778 — "23 years" of Castor in Euseb., and Clint. i. p. 156), at Athens, Aeschylus succeeded by Alcmaeon, thirteenth and last archon for life.

754 B. C. (= 804 y. $49\frac{123}{366}$ d. — "52 years" of twelve lunations of 2 K. xv. 2 and 2 Chron. xxvi. 3), Uzziah succeeded at Jerusalem by his son Jotham, fourteenth Jewish king. (According however to Julius Africanus, Jotham was king during the archonship of Aeschylus. See above).

"In or about this year" (Percev. i. 49), accession of Yarŏb as ruler of Yemen. (The earliest of the descendants of Cahtan or Yoktan known to the Arabs).

753 B. C. = "last year of Vŏhhŏris," death of an Apis or sacred bull — (Birch).

The same year (= 1413 — 660 years = 351 + "18 + 39" + erased + "124 + 177 + 44 years" of the Egyptian Chronicle = 759 — "6 years" of the Afr.-Maneth. table), end of a phoenix. Marked in the Maneth. tables by "a lamb speaking," and by the "burning of the captive king Vŏhhŏris" (see Introd. p. . .).

Vŏhhŏris was burned by Savakŏn, head of the Ethiopian or twenty-fifth dynasty (Maneth.). Savakŏn is mentioned also by Herodotus, and Diodorus. The name of king Sabak occurs on the portals of Luxor and Karnak, on a statue — now in Rome, and on some article (now in Florence, Gild. analect.).

"In the autumn" (= 755 — "2 years" of Castor, Euseb., Syncell., and Clint. i. p. 156), at Athens by a change in the form of government, Charops son of Aeschylus made archon for "ten" years.

752 B. C. = "2d year of Sabak," death of an Apis or sacred bull — (Birch).

"750 B. C." (Hieronym. and Clint.), "Ninth" change in naval dominion. Leaving the Egyptians, the "Empire of the sea" acquired by the Milesian Greeks.

"748 B. C." (Clint. i. p. 160 and 247), Eighth olympiad, Phidon king of Argos presiding. The first *coining of money* with inscriptions, is attributed to Phidon; by whom also, a system of *weights and measures* was established (Herodot., Aristot., Strab., Plin., and others). His brother Caranus founded the Macedonian monarchy.

"747, Feb. 26th" (. . . Blair, and Clint. i. p. 278), *era of Nabonassar*. The king reigning at Babylon who (according to Berosus and Alexander Polyhistor in Syncell. p. 209) destroyed the records and everything relating to his predecessors, in order that he might himself head the List of Babylonian kings.

"746 B. C." (Pausan. ii. 1. 1, and Clint.), Telestes slain; and the accession of Automenes, twelfth king of Corinth.

"745 B. C." (. . . Clint.), a change at Corinth in the form of government; kings replaced by annual magistrates called "prytanes."

"In this year" (. . . Lacharme note to Chi-King i. 10. 4), the kingdom of Kiu-gouo detached from Tsin by king Tchao-heou, and presented to his uncle Tching-chi.*

"744 B. C." (. . . argum. Chi-King i. 7. 1), death of Ou-kong, prince of Tching.

"743 B. C." (Pausan. viii. 5, and Clint. i. p. 92), Aechmis reigning in Arcadia.

"The same year" (Pausan. iv. 5. 4, and Clint.), beginning of the First Messenian war. Alcamenes, leader of the Spartan army, being a colleague of Theopompus. — The war (according to Tyrtaeus) continued "nineteen" years.

742 B. C. = "12th year of Sabak;" the latest date in his reign found on the monuments (Leps. k. tab. p. 21). Sabak concluded a treaty with Assyria, and his clay seal — has been found among the ruins of Nineveh (Birch).

"In this year" (Euseb., and Clint., see also Pausan. iv. 5. 4), at Athens, the accession of Aesimides, another son of Aeschylus, as second Decennial archon.

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* *Pachyma?* . . . . of China. A *fungus* called "hoelen," large as a child's head, is considered by the Chinese a valuable medicine (Lindl.): the "fou-ling" collected towards the South on mount Cheou-yang, according to an ode of the kingdom of Tang — (Chi-King i. 10. 12), described by Lacharme as growing near old pines and disagreeable in flavour, but strengthening the stomach and sold at a high price, may be compared.

740 B. C., "before the fifth year of the Messenian war" (Pausan. iv. 7, and Clint. i. p. 337), Alcamenes succeeded by his son Polydorus, colleague of Theopompus and tenth Spartan king in the Agid line.

738 B. C. (= 753 y. $250\frac{8}{860}$ d. — "16 years" of twelve lunations of 2 K. xv. 33 and 2 Chron. xxvii. 1), Jotham succeeded at Jerusalem by Ahaz, fifteenth Jewish king.

Besieged in Jerusalem by Pekah king of Israel and Rezin king of Syria (2 K. xv. 37, xvi. 5 to 10, and 1 Chron. v. 26, see also Nicol. Damasc.), Ahaz sent for aid to Tiglath-pileser the Assyrian emperor: who, improving the opportunity, captured Damascus and put an end to the *Syrian kingdom*. Rezin, the last of "ten generations of kings" from Hadad (contemporary with David), was slain.

"735 B. C." (. . . Lacharme note to Chi-King i. 3. 10), Tchouang-kiang queen of Ouei.

"In this year" (Thucyd., and Clint.), in Sicily, Naxos founded by Greek colonists from Chalcis in Euboea, led by Theucles.

"734 B. C." (Euseb., and Clint., see also Timaeus, Diodor., Strab., and Plut.), after leaving on Corcyra or Corfu a colony in charge of Chersicrates, Syracuse founded by the expedition from Corinth commanded by Archias. These settlements of the Corinthians appear to have been undertaken with some regard to the purposes of commerce.

One hundred and seventh generation. Sept. 1st, 734, mostly beyond youth: the prophets, Micah, and Joel: the Greek poets, Prodicus of Phocaea, Diodorus of Erythræ, Augias of Troezen, and Hegesinus; the composer of music, Olympus the younger (Clint. i. p. 345); the Boeotian lawgiver, Philolaus.

"733 B. C" (= 747 — "14" = 731 + "2 years" of Astron. can. and Clint. i. p. 278), Nabonassar succeeded by Nadius, as king of Babylon.

"732 B. C." (Euseb. and Clint., see also Pausan. i. 3. 2), at Athens, Aesimenides succeeded by his son Clidicus, third decennial archon.

"The same year" (Euseb. and Clint.), "Tenth" change in naval dominion. Leaving the Milesians, the "Empire of the sea" acquired by the Carians, or Carian Greeks. — Held by them "sixty-one" years. Among other evidence of the extent of the voyages of the Carians, is "Karikōn-tēichōs;" a city on the West coast of Africa, North of the Desert — (mentioned by Hanno, Ephorus, C. Ptolemæus, and Stephanus Byzantinus, C. Mull. geogr. min. i. p. 4).

"731 B. C." (= 726 + "5 years" of Astronom. can., and Clint. i. p. 278), Nadius succeeded by Chinzirus and Porus, as king of Babylon.

"730 B. C." (= 734 — "5th year after Syracuse" of Thucyd. vi. 3, and Clint.), in Sicily, the two cities of Leontium and Catana founded by Greek colonists.

728 B. C. (= 759 — "31 — 6 yrs" of the Afr.-Maneth. table, the same table giving 715 + "14 yrs" = 729, and the Euseb.-Maneth. table + "12 yrs" = 727), Savakōn succeeded by his son Sĕvihŏs, second king of the Twenty-fifth dynasty. "Twelve" years only are assigned to his reign in the Euseb.-Maneth. table. The name of king Sabatok occurs "on a small ruined temple at Karnak" — (Glid. analect.).

The same year (= "about the fourth year of the Twelfth Olympiad," Cinc. Al., and Clint.), the date for the founding of Rome — given by Cincius Alimentus; derived perhaps while a prisoner with Hannibal and the Carthaginians (see 722 B. C.).

At Caere in Etruria, and at Ardea and Lanuvium in Latium, there were *paintings* more ancient than the founding of Rome (Plin. . . . , and Bryan dict. paint.). A painting of Atlanta and Helen in a ruined temple at Lanuvium is specified.

Lotus rectus of the Mediterranean countries. Called on Zacynthus "melilŏtŏn thēlukōn (Sibth.), possibly therefore the "meliloton" or "sertulam campanam" worn in garlands by the ancient Italians, — its odour saffrony as well as the flower, "ipsa cana" the plant hoary, and with short leaves (Plin. xxi. 29); mentioned also by Celsus v. 11, and "serta campanica" by Cato 107, Ovid fast. iv. 440, and Vegetius iii. 6: the "mĕlilŏtōs" growing in Campania is described by Dioscorides as "atōnōn" weak-scented, and is identified in the added synonyms with the "sĕrtōulam" or "trupatiōum" of the Romans: L. rectus is described by Morison ii. pl. 18; is termed "l. lybica" by Rivinus tetrap. pl. 78, "l. villosus altissimus flore glomerato" by Tournefort inst 403; and is known to grow in Southern France, its stem "pubescente villoso" and leaflets "obovatis" (Pers.). Eastward, the "sĕrtōulam" of the Romans is further identified in Syn. Diosc. with the "thĕrmōuthis" of the prophets, and "aïmĕith" of the Egyptians: "mĕlilŏtinōus" garlands are mentioned by Alexis, and Nicander ther. 897; and Theophrastus vii. 15. 3 speaks of many different kinds of "lŏtōs" including one called "mĕlilŏtōs;" L. rectus was observed by Sibthorp, and Chaubard, from Crete and the Peloponnesus to Constantinople. (See Melilotus officinalis).

727 B. C. (Schmitz . . . , see also Archiloch., and Strab. xiv. 1. 40), Magnesia on the Meander captured and destroyed by the Treres, a Cimmerian tribe. The presence of these barbarians, encamped in wagons and threatening ruin, is described and deprecated in a poem by Callinus. A

painting of the battle-scene by Bularchus, — was purchased less than eleven years afterwards by the Lydian king Candaules (Plin. vii. 38, and xxxv. 8).

Tilia Europæa of middle and Northern Europe. Called by Chaucer "linde," in the ballad of Robin Hood "lyne," in current English *linden* or *line* or *lime* (Prior), in Welsh "pisgwydden," in German "linde," in Finnish "lechmus," in Slavonian "lepa" or "lipa," in Morduan "pikscha" (A. Dec.), in France "tilleul" (Nugent), in Italy "tiglio" or "tiglia" (Lenz); and doubtless furnishing implements in use among the Treres: — the "tilia" is mentioned by Virgil, and Columella, by Pliny xvi. 30 as growing in the mountain valleys of Italy: T. Europæa is known to grow in Italy (Lenz) and throughout middle Europe as far as Finland, the inner bark much used in the North for cordage (fl. Dan. pl. 553, Pers., and Prior). By European colonists, was carried to Northeast America, where it continues to be sometimes planted for ornament. The flowers, according to Host, and Lindley, are used in "infusion in Austria with much success in vertigo and spasms."

The same year (= 717 y. $287\frac{184}{365}$ d. + "9 years" of twelve lunations of 2 K. xvii. 1 and xv. 30), Pekah slain and succeeded by Hoshea, nineteenth and last king of Israel.

"726 B. C." (. . . Blair . . .), the Spartans defeated by the Messenians under Aristodemus and despairing of a speedy termination of the war, send home permission to "their wives to prostitute themselves."

"The same year" (= 721 + "5 years" of the Astronom. can., and Clint. i. p. 278), Chinzirus and Porus succeeded by Jugaeus, as king of Babylon.

723 B. C. (= 738 y. $58\frac{226}{360}$ d. — "16 years" of twelve lunations of 2 K. xvi. 2 and 2 Chron. xxviii. 1), Ahaz succeeded at Jerusalem by his son Hezekiah, sixteenth Jewish king.

A *postal establishment* at this time in Palestine: at least, royal proclamations and official letters were delivered regularly by couriers (2 Chron. xxix. 3 to xxx. 10).

"The same year" (Tyrt., Pausan. iv. 13. 5, and Clint.), shortly after the suicide of Aristodemus (see *Cynodon dactylon*), the Messenian war closed by the capture of Ithome by the Spartans under Theopompus. A portion of the Messenians abandoning their country, sailed under Alcidamas to Southern Italy and settled in Rhegium.

"722 B C. (= 616 + "132 yrs." of ten lunations of pontif. reckoning, Sm. biogr. dict. . . .), not earlier than this date, founding of the city of Rome. The date is confirmed by historic probability, and by Cicero tusc. i. 1, who makes Romulus contemporary with the Greek poet Archilochus.

The selection by Romulus of "a healthy spot in an infected region" (Cic. de republ.) reveals the presence of the *Italian malaria*: — five hundred years later, soldiers protested against being quartered in the unhealthy environs of Rome (Liv.); field-labor, according to Cato re rust., cannot be undertaken in summer in places where the atmosphere is unhealthy; the unhealthy atmosphere in Apulia and near Brundusium, is mentioned by Caesar bell. civ.; and the owners of unhealthy estates are counselled by Varro to sell, or abandon them altogether (Schouw plants and man vi.).

The innovation of wreathing mortals as early at least as Romulus, — a practice among the Romans confined to warlike deeds (Plin. xvi. 4).

Ostrya vulgaris of the countries on the North side of the Mediterranean. The *hop-hornbeam* is called in Italy "carpine nero" or "carpinella" or "ostria" (Lenz), in Greece "ōstrua" (Sibth.), and the "arbori infelici" of the laws of Romulus — (Just. Lips., and Dion. Hal. ed. Reiske), signifying gallows according to Cicero . . . , may be compared: the "carpinus atra" is mentioned by Cato 31; the "ostryn" or "ostryam," by Pliny xiii. 37 as "solitariam circa saxa aquosa," but his account seems taken chiefly from Theophrastus: O. vulgaris is described by Micheli pl. 104, and is known to grow in Italy and other parts of Southern Europe (Scop., Pers., and Lenz). Eastward, the "ōstrus" or "ostruan" is described by Theophrastus iii. 10. 3 as the only one of its kind, and allied in its aspect and bark to the beech, its fruit in shape and colour resembling barley, and wood hard, but regarded inauspicious if brought into a house, inducing difficult parturition and a miserable death: O. vulgaris was observed by Sibthorp on mount Athos and the Bithynian Olympus.

Celtis Australis of Barbary. A species of *nettle-tree* called in Germany "zurgelbaum," in Italy "perlaro" or "bagolaro" or "giracolo" (Lenz), in France "micocoulier" (Fée), in Greece "mikrōkōukki" (Fraas) or "mikrŏkōukōuli" or "glukōkōkka" or "kĕratha" (Sibth.), in Spain "almez" (Spreng.), in which we recognize the "mis" identified by Ebn Baitar with the "lotos;" exotic in Italy but a tree in the Vulcanali as old as Rome, planted by Romulus after his victory "de decumis" — (Masur.), one in the area Lucina known in the "three hundred and seventy-ninth year of Rome," and an earlier third to which the hair of Vestal virgins was carried, the "celtin" with blackish wood in request for flutes being identical (Plin. xiii. 32 and xvi. 85): C. Australis is described by Anguillara . . . , and Camerarius pl. 155; is termed "c. fructu nigricante" by Tournefort inst. 612; occurs in various parts of Southern Europe, a tree near Aix in Provence being more than five hundred years old (Fée, and Lenz p. 15); and is known to grow wild in Barbary (Duham. i. pl. 53, and Pers.). Eastward, the "livus aulōs" Lybian flute is mentioned by Euripides alc. 346 and troad. 544: the

"lŏtŏs" with blackish wood is mentioned by Theophrastus iv. 2. 5; the "lŏtŏs thĕnthrŏn," by Dioscorides as a big tree with sweet edible fruit larger than a grain of pepper: C. Australis was observed by Sibthorp, and Chaubard, frequent from Crete and the Peloponnesus to Constantinople; by Belon, in Syria; and is enumerated by Clot-Bey and Figari as recently introduced into Egypt. The wood is according to Sprengel highly esteemed, being hard heavy and blackish.

Agrostemma coronaria of Europe and the adjoining portion of Asia. Called in France "coquelourde" (Fée), in Germany "gartenrade," in Italy "cotonella" or "coronaria" or in gardens "velutini" (Fraas); in which we recognize the "luhnis stĕphanŏmatikē" identified in Syn. Diosc. with the "vallariōn" of the Greeks, and "gĕnikōularis" or "vallaria" of the Romans: the "vallaris" wreath according to Livy was bestowed on him who first entered the enemy's works, and the "froudea" given by Romulus to Hostus Hostilius for entering Fidena — (Plin. xvi. 5) may therefore be compared: A. coronaria is termed "lychnis coronaria Dioscoridis sativa" by Tournefort inst. 334; and is known to grow wild in North Italy and Switzerland (Pers., and Lenz). Eastward, the "luhnis" is enumerated among coronary plants by Theophrastus vi. 8. 3; the "luhnis stĕphanŏmatikē" woven in garlands has according to Dioscorides a flower like that of "lĕukōiŏ" but purple; is identified in the added Synonyms with the "athanatŏs" or "akulŏniōn" or "skĕptrōn," with the "aima apŏkathēmĕnēs" of the prophets, and "sĕmĕōn" of the Egyptians: A. coronaria was observed by Sibthorp, Griesebach, and Fraas, on high mountains from Parnassus to Athos, Olympus, and Hæmus.

"The same year" (Euseb., and Clint.), at Athens, accession of Hippomenes of the family Medontidæ, as fourth Decennial archon.

"721 B. C." (= 709 + "12 years" of the Astronom. can., and Clint. i. p. 278), Jugæus succeeded by Mardocempadus as king of Babylon.

"March 19th, three hours and twenty minutes before midnight" (as reduced by Ptolemy to the meridian of Alexandria, Blair . . .), *eclipse of the moon*. The first of the *Babylonian eclipses*; — a series that has proved of great service to historians and chronologers.

"The same year" (Scymn., Diodor., and Clint.), in Southern Italy, the city of Sybaris founded by Greek colonists.

The same year (= 717 y. $287\frac{164}{365}$ d. + "3 years" of twelve lunations of 2 K. xvii. 5), Hoshea having "sent messengers" to the king of Egypt "So" (Sĕvihŏs), the Assyrian emperor Shalmaneser entered Palestine, and laid siege to Samaria.

"720, March 8th, fifty minutes before midnight" (as reduced by Ptolemy to the meridian of Alexandria, Blair), second Babylonian *eclipse of the moon*.

"In spring, in the Second month, on the cyclic day 'y-sse' of the 51st year of Ping-wang" (Khoung-tseu, the Li-tai-ki-sse, and Pauth. p. 107), *eclipse of the sun*.

"Sept. 1st, four hours and twenty minutes before midnight" (as reduced by Ptolemy to the meridian of Alexandria, Blair), third Babylonian *eclipse of the moon*.

"The same year" (. . . . Gaubil), death of Ping-wang. He is the last emperor mentioned in the Chou-king.

"Dresses made of herbs by the barbarians of the islands" mentioned in the Chou-king ii. 1. 11, — (Pauth. p. 48): an early notice of the *East Indian* tribes.

Stagmaria verniciflua of the Eastern portion of the Malayan Archipelago. Varnish is mentioned in the Chou-King ii. 1. 5, and as one of the products of Yen — (Pauth. p. 47). S. verniciflua, a tree of considerable size, was observed by Rumphius ii. pl. 86 in the Moluccas and is termed by him "arbor vernicis;" is called in Malay "kayo rangas;" is fully described by Jack; and according to Lindley, "yields one of the celebrated hard black lackers or *varnishes* of China. The "bernice arbor" of Vincentius Bellovacensis, is referred here by Sprengel.

Gossypium Indicum of Tropical Eastern Asia. The *cotton* shrub is called in Bengalee "kapas" (D'roz.), in ancient Sanscrit "karpasi" (Ritter), in Tamil "paratie" or "van-paratie," in Telinga "puttie" (Drury), in Burmah "wa" (Mason), in Tagalo "bulac" (Blanco): "cotton thread" manufactured in the province of Yu, is mentioned in the Chou-King — (Pauth. p. 49): G. Indicum has been cultivated in China from the Ninth century (Schouw p. 149); is said to have been introduced "from China" into Japan so late as "1558–70 A. D." (Jap. centen. comm. 74); was observed by Blanco on the Philippines, where seeds of several cultivated varieties, some with very sparse fibres, were shown me; by Mason, "exotic" in Burmah, but farther North according to Wallich grows along the Irawadi and rivers of Martaban (A. Dec.). Westward, is mentioned in the Institutes of Menu (transl. bramin. and Deslongch.); seems included in the wool-bearing tree from which according to Herodotus iii. 106 the people of India make their clothes; and "karpasŏs" of Barygaze (Baroach) is mentioned in the Erythraean Periplus: G. Indicum was observed by Rheede i. pl. 31 under cultivation in Malabar; by Graham, "the staple article of the commerce of Bombay," cultivated from Guzerat to Dharwar and Coimbatore, as well as in Bengal (Roxb., and Drury). Farther West, a cuirass made of "ĕiriōisi apō xulō" was sent by Aahmes II. to Greece (Herodot. iii. 47): "krphs" is men-

tioned in Esther i. 6; "carbasina" by Caecilius, Lucretius, Cicero, and Varro; the living plant was introduced before the time of Strabo into Susiana, Egypt, and other Mediterranean countries (Plin., Ebn Alvam, and Schouw 22); and in the time of Pliny xix. 2. 3 the Egyptian priests wore cotton garments: G. Indicum was observed by Tournefort, Forskal, and Chaubard, under cultivation in Greece; by myself, on Malta; by Forskal, Delile, and myself, in Egypt; by myself, a few stocks in a court-yard at Mocha; and again a few, all in languishing condition, on Zanzibar. By European colonists, was carried to Northeast America, where it continues extensively cultivated in our Southern States, and by a peculiar process the "sea-island" modification has been developed; to the islands of the Pacific, observed by myself naturalized on the Hawaiian Islands. When carried North, is annually killed by the winter frosts, but is not properly an herbaceous plant.

Citrus Sinensis of Tropical Eastern Asia. The *mandarin orange* is called in Tagalo "narangitas" or "sintoris" (Blanco), in Burmah "shouk-lieng-mau" (Mason), in Tamil "kitchlee," in Hindustanee "koda" (Drury); and the orange mentioned in the Chou-King ii. 1. 11 as cultivated in the province of Ying — (Pauth. p. 48) may be compared: C. Sinensis was observed by myself throughout the Malayan archipelago, the only kind of orange (with a solitary exception at Manila); by Mason v. p. 453 and 760, "exotic" in Burmah, distinguished by the natives and sold in large quantities. Westward, "naranga" and "nagaranga" are mentioned in the Ayurvedas (Susrut.): "melarancie assai ma tutte dolci" were found by Vasco de Gama in 1498 in Hindustan: C. Sinensis was observed by myself the only kind cultivated there from Bombay to Aurungabad; and according to Drury, "is found in the Northern Circars" where it is called "cumbla nabla," and "is indigenous in Silhet and on the slopes of the Neilgherry mountains." Farther West, the "round atrodj" according to Masudi (quoted by Makrizi) was brought "from India subsequent to the three hundredth year of the Hedjra" (912 A. D.) "and first planted in Oman, and which lost in Syria and Egypt much of its original odour and colour:" the "limum mokhattam" was seen by Abd-allatif in Egypt, of a brighter red than the narandj" (C. aurant.) "round and a little flattened, and as if impressed with a seal" (at the apex); the "limun hælu," by Forskal, and is described by Delile as "fructu aurantiiformi cortice lævi medulla dulci:" C. Sinensis was observed by myself in the imaum's plantation on Zanzibar; and as transported to the Mediterranean countries is termed "aurantium dulci cortice sinense" by Ferrari hesperid. pl. 433, is described also by Tournefort inst. pl. 390, and Miller (Pers.); and var "myrtifolia" has become frequent in Northern greenhouses.

Citrus decumana of Tropical Eastern Asia. Called by European colonists *shaddock* or *pummalo* (Graham) or "pampel-moes" (Rumph.), in Tagalo "lucban" (Blanco); and the "yeou" cultivated in China according to the Chou-King ii. 1. 11, — is referred here by Pauthier p. 48: C. decumana was observed by Loureiro p. 572 frequent in Anam and China, and from China according to Rumphius ii. pl. 24 was introduced into the Malayan archipelago; was observed by Blanco on the Philippines; by myself, a large tree under cultivation from the Tongan and Feejeean islands throughout the Malayan archipelago; by Mason v. p. 452 "exotic" in Burmah and the fruit inferior in quality. Westward, is exotic in Hindustan, as shown by the name "batavi nimboo" (Roxb., and Drury); was observed there under cultivation by Wight, Graham, and myself; and farther West, by myself on Zanzibar. The fruit has been sometimes carried up the Red Sea to Egypt, where "lemons large as water-melons" were seen by Abd-allatif; and the "kabbad" by Ebn Ayyas, described as an "orange of extraordinary bigness" by Vansleb; also to Jerusalem, as appears from rabbi Schwarz ii. 1. By Capt. Shaddock, seeds were carried to the West Indies before the visit of Sloane i. p. 41 (Pluk. alm. p. 239), and the tree continues under successful cultivation, as appears from Macfadyen p. 131 (A. Dec.) and from fruit imported into the United States.

Aleurites triloba of the Eastern islands of the Malayan archipelago to the Samoan. The *candlenut* is a large tree called on the Hawaiian and Taheitian islands "tutui," on Tongatabu "tuitui," on the Marquesan islands "ama" and the Samoan "lama" meaning torch or candle (Hale), in Tagalo "lumban" (Blanco); and the "tong" tree growing according to the Chou-King ii. 1. 9 on the Southern portion of the Y mountain — (in Kiang-nan), and according to Gaubil affording an oil esteemed in China for its great utility, may be compared: A. triloba was observed by Blanco frequent on the Philippines, and the oil from its nuts sold by the natives; by Rumphius ii. pl. 58, on the Moluccas (Pers., and Steud.); by myself, to all appearance indigenous on the Feejeean and Samoan islands: but clearly by Polynesian colonists carried to Tongatabu, where it was regularly cultivated by the natives; to Taheiti, where it was observed by Forster prod. 360, and has become naturalized throughout the Interior; and to the Hawaiian Islands, where the nuts were strung together for candles. Westward from the Philippines, is called in Bengalee "bangla-akrot," in Telinga "natu-akrotu," in Tamil "nattu-akrotu" (Drur.), in the environs of Bombay "japhal" (Graham); is known to occur on Ceylon (Pers.), where its oil is called "kekuna" oil (Drur.); was observed by Roxburgh, and Drury, from Bengal to the Northern Circars and Travancore; by Graham, seemingly wild "in the Southern Mahratta country about Belgaum," and planted "in gardens Bombay;" by myself, only under cul-

tivation.* By European colonists, was carried to the Mauritius Islands, where according to Bojer it is almost naturalized; to Brazil, observed by myself planted for ornament around Rio Janeiro. Its oil, exported at first by residents of the Hawaiian Islands, has now become generally known in commerce.

"719 B. C. = 1st year of Hing-wang, of the Tcheou" or Fifth dynasty — (Chinese chron. table).

718 B. C. (= 722 y. $233\frac{14}{360}$ d. — "6th year" of twelve lunations, 2 K. xviii. 10), Samaria captured by the Assyrians under Shalmaneser; terminating the kingdom of the Ten tribes. The conquered Israelites were removed and placed "in Halah and in Habor" by "the river of Gozan, and in the cities of the Medes." — (The river Gozan is identified by Rennel geogr. Herod. with the Ozan, flowing through Ghilan into the Caspian Sea). The account of the Colchians by Herodotus ii. 104 may be compared, as affording at least many points of resemblance.

"717 B. C. = 3d year of Hing-wang" (Chinese chron. table), beginning of the Thirty-third cycle.

"716 B. C." (= 546 + "170 years" of Herodotus, and Clint.), death of the Lydian king Candaules, and accession of Gyges, head of a new dynasty.

The luxurious costume and habits of his countrymen of Samos, described in a poem by Asius.

Daphne argentea of the Peloponnesus and Greek islands. Called on Samos "sarŏmatahi" (Tourn.), and used there for brooms and for procuring a yellow dye as early probably as the time of Asius: — observed and distinguished from D. tartonraira by Wheeler, and Tournefort trav. ii. 135, regarded also as a distinct species by Sibthorp and Smith: termed "thymelæa seu tartonraire lini foliis argenteis" by Tournefort cor. 41 as observed by him on Samos; by Sibthorp, on Samos and Salamis, but more abundant around Corinth.

715 B. C. (= 759 — "44 years" of the Egyptian Chronicle and Euseb.-Manetho table), Sĕvihŏs succeeded by Tarakōs or Tarkōs, third king of the Twenty-fifth dynasty. He is mentioned in 2 K. xix. 9, and by Strabo i and xv. The name of king Taharka occurs at Medinet-abu, also on mummy-cases, and in inscriptions as far up the Nile as Gebel Barkal in Upper Nubia.

The Second epoch in Nubian or Ethiopian history (according to Lepsius eg. and sin. p. 17 and 152), begins with Taharka: by whom and his immediate successors, magnificent buildings were erected; all (it is inferred) in the Egyptian style of art. The oldest structures of real *Ethiopian workmanship* are probably those at Gebel Barkal, and are "perhaps not earlier than Taharka."

Ruta tuberculata of the Egyptian Desert. Called in Nubia "geryg el-ghazal," in Egypt "megennyneh" (Del.) or "mæddjenninæ" (Forsk.), in Egyptian "mtōtf" or "ftōtf" (Kirch., and ms. Par.), and as early doubtless as this date the juice mixed in water by the women of Egypt to wash the head and lengthen the hair, — as witnessed by Forskal p. 86: the plant was observed by Forskal, and Delile, in the Desert around Cairo.

"712 B. C." (Euseb., and Clint.), at Athens, accession of Leocrates, fifth Decennial archon.

"The same year" (Mela i. 19, and Clint.), on the Propontis, Astacus founded by Greek colonists from Megara. — At the end of "four hundred and forty-eight years," the name of the city was changed to Nicomedia.

Medicago arborea of the East Mediterranean countries. Called in Greece "triphullŏklatha" (Fraas); and the "cytisus" discovered on Cythnus and carried thence to other Greek islands and the cities of Greece — (Plin. xiii. 47 and xviii. 43), or "kutisōs" of Archilochus (schol. Nic. ther., and Gesn. præf. Trag.), Cratinus, Eupolis, Democritus, Amphilochus, Aristomachus, Polemon diæt. ii. 25, 1 Morb. mul. 73, Antilochus (schol. Nic. ther. 617), Theocritus, mentioned by Aristotle iii. 21 as given to cattle, by Dioscorides as planted near hives to attract the bees, is referred here by Honorius Bellus, and writers generally: M. arborea was observed by Sibthorp, and Fraas, on rocks in Attica and on the Greek islands. Westward, the "kutisōs" or "tēlinēn" or "lŏtōn mĕgan" or "triphullōn" is identified in Syn. Diosc. with the "triphōlĭōum maĭōus" of the Romans; the "cytisus" is mentioned by Virgil, Hyginus, Columella, but continued rare in Italy in the days of Pliny: M. arborea is described by Maranta, and Lobel ii. pl. 46; is termed "m. trifolia frutescens incana" by Tournefort inst. 412; is known to occur in Italy (Pers., and Lenz), and has become frequent in other parts of Southern Europe (Fée).

711 B. C. (= 710 y. $9\frac{93}{360}$ d. = 717 y. $287\frac{84}{360}$ d. — "14th year" of twelve lunations of 2 K. xviii. 13), an Assyrian army under Sennacherib, traversing Palestine against rumoured opposition from "Tirhakah king of Ethiopia," and threatening Jerusalem, destroyed in one night — (2 K. xix. 9 to 35, and Herodot.).

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* *Bambusa arundinacea* var. nana. The "small *bamboo*" mentioned in the Chou-King ii. 1. 11 as growing in the Southern provinces of China — (Pauth. p. 48) is probably this dwarf variety. According to Mason v. 525, "the Chinese dwarf bamboo" introduced "from Penang" into Burmah, "makes a pretty hedge, and when cut annually, looks like an English quick-set hedge."

710 B. C. (2 K. xix. 36 and 37), returning to Nineveh, Sennacherib was assassinated by his sons Adrammelech and Sharezer; who "escaped into the land of Armenia." The revolt of the Medes, and consequent *dissolution of the Assyrian Empire* (an event placed at this date by Josephus and Herodotus, but Ctesias has 1071 + "1000 — 1360 years" = 711, and in Euseb. ii. from the same point "25th of Teutamus," — 7 — "40 — 30 — 40 — 38 — 45 — 30 — 20 — 50 — 42 — 20 years" = 709): leaving to Esarhaddon, son and successor of Sennacherib, only the reduced kingdom of Assyria proper.

"The same year" (Dionys., and Clint.), the city of Crotona in Southern Italy founded by Greek colonists.

"709 B. C." (Herodot., and Clint.), the Medes having gained independence and power, commencement of the "fifty-three" years attributed to their leader Deioces. (A year later is indicated by other authorities, 776 + 43 — "28 — 30 — 40 — 13" = 708 = 776 + "40 — 28 — 20 — 30 — 30 years" of Euseb. i = 816 — "28 — 50 — 30 years of Ctesias in Diodor. ii. 32).

"The same year" (= 704 + "5 years" of Astronom. can., and Clint. i. p. 278), Mardocempadus succeeded by Archianus, as king of Babylon. At Jerusalem (709 y. 20 $\frac{56}{360}$ d. = 694 y. 183$\frac{146}{360}$ d. + "15 years" of twelve lunations of 2 K. xx. 6, and Isai. xxxviii. 5), recovery of king Hezekiah from sickness. — (For the arrival of the Babylonian embassy mentioned in 2 K. xx. and Isai. xxix., see below).

"July 17th," on the "first day of the Seventh month in the 11th year of Houan-wang" (Khoungtseu, the Li-tai-ki-sse, and Pauth. 107), total *eclipse of the sun*.

Ephedra distachya of the shores of the Mediterranean. An Equisetum-like shrub called in Greece "pōlukōmpōs" (Sibth.): the "tragōs" moistening its gray beard in the sea indicated by the Oracle to Phalanthus — (Diod. viii. 21), described by Dioscorides as a shrubby and decumbent plant growing by the seaside, leafless, with numerous red berries large as a grain of wheat pointed and very astringent, identified in the added Synonyms with the "traganōs" or "skōrpiōn," is referred here by writers: E. distachya was observed by Sibthorp, Chaubard, and Fraas, on rocks exposed to the sea throughout Greece and the Greek islands, and farther inland on mount Athos and by the roadside near Smyrna. Westward, the account of the "herba tragos" by Pliny xxvii. 116 seems chiefly taken from Dioscorides; E. distachya is described by Ruellius, Dalechamp, Camerarius, and Barrelier pl. 731; is termed "e. maritima minor" by Tournefort inst. 663; and is known to grow on stony hills exposed to the sea in Barbary and Southern Europe (Pers., and Spreng.).

"708 B. C." (Hieronym., and Clint.), the city of Tarentum in Southern Italy founded by Phalanthus and the "Parthenians" (expatriated Spartans of illegitimate birth).

In this year (= "Ol. 18th" of Xanthus, see also Hellan., and Glaucus of Rhegium), Terpander. His improvement in combining *poetry with instrumental music* (Clem. Alex., and Plut. mus. 3) hardly later than this date. Terpander composed hymns, some of them in hexameter verse (Sm. b. d.).

The Homerid hymn to Mercury 51 containing an account of the seven-stringed lyre (the invention of Terpander), not earlier than this date.

Hedera helix of the Himalayan mountains. Called in Britain *ivy*, in Anglo-Saxon "ifig," in Old High German "ëbah" (Prior), in current German "epheu" (Grieb), in France "lierre" (Nugent), in Italy "ellera" or "edera" (Lenz), in Greece "kissōs" (Sibth.), in Egyptian "hēnōsiris" or "shĕnōsiris" (Plut. is. and osir.); in which we recognize the ΚΙΣΣΟΣ mentioned in the Homerid hymn to Dionysus or Bacchus 40, — also by Anacreon (anthol. pal. vi. 134 and vii. 29), Pratinas, Pindar, Cratinus, Sophocles, Theophrastus, Erasistratus, Theocritus, Semus Delius, Dioscorides, Athenaeus xiv. 16, and that Harpalus attempted without success to introduce into Media (Plin. xvi. 62): the "kissōs" is mentioned also in 2 Macc. 6. 7: H. helix, I was informed, has not been successfully cultivated in Egypt; was observed by Hasselquist on mount Tabor in Palestine; by Forskal, Sibthorp, Chaubard, and Fraas, seemingly wild from the Peloponnesus throughout the Greek islands. Westward, the "kissōs" or "nusiōn" or "thiōnusiōn" or "pĕrsis" is identified in Syn. Diosc. with the "sōuvitēs" of the Gauls, and "silva matĕr" or "ĕthĕra" of the Romans; the "edera" or "hedera" is mentioned by Cato 111, Horace, Ovid fast. iii. 766, Columella, and Tacitus: H. helix is termed "h. arborea" by Tournefort inst. 613; and seems at least completely naturalized in Europe, clinging to trees and rocks from Italy as far as Sweden (Curt. lond., Pers., Spreng., and Lenz). Eastward from Palestine, Alexander was informed by priests of Bacchus on the Upper Indus that the "kissōs" there grew only on mount Meros: H. helix was observed by Royle wild on the Himalayan mountains (Kitt. bibl. cycl. ii. p. 203 to 217). By European colonists, was carried to Northeast America, where its cultivation for ornament is increasing in our Middle States. Is mentioned according to Lindley "as a sudorific, and was once reputed to prevent drunkenness."

"In this year" (Xanth., Clem. Alex., and Clint.), the poet Archilochus leaving Paros in company with a colony for Thasos.

Prunus insititia of Europe and the adjoining portion of Asia. Called in Britain *wheaten plum*

(Ainsw.) or *bullace*, by Turner "bulles," by Treveris "bolays," by Galfridus pr. pm. "bolas" (Prior), by the Bretons "belosse" or "bolosse" (Le Gall), in France "prunier sauvage" (Fée), in Germany "haferpflaume" (Lenz), in Greece "agriōthamaskēnia" (Sibth.) or "kōrōmēlĕa" (Fraas); in which we recognize the KOKKVMHVON of Archilochus, — Hipponax, Aristophanes, having a round nucleus according to Theophrastus iv. 2. 10, and further noticed by Nicander, Dioscorides, and Pollux i. 232: P. insititia was observed by Sibthorp, and Fraas, wild in Greece and as far as Smyrna; is known to grow also about Caucasus (Ledeb.); and cultivated varieties may be included in the "barkuk" of Egypt and Yemen, the possible origin of the Greek name. Westward, the "prunum cereum" is mentioned by Virgil, "prunus silvestris" by Columella, and "ingens turba prunorum" by Pliny xv. 12: P. insititia occurs in debris of Swiss lake-villages belonging to the Stone Age (Heer); is termed "p. sylvestris præcox altior" by Tournefort inst. 623; is known to grow wild in Italy and throughout middle Europe (Linn., Pers., Bertol. fl. ital., and A. Dec.). By European colonists, cultivated varieties were carried to Northeast America, where they continue in our gardens intermingled with prunes or damsons under the common name of *plum* (see P. domestica).

Cratægus tanacetifolia of the East Mediterranean countries. Called in Greece "trikōkkia" (Sibth.), in which we recognize the "trikōkkōn" identified by Dioscorides with the MESPILON of Archilochus, — Eubulus, Superfœt. 25, Theophrastus iii. 12, Agatharchides 96, and others, a thorny tree with edible fruit which resembles a small "mēlŏ" and contains three bony granules; mentioned also by Pollux i. 233, and "mĕspilōn" water prescribed by Hippocrates vict. acut. 62: C. tanacetifolia is termed "m. orientalis tanaceti folio villoso magno fructu pentagono e viridi flavescente" by Tournefort cor. 44 and trav. ii. pl. 172, and was observed by him, Sibthorp, and Fraas, on all the high mountains of Greece.

"704 B. C." (= 404 + "300 years" of Thucyd. i. 13 and Clint., see also Herodotus, and Diodor. xiv. 42), *trireme galleys*, a new and larger class of sea-going vessels, built for the Samians by Aminocles of Corinth. — Row-galleys continued in use on the Mediterranean in the days of Baumgarten, and Cervantes: and even now, the term "galley-slave" has hardly become obsolete in the English language.

"The same year" (= 702 + "2 years" of the Astronom. can., and Clint. i. p. 278), at Babylon, end of the reign of Archianus.

703 B. C. (Beros., Alex. Polyhist., and Clint. i. p. 278), after reigning "thirty days" at Babylon, Hagisa slain and succeeded by Marudach Baldanes. Who reigned "six months;" and is regarded (by Josephus and Eusebius) as the king who "sent letters and a present" to Hezekiah at Jerusalem (2 K. xx. 12, and Isai. xxxix. 1, see above). The embassy is proof, that Babylon was now independent of Assyria.

"702 B. C." (= 699 + "3 years" of the Astronom. can., and Clint.), Marudach Baldanes slain, and the accession of Elibus or Belibus as king of Babylon.

"The same year" (Euseb., and Clint.), at Athens, accession of Apsander, sixth Decennial archon.

One hundred and eighth generation. Jan. 1st, 700, mostly beyond youth: the Greek poet Tyrtæus, and the Messenian bard Theoclus (Blair).

"699 B. C." (= 693 + "6 years" of the Astronom. can., and Clint., see also Beros., and Alex. Polyhist.), "in the third year of Elibus," Babylon captured by an Assyrian king, and placed under the rule of his son Apronadius. (On comparing 2 K. xvii. 24 and Ezr. iv. 2 to 10, the Assyrian king is found to be Esarhaddon; the son Apronadius corresponding to "Asnapper," who established colonists from Babylon, Cuthah, Ava, Hamath, and Sepharvaim "in the cities of Samaria instead of the children of Israel."

"696 B. C. = 1st year of Tchoung-wang, of the Tcheou" or Fifth dynasty — (Chinese chron. table).

The same year = "20th year of Taharka," on the monuments — (C. Mull. fr. Man. p. 593).

695 B. C. (= 722 y. $233\frac{14}{360}$ d. — "29 years" of twelve lunations of 2 K. xviii. 2 and 2 Chron. xxix. 1), Hezekiah succeeded at Jerusalem by his son Manasseh, seventeenth Jewish king.

"693 B. C." (= 692 + "1 year" of the Astronom. can., and Clint.), Apronadius succeeded by Regibalus, as king of Babylon.

In this year = "23d year of Taharka," invasion of Egypt by the Assyrians under Esarhaddon; who has left a record of his passage on the rocks at Nahr-el-Kelb, close to the tablet of Ramessu II. (Birch.) His capture of the city of No — (On or Heliopolis) is mentioned by Nahum iii. 8.

"The same year" (. . . . Suid., and Clint.), Simonides the iambic poet. He was contemporary with Archilochus (Clem. Alex. i. p. 33), and led a migration from Samos to the neighbouring island of Amorgos (Strab. x. p. 487, Steph. Byz., and Tzetz. xii. 52).

The BAKKARI ointment of Simonides of Amorgos — (Clem. Alex. pæd. ii. 8), or "vakharis" of Hipponax, Aeschylus, Magnes, Ion, Achaeus, Epilycus, Cephisidorus, and Athenaeus xv. 40, may

be compared with the "bachur" ointment of the Arabs. As prepared by Arab colonists in Spain and Portugal, the ingredients are enumerated by Jao de Souza vestig. arab.

Inula conyza of Europe and the adjoining portion of Asia. Called in Britain from its fragrant root *ploughman's spikenard* (Pryor, and Cockayne); in which we recognize the "nardum rusticum" identified by Pliny xxi. 16 with the "bacchar quoque radicis tantum odoratae" of which ointment was made by the ancients — according to Aristophanes: the "vakharis" of Nat. mul. p. 535 to 549, Vict. acut., Lucian lexiph. p. 187, and Athenaeus xv. 41 is defined by Erotian voc. Hipp. as a plant as well as kind of ointment, and the plant is described by Dioscorides as a fragrant coronary herb with whitish and purple flowers and a cinnamon-scented root: I. conyza was observed by Sibthorp in the environs of Constantinople. Westward, the "bacchare" plant worn in garlands according to Virgil for protection against evil speaking, is referred here by Anguillara, and Gerarde p. 647; I. conyza is described also by Tragus, and Matthioli; is termed "c. major vulgaris" by Tournefort inst. 454, "conyza squarrosa" by Linnæus; and is known to grow throughout middle Europe as far as Denmark (fl. Dan. pl. 622, Engl. bot. pl. 1195, Pers., and Spreng.).

The same year (= 661 y. $100\frac{1}{6}$ d. + "37 years" of ten lunations, Sm. b. d.), Romulus succeeded by Numa Pompilius, second king of Rome. — The tomb of Numa in the Janiculum is mentioned by Pompeius Festus (Paul. Diac.).

Lathyrus sativus of the Mediterranean and Tauro-Caspian countries. Called in Britain *chickling vetch*, in France "gesse" (Nugent) or "pois quarrées" (Forsk.), in Germany "platterbse" (Grieb), in Italy "cicerchia" (Lenz), in Greece "agriōlathōuri" (Sibth.) or "lathōuri" (Fraas), in Egypt "gilban" (Del.); in which we recognize the "lathurōn," one of the legumes among the Romans prohibited to persons leading a chaste life — (Plut. qu. rom. 95): the "cicercula" is mentioned by Columella ii. 10. 19, by Pliny xviii. 32 to xxii. 72 as "minuti ciceris inaequalis angulosi veluti pisum," is also mentioned by Palladius ii. 5: L. sativus is termed "l. s. flore fructuque albo" by Tournefort inst. 395; was observed by Forskal under cultivation near Marseilles; is known to occur cultivated and springing up spontaneously in Italy, Algeria, Spain, and as far as Switzerland (Pers., Boiss., and A. Dec.). Eastward, the "lathurōs" is mentioned by Anaxandrides, Alexis, by Theophrastus viii. 3 as having a compressed stem resting on the ground: and the "djilban," by Ebn Djoldjol, and Ebn Baitar: L. sativus was observed by Sibthorp, and Fraas, in mountainous cultivated ground in the Peloponnesus and on Parnassus; by Delile, and Clot-Bey, under cultivation in Upper Egypt and the seeds given to cattle; is known to occur both cultivated and seemingly wild about Caucasus and in the province of Talusch (Ledeb., and C. A. Meyer). Farther East, has Bengalee but no Sanscrit names (Pidd., and A. Dec.); is called "lang" in Guzerat, where it was observed by Law "commonly cultivated" and "very pretty when in flower" (Graham).

Lathyrus cicera of the Mediterranean countries, and as far as Caucasus. Called in France "gesse chiche" (Fée), in Germany "grosse platterbse" (Fraas); and probably included in the prohibited "lathurōn:" — the "cicera" is mentioned by Columella ii. 10 as employed for feeding cattle; the "columbinum" kind "quod alii venerium vocant candidum rotundum leve," by Pliny xviii 32 to xxii. 72: L. cicera is described by Dodoens pempt. 523; is termed "l. sativus flore purpureo" by Tournefort inst. 395; and is known to occur cultivated and springing up spontaneously from Trieste and Northern Italy to Algeria and Spain (Pers., Boiss., A. Dec., and Lenz). Eastward, was observed by Sibthorp, Dænzer, and Griesebach, from the Peloponnesus to Thrace and Asia Minor; and is known to grow seemingly wild about Caucasus (Ledeb., and C. A. Meyer). By Columbus, "vitches" were carried to the West Indies (F. Columb. 53), but at the present day their cultivation seems unknown in America.

"692 B. C." (= 688 + "4 years" of the Astronom. can., and Clint.), Regibalus succeeded by Mesesimordachus, as king of Babylon. The same date (= 604 + "20 + 21 + 21 + 8 + 18 years") is given by Alexander Polyhistor for the accession of the Assyrian king Senecherimus.

"The same year" (Euseb., and Clint.), accession of Eryxias, seventh Decennial archon at Athens.

"691 B. C." (Euseb., and Clint.), the art of *welding together silver and iron* discovered by Glaucus of Chios, a celebrated statuary in metal. A specimen of his workmanship, "a silver bowl having an iron base," — was sent nearly a century later by the Lydian king Alyattes to Delphi (Herodot. . .); and its "iron base, chased with figures of animals, insects, and plants" remained extant in the days of Pausanias x. 16, and of Athenaeus v. p. 210.

"690 B. C." (Euseb., and Clint., see also Philosteph., and Athen. vii. p. 297), in Pamphylia on the Southern coast of Asia Minor, the city of Phaselis founded by Greek colonists under Lacius.

"Not earlier than this year" (. . . . Clint.), the Second musical school at Sparta founded by Thaletas of Crete.

The same year = "26th year of Taharka;" the latest date in his reign found on the monuments (Leps. k. tab. p. 21).

Not earlier therefore than this date (the Euseb.-Maneth. table giving 339 + "6 + 4 + 6 + 20 + 21 y. 4 mo. + 6 + 120 y. 4 mo. + 42 + 25 + 17 + 6 + 45 + 8 + 6 + 7 + 12 years" = 690 y. 8 mo.), end of the reign of Tarakos or Taharka. In the Euseb.-Maneth. table, he is succeeded by the Ethiopian Amméris. The name of queen Amuniritis occurs on contemporaneous monuments (Leps. k. pl. 46). The successor of Taharka is called Urdamani in the Assyrian annals, — and Rutamen by Birch hist. 178.

A coffin dated in the reign of queen Amuniritis, — and now in the British museum, is described by Birch.

Melilotus officinalis of Europe and the adjoining portion of Asia. Yellow-flowered and called in Britain *melilot* (Prior), in France "mélilot" (Nugent), in Germany "melilote" (Grieb), in Italy "meliloto" or "loto domestico" or "tribolo" or "trifoglio odorato" (Lenz), in Greece "triphulli" (Fraas), or "nēhaki" (Sibth.), and possibly the "thĕrmōuthis of the prophets or "aimĕith" of the Egyptians — identified in Syn. Diosc. with the "mĕlilōtōs;" described by Theophrastus caus. vi. 14 and od. 34 as giving out its lasting odour when dried; by Dioscorides, as produced of the best quality in Attica, and at Cyzicum, and around Carthage: the "yellow-flowered melilot" is also mentioned by Avicenna (Lobel hist. p. 501): M. officinalis was observed by Sibthorp, and Fraas, frequent in moist situations throughout Greece and the Greek islands; is enumerated by Clot-Bey as long known in Egypt, and dried "melilothus" was observed there in drug-shops by Forskal. Westward, a "melilotus" growing everywhere "recens nec candicans" herbaceous and not hoary "et croco quam simillima" is distinguished by Pliny xxi. 37; the "melilotus" of Palladius xi. 14. 8 may also be compared: M. officinalis is described by Matthioli p. 809; is termed "melilotus officinarum germaniæ" by Tournefort inst. 407; and is known to occur in Italy and throughout middle Europe as far as Denmark (fl. Dan. pl. 934, and Pers.), in Britain regarded by Watson and others as a naturalized exotic. By European colonists, was carried to Northeast America, where it continues in cultivated and fallow ground in our middle and Southern States (A. Gray, and Chapm.); also to Southeast Australia, where it has become naturalized, even in the Interior (Corder, and A. Dec.). Its odour in herbaria according to Sprengel has continued perceptible more than an age: and the decoction according to Lindley is sometimes used medicinally.

Melilotus alba of middle Asia. The *white-flowered melilot*, by some writers regarded as not distinct, — was already in Italy in the days of Pliny xxi. 37, who enumerates the "candida" as the most odorous kind of "melilotos:" M. alba is termed "m. officinarum germaniæ flore albo" by Tournefort inst. 407; and is known to occur throughout middle Europe as far as Britain, where it is regarded by Watson and others as exotic and introduced (A. Dec.). Eastward, the "white-flowered" kind is distinguished by Avicenna (Lobel hist. p. 501): M. alba was observed by Forskal, and Sibthorp, from Thessalonica to Smyrna; by Wight, Law, and Graham, "in pasture grounds" in the environs of Bombay and other parts of Hindustan. By European colonists, was carried to Northeast America, where it continues in fallow ground and in open situations near the sea, to all appearance naturalized.

"688 B. C." (= 680 + "8 years" of the Astronom. can., and Clint.) at Babylon, end of the reign of Mesesimordachus.

In this year (= 759 — "31 — 6 — 40 yrs" of the Afr.-Maneth. table), accession of Stĕphinatēs or Stĕphinathis; head of the Twenty-sixth dynasty. Tnephahtos is mentioned by Diodorus i. 45. 2, Tehnatis by Plutarch is. and os. 8; and according to a papyrus, Tafnekht made himself master of Lower Egypt, as far as Heracleopolis (see Birch). The name of king Kasto or T-h-k occurs on contemporaneous monuments, and according to Lepsius he married Amuniritis.

"687 B. C." (= 559 + "128 years" of Herodotus i. 130, and Clint.), beginning of the *Median Empire:* Deioces being formally established ruler, and his dominions extending as far West as the river Halys in Asia Minor.

The city of Ecbatana built for the new seat of government by Deioces. Who also was accustomed to deliver his *judgments in writing* — (see Herodot. i. 100, and Esth. i. 19).

"685, in the autumn" (Pausan. iv. 15. 1, but Clinton i. p. 180 and 253 thinks probably six years later), revolt of the Messenians against the Spartans, commencing the Second Messenian war. — The war continued "seventeen" years.

"684 B. C." (. . . . Clint. . .), Perdiccas succeeded by Argaeus, fifth king of Macedonia.

"683 B. C." (the seven Decennial archons occupying "69 years" according to Clinton), a change at Athens in the form of government; Eryxias succeeded by Creon, the first Annual archon.

"681 B. C. = 1st year of Li-wang II., of the Tcheou" or Fifth dynasty — (Chinese chron. table).

In this year (= 688 — "7 yrs" of both Maneth. tables = 664 + "15 yrs dodecarch. + 2 yrs anarch." of Diodorus . . .), Stĕphinatēs succeeded by Nĕhĕpsŏs, second king of the Twenty-sixth dynasty. Nĕŏhavin is mentioned by Alexis autarch. (Athen. x. p. 418): the name of king Ankhĕpi or Pankhi occurs on contemporaneous monuments, — and is placed next after queen Amuniritis by Lepsius k. pl. 4. According to

the above-mentioned papyrus, the revolted Tafnekht was subdued by Pankhi, king of Ethiopia, residing at Noph or Napata (see Birch).

"680 B. C." (= 667 + "13 years" of the Astronom. can., and Clint.), accession of Asaridinus, or Esarhaddon retaining for himself the city of Babylon.

"678 B. C." (= 716 — "38 years" of Herodot, Clint.), Gyges succeeded by Ardys as king of Lydia.

"676 B. C. = 1st year of Hoei-wang, of the Tcheou" or Fifth dynasty — (Chinese chron. table).

"The same year" (Sosib., Athen. xiv. p. 635, Jul. Afr., and Clint.), "Carnea" or contests with the harp, instituted in Laconia.

"675, Oct. 10th," on the first day of the Tenth month in the "2d year of Tchoun-wang" (Khoung-tseu, the Li-tai-ki-sse, and Pauth. 107), *eclipse of the sun.*

In this year (= 313 + "362 yrs" of the Vishnu-Purana, H. H. Wils. ind. dram. ii. 137), in Hindustan, accession of the first "of the ten Saisunagā princes."

The same year (= 681 — "6 yrs" of the Afr.-Maneth. table). Něhaŏ is placed here in the Afr.-Maneth table, — but in the Euseb.-Maneth. table (688 — "12 — 7 — 6 yrs" = 663) under Psammetichus.

"674 B. C." (Hieronym. and Clint., see also Thucyd. iv. 25 and Mela i. 19. 33), on the Asiatic shore of the Bosphorus, Chalcedon founded by Greek colonists from Megara under Archias. — "Seventeen" years later (Herodot. iv. 144), Byzantium directly opposite founded also by Megaran Greeks; the city continues flourishing to the present day under the name of Constantinople.

"671 B. C." (Euseb., and Clint.), "eleventh" change in naval dominion. Leaving the Carians, the "Empire of the sea" acquired by the Lesbian Greeks. — Held by them "sixty-nine" years.

"669, May 27th" = "first day of the Sixth month in the 8th year of Hou-wang" (Khoung-tseu, the Li-tai-ki-sse, and Pauth. 107), *eclipse of the sun.*

Zizyphus jujuba of Hindustan. The *jujube tree* or *wild bhere* is called in Hindustanee "bier," in Bengalee "kool," in Telinga "rengha" (Lindl.) or "reygoo," in Tamil "elendie" (Drur.), in Burmah "hzee" (Mason); and "more than twelve hundred years" ago was introduced by the way of "Persia" into China — (Li-chi-tchin, and others): the "jujube" is mentioned in an ode attributed to Tcheou-kong, and in one written about B. C. 661 (Chi-King i. 9. 3 and i. 15. 1, and Lacharme); the "eul" or "tsao" cultivated and its fruit eaten, by Thseng-tsi, Thseng-tseu, Koung-sun-tcheou, and Meng-tseu ii. 5. 14 to 8. 36: Z. jujuba was observed by Cibot mem. chin. iii. p. under frequent cultivation in China; by Blanco, cultivated and seemingly wild on the Philippines, and its fruit called "manzanitas;" is termed "mansana arborea" by Sonnerat pl. 94; was observed by Rumphius ii. pl. 36 on the Moluccas, its bark employed as a remedy for diarrhœa (Lindl.); by Mason v. 458, "exotic" in Burmah but "often found apparently growing wild," its "small sour berry a great favourite with the Burmese and Karens." Westward, the "koli" tree is mentioned by Budhaghosha parab. xxvi; Z. jujuba according to Royle is the most common species in Northern Hindustan; was observed by Roxburgh, Ainslie, and Wight, from Bengal throughout the peninsula; by Rheede iv. pl. 41, in Malabar; by Gibson, and Graham, in the environs of Bombay "common almost everywhere," and "very abundant in the Kandesh jungles, particularly towards the Taptee;" its fruit according to Drury "is eatable," and leaves on their "under side as well as young branches and petioles covered with dense tawny tomentum." (See Z. melanogona).

"668 B. C." (= "first year of the 28th Olymp." of Pausan. iv. 23. 2), after eleven years siege, the city of Ira captured by the Spartans: terminating the Second Messenian war. (Pausanias' date is however regarded by Clinton i. p. 190 and 253, as probably "six" years too early).

"Nov. 10th" = "first day of the Twelfth month" (Khoung-tseu, the Li-tai-ki-sse, and Pauth. p. 107), *eclipse of the sun.*

One hundred and ninth generation. May 1st, 667, mostly beyond youth: the prophet Nahum: among the Greeks, Polymnastus of Colophon, who improved the Spartan music.

"The same year" (= 647 + "20 years" of the Astronom. can., and Clint.), Asaridinus or Esarhaddon succeeded by Saosduchinus, now king of Babylon. (The accession of the Assyrian king Sammughes is placed by Alex. Polyhistor a year later, = 604 + "20 + 21 + 21," with an additional year assigned to his reign: as though the two names belonged to the same king).

Manasseh king at Jerusalem bound with fetters by "the captains of the host of the king of Assyria," and carried (not to Nineveh) "to Babylon" (2 Chron. xxxiii. 11).

"665 B. C." (Euseb., Ael. xii. 50, and Clint.), at Sparta, first performance of the gymnopaedia, the songs on the occasion including some by Alcman.

Lactuca scariola of Europe and the adjoining portion of Asia. Called in Britain *lettuce*, in Scotland "lattouce" (Prior), in France "laitue" (Nugent), in Germany "salat" (Grieb), in Italy "lattuga" or "lattuca" (Lenz), in Greece "marōuliōn or "marōuli" (Fraas) or "thrithax" (Zalikogl.), in Egypt "khass" (Del.) or as heard by myself "khŭss," in Egyptian "iŏv nsŏtshĕ" (Ming.) or

"ōuf" or "ōv" (ms. Par., and Kirch.) or "ĕmvrōsi" (Syn. Diosc.); in which we recognize the "laktōuka" identified in Syn. Diosc. with the Θ ΡΙΔΑΚΑ of Alcman, — Hipponax, Cratinus, Polemon diæt. ii. Theophrastus, Athenaeus iii. 82, and "thrithax ēmĕrōs" esculent according to Dioscorides: the "thrithax" was already in Egypt when invaded by Cambyses (Herodot. . .): the "khass" is mentioned by Ebn Baitar: L. scariola was observed in Egypt under cultivation by Abd-allatif, Forskal, Delile, Clot-Bey, and myself; by Forskal, under cultivation among the mountains of Yemen; by Fraas, under cultivation in Greece; by him, and Sibthorp, in shaded situations in its original state, is known to grow also about Caucasus and as far as the Altaian mountains (Ledeb., and C. A. Meyer). Westward, the "thrithax ēmĕrōs" is identified in Syn. Diosc. with the "laktōuka" of the Romans; the "lactuca" according to Plĭny xix. 38 was known to the ancient Italians in one variety only; is mentioned also by Varro, Horace, Celsus, Columella, and Martial: L. scariola is described by Hermann parad. pl. 91, and Morison iii. 7. pl. 2; is termed "l. sylvestris costâ spinosâ" by Tournefort inst. 473; and is known to grow from Italy throughout middle Europe as far as Denmark (Ray, Engl. bot. pl. 268, fl. Dan. pl. 1227, and Wats.), is besides abundantly cultivated. Eastward from Caucasus, is called in Persian and Hindustanee "kahu" (Roxb., and D'roz.), but seems devoid of a Sanscrit name; was observed by Royle him. p. 247 in the gardens of Northern Hindustan; by Graham, in the environs of Bombay; and by Roxburgh, Wallich, and Wight, farther South and East: by Mason, "exotic" in Burmah; by Loureiro, in Anam; by Kaempfer, and Thunberg, under cultivation in Japan and called "kantats," or usually "futsu kusa" or "too tsisa." By European colonists, was carried to Northeast America, where it continues abundantly cultivated; to the island of Tristan d' Acunha (A. Dec.); and according to Loureiro, to Macao in Southern China. The inspissated juice according to Lindley is sold under the name of *thridace* or *lettuce opium*. (See L. virosa).

Calendula arvensis of the Mediterranean countries. A kind of wild *marigold* called in Germany "feld-ringelblume," in Italy "fior rancio selvatico" or "fiorrancio campestre" (Lenz), in Greece "graias t'atrahti" (Fraas), in Egypt "tob â'yny" or "kahleh" (Del.); in which we recognize the ΚΑΥΧΑΝ of Alcman, — or "kalhē" of Epicharmus, Numenius (schol. Nic. ther. 257), Nicolaus of Damascus, and Athenaeus xv. 28: C. arvensis was observed by Sibthorp, Chaubard, and Fraas, frequent in waste and cultivated ground from the Peloponnesus throughout the Greek islands; by Forskal, Delile, and myself, on the river-flat of the Nile as far as Cairo. Westward, the "calthula" garment is mentioned by Plautus; the "caltha" by Vitruvius, Virgil ecl. ii. 50, and the "flammeola caltha" by Columella x. 307: C. arvensis is described by Columna phyt. pl. 13 (Spreng.); is termed "caltha arvensis" by Tournefort inst. 499; was observed by Lenz seemingly wild in Italy; and is known to occur in cultivated ground as far as middle Europe (Scop., and Pers.).

Gnaphalium Orientale of the East Mediterranean countries. The ΕΥΙΧΡΥΣΟ mentioned as coronary by Alcman, — Ibycus, Cratinus, Themistagoras, Athenaeus xv. 27, or "ĕlĕiōhrusōu" of Theophrastus ix. 19 having a slender superficial root, hard stem, whitish leaves, and golden flowers, with which whoever is crowned will it is believed become illustrious, is referred here by Honorius Bellus (Clus. p. 300): Plĭny xxi. 38 adds, that the Magians crown themselves with "heliochrysos," thinking that honour and reputation belong to it: G. Orientale is termed "elichrysum orientale" by Tournefort inst. 453; was observed by Sibthorp on Crete; and is known to grow in Barbary (Lam. ill. pl. 693, and Pers.).

Gnaphalium stoechas of the Mediterranean countries. The *gold-everlasting* is called in Germany "gold-immortelle" (Lenz), in France "immortelle" (Nugent), in Greece "kalōkŏimithikis" or "thakrua tas panagias" (Sibth.) or "amaranthōn" (Fraas); and possibly the "ĕlihrusŏ" of Alcman; — clearly the "amarantŏn" or "hrusanthĕmŏn" identified in Syn. Diosc. with the "ĕlihrusŏn of Dioscorides with which images of the gods were crowned, placed besides among clothing to keep out moths: Ptolemy was careful to crown the gods of Egypt with "heliochrysum" (Plin. xxi. 96); the "ĕlihrusŏn" is mentioned also by Theocritus i. 28, Nicander ther. 625, and the scholiast: G. stoechas was observed by Delile on the Mediterranean border of Egypt; by Sibthorp, Chaubard, and Fraas, frequent from the Peloponnesus throughout the Greek islands. Westward, is described by Valerius Cordus f. 65, and Barrelier pl. 409; is termed "elichrysum seu stoechas citrina angustifolia" by Tournefort inst. 452; was observed by Forskal near Marseilles; is known to grow from Italy as far as middle Europe (Lam. fl. fr., and Pers.); and wreaths of its flowers are often seen in our modern cemeteries.

Sesamum Orientale of Equatorial Africa. Called in French and English gardens *sesame* (Nugent), in German "sesam," in Italy "sesamo" (Lenz), in Greece "sisami" (Forsk.) or "sĕsami" or "sēsami" or "sōusami" (Fraas), in Egypt "semsem," in Yemen "djyldjylan" (Forsk.), in Egyptian "sĕmsēm" or "susamĕn" (ms. Par., and Kirch.) or "ōkĕ" (ms. Par.); in which we recognize the ΣΑΣΑΜΟ of Alcman, — or "sēsamōn" of Stesichorus (or perhaps Ibycus, Athen. iii. 75 to iv. 72), Crates, and Hippocrates; cultivated for its oil in Babylonia in the days of Herodotus i.

193, and Strabo xvi. 1; in Egypt also in the days of Theophrastus . . . . , Dioscorides, and Pliny; and its culture in Italy mentioned by Columella ii. 10. 18, Pliny, and Palladius: S. orientale continues well known in Italy (Lenz); was observed by Forskal, Chaubard, and Fraas, under cultivation from the Peloponnesus to Tenedos, the seeds plastered on bread; by Abd-allatif, Forskal, Delile, and Clot-Bey, under cultivation in Egypt; was ascertained by myself at Zanzibar to be cultivated in the neighbouring portion of Africa; and Westward in the same Equatorial portion, is known to have been long cultivated along the Atlantic (Hook.): Eastward from Arabia, is called in the environs of Bombay "gingelie" or "tul" (Graham), in Bengalee "til," in Telinga "noowooloo," in Tamil "yelloo cheddie" (Drury), in Sanscrit "tila" (Roxb.): "sesama ab indis" is mentioned by Pliny xviii. 10; "tila," in the Institutes of Menu: S. Orientale was observed by Rheede ix. pl. 55 in Malabar; by myself, in the environs of Bombay, cultivated according to Graham for its oil and "a very common plant springing up in uncultivated places and flowering towards the close of the rains;" by Roxburgh, and Royle, in other parts of Hindustan; and by Burmann pl. 38, on Ceylon. Farther East, by Mason v. p. 504, "exotic" and called "hnan" in Burmah, "largely cultivated by the Karens" and the seeds sold to the Burmese, who use the oil in curries and for burning; by Rumphius v. p. 204, cultivated and naturalized in the Malayan archipelago and called in Malay "widjin;" by Blanco, on the Philippines, and called in Tangalo "linga," in Bisaya "longa," in Pampango "langis;" by Thunberg, in Japan and called "koba;" and is called "moa" in China (Rumph.). By European colonists, was carried from Equatorial Africa across the Atlantic to Brazil (Piso, and A. Dec.), has become naturalized in Tropical America, and as far as Florida.

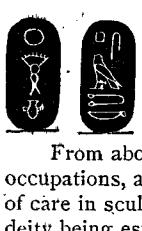
Cyperus esculentus of the Mediterranean countries. Called in Italy "dolcichini" or "bacicci" (Lenz), in Greece "kipĕrōs," in Egypt "hab el aziz" (Forsk.); and the ΚΥΠΑΙΡΟΝ of Alcman — may be compared: the "kupĕirōn" by some called "zĕrnan" according to Democritus has a root aromatic in flavour (geopon. ii. 6): the "malinathallē" buried in sand not far from the Nile and giving out leaves like "kupĕirŏ," becomes according to Theophrastus iv. 8. 12 as large as a "mĕspilōn" and is cooked and eaten: seeds of C. esculentus according to Wilkinson have been found in ancient Egyptian tombs: the living plant was observed by Forskal, and Delile, in Lower Egypt; by Forskal, near Constantinople, the root large and edible with an aromatic flavour; by Gittard, in the Peloponnesus. Westward, is described by Morison iii. pl. 11; was observed by Desfontaines i. p. 43 in Barbary; by Tenore pl. 101, and Lenz, in Italy; is known to grow also in Southern France (Villars, and Pers.).

"The same year = beginning of the Tenth manwantara" among the Hindus (Graha Munjari tables, and Bentley as. res. viii. p. 244).

"664 B. C." (= 404 + "260 years" of Thucyd. i. 13, and Clint.), *naval combat* between the Corinthians and their colonial descendants of Corcyra or Corfu. Regarded by Thucydides as the earliest one known to the Greeks.

"Three hundred and forty-one kings" preceded Psammetichus, according to the statement of Egyptian priests to Herodotus ii. 142. In the Afr.-Maneth. table, one hundred and thirteen kings being named, the unnamed kings of the Seventh, Eighth, Eleventh, Thirteenth, Seventeenth, and Twentieth dynasties, make up the required number, 113 + "70 + 27 + 16 + 60 + 43 + 12" = 341. The exclusion therefore may be remarked of the unnamed kings of the Ninth, Tenth, Fourteenth, Sixteenth, Nineteenth, and duplicated Seventeenth dynasties.

VI. GREEK ASCENDENCY.



The same year (= 610 + "54 years" of Herodotus and the Afr.-Maneth. table, the Euseb.-Maneth. table giving 570 + "25 + 17 + 6 + 45 years" = 663 = 688 — "12 — 7 — 6 yrs"), accession of Psammētihōs or Psammetichus, fourth king of the Twenty-sixth dynasty: an occasion marked by the first introduction into Egypt of a body of Greeks (Herod. ii. 154). He married a daughter of king Pankhi — (Birch).

From about this date, the Egyptian monuments no longer present representations of manners, occupations, and the mechanic arts; may also be recognized by a difference in style, a general want of care in sculpturing hieroglyphic characters, and by the reduplication of the deities; the cat-headed deity being especially frequent.

The name of king Psametik occurs on contemporaneous monuments, on stones from a temple begun by him near Nahariehi (Leps. eg. and sin. 43); in the great unfinished hall at Karnak, in the quarries at Tura, on the rocks near Philæ, on an obelisk (now in Rome), and on a papyrus and other moveable articles (now in the museums of Europe).

"Under the Psammetichi" (Leps. eg. and sin. p. 28 and 118), a third canon of proportions for

the human figure makes its appearance in the Egyptian sculptures. — This new rule or canon is that mentioned by Diodorus; and continued unchanged until the time of the Roman emperors.

"661 B. C." (. . . . Lacharme note to Chi-King i. 9), the kingdom of Ouei incorporated in the kingdom of Tsin by prince Hien-kang

. In this year (= 635 y. $147\frac{21}{88}$ d. + "32 years" of ten lunations, Sm b. d.), Numa succeeded by Tullus Hostilius, third king of Rome.

Prasium majus of the Mediterranean countries. A Labiate plant called in Greece "phassōhōrtōn" (Sibth.), equivalent to the "peristereona" identified by Pliny with the "sagmina" employed by Tullus Hostilius in concluding alliance with the Albans — (Liv. i. 24. 4): the "peristereona" is further identified by Pliny xxii. 3 and xxv. 59 with the "hierabotane" with which the temple of Jupiter was swept and purified, and which was carried to enemies by the "verbenarius" in the Roman army: P. majus is described by Morison iii. pl. 21; is termed "galeopsis hispanica frutescens teucrii folio" by Tournefort inst. 186; is known to grow about Rome as well as in Sicily and Morocco (Pers.). Westward, the "erva saggouinalis" or "krista gallinakĕa" or "phĕrraria" or "trixalis" or "ĕxoupĕrans" of the Romans is identified in Syn. Diosc. with the "pĕristĕrĕŏn ŏrthŏs," named according to Dioscorides from doves loitering around, mostly single-stemmed from a single root, and a span high with incised greyish leaves: the "pĕristĕrĕŏn ōrthŏs" or "pĕristĕriŏn" or "trugŏniŏn" or "iĕra vōtanē" or "philtrōthōtēs" or "vōuniŏn" is further identified in Syn. Diosc. with the "ĕras thakruŏn" or "aima ĕrmōu" or "aima galēs" of the prophets, and "pĕmpsĕmptĕ" of the Egyptians: the "pĕristĕrĕŏn ōrthōs" is mentioned also by Aetius, and Alexander Trallianus: "pastus columbarum" occurs in a translation of Avicenna, and the "aiaranuthali" of Ebn Baitar may also be compared: P. majus was observed by Sibthorp, and Chaubard, on rocky hills from the Peloponnesus to Caria in Asia Minor. (See Verbena officinalis, V. supina, and Sisymbrium officinale).

"660 B. C." (Euseb. and Clint., see also Ephor., Aristot., Strab. vi. p. 260, and Clem. Alex. i. p. 309), in Italy, laws made by Zaleucus for the Greek colonists at Locris. Regarded as the earliest collection of *written laws* possessed by the Greeks.

"The same year (= 17th year of the emperor Huivam = 58th year of the 35th Chinese cycle," Kaempf. ii. 2, and art de verif.), "Third and last epoch of Japanese history," the Nin-O of the Japanese, or "era of Sinmu" (see below).

"In this year" (. . . . Lacharme note to Chi-King i. 4. 6), Oen-kong, son of Y-kong king of Ouei. — He was killed in battle against the barbarians of the North.

"657 B. C. = 20th year of Hoei-wang" (Chinese chron. table), beginning of the Thirty-fourth cycle.

Ricinus communis of Tropical America? The *castor-oil plant* is called in Germany "wunderbaum," in Italy "ricino" or "ricino commune" (Lenz), in Greece "krōtŏnĕia" or "kōllōkiki" (Sibth.) or "kiki" (Fraas), in Egypt "kharoua," in Nubia "rouagy" (Del.), in Yemen "tebscha" or "djar" (Forsk.), by the prophets "aima purĕtōu," in Egyptian "susthamna" or "trixin" (Syn. Diosc.), in Sanscrit "eranda," in Hindustanee "arend" or "arendi," in Bengalee "bherenda," in Telinga "amadum" (Lindl.), in Tamil "valluk" or "sittamunak" (Drur.), in Burmah "kyet-hsoo" (Mason), in Tagalo "lingansina" or "tangantangan," in Ylocano "tangantangan" or "tavatavang sina" (Blanco), in Japan "fima," or usually "karagi" or "karagasju" or "Chinese goma" (Thunb.); and the "ricin" is mentioned in an ode attributed to Tcheou-kong — (Chi-King i. 15. 1, transl. Lacharme): R. communis was observed by Kaempfer, and Thunberg in Japan, employed for making ink; by Mason v. 492, "exotic" in Burmah, very extensively cultivated by the Karens for its seeds, used to fix colours; by Roxburgh, and Wight, in Bengal and peninsular Hindustan; by Rheede ii. pl. 32, in Malabar; by myself, cultivated and naturalized as far as Bombay, according to Graham "common about villages all over the country" and its oil "generally used in lamps by the natives;" by Forskal, among the mountains of Yemen, seemingly wild; by myself, seemingly wild on Zanzibar; by Grant, "everywhere near dwellings" on his route to the Nile, its leaves having virtues among the Negro tribes, and its oil used for ointments. Farther North, the "sillikupriŏn" or "kiki" is mentioned by Herodotus ii. 94 as cultivated in Egypt for its oil, and springing up spontaneously in Greece; its cultivation in Egypt is also mentioned by Strabo xvii. 2, but according to Pliny xv. 7 the plant was unknown there in ancient times: the "kiki" or "krōtŏn" is mentioned also in Nat. mul., 2 Morb. mul. 79, Plato tim. 60, Theophrastus i. 10. 9, Nicander ther. 676, Diodorus i. 34, Galen, Hieronymus, Hesychius, is compared by Dioscorides to a small fig-tree, its leaves like those of the plane but larger; is identified in the added Synonyms with the "sĕsĕli kupriŏn," and with the "lŏupa" or "rikinōum" of the Romans; and the "cici" or "ricinum" was in Spain as well as Italy in the days of Pliny xv. 7: the "kykywn" is mentioned in Jonah iv. 6; "kyk" oil according to the Talmudists is one of the five kinds permitted by Tradition in sabbath lamps (Royle in Kitt. bibl. cycl.); and the "kherwa" is mentioned by Avicenna, and Serapion: R. communis was observed by Forskal, Delile,

and Clot-Bey ii. 38, under cultivation in Egypt for its oil; by Sibthorp, Chaubard, and Fraas, in waste places and sometimes cultivated, from Cyprus to the Peloponnesus; by Matthioli 771, in Italy; by Lobel, and J. Bauhin, under cultivation in Southern Europe (A. Dec.); by Ray, and Gussone, naturalized on Sicily; by Desfontaines ii. 355, and Reuter, in Barbary. Eastward from Japan, was observed by myself naturalized on the Feejeean Islands, and strings of its seeds used as candles; naturalized also from Polynesian introduction on New Zealand and the Hawaiian Islands. Farther East, is called by the Caribs "lamourou" (Descourt. i. and ii. pl. 127), their knowledge of the plant therefore not derived from Europeans; was observed by E. James seemingly wild at the junction of the Canadian and Arkansas rivers: but from European introduction is cultivated in our Atlantic States and along the Ohio.

"656 B. C." (Clint i. p. 194 and 274), Deioces succeeded by Phraortes, second Median emperor: regarded by Clinton as the "Arphaxad" of the Book of Judith i. 1 to 15.

"655, Aug. 19th," in the "Ninth month in the 22d year of Hoei-wang" (Khoung-tseu, the Li-tai-ki-sse, and Pauth. 107), *eclipse of the sun.*

"The same year" (. . . . Clint.), the Bacchiadæ expelled from Corinth; Cypselus establishing himself there as king.

About this time (Percev. i. 54), Himyar, son of Abdshams and great grandson of Yarob, ruling Yemen. His brother Cahlan was the progenitor of various Bedouïn tribes.

"654 B. C." (Hieronym., and Clint.), on the Northern shore of the Black Sea, the city of Olbia or Borysthenes founded by Greek colonists.

"651 B. C. = 1st year of Siang-wang, of the Tcheou" or Fifth dynasty — (Chinese chron. table).

"648, Feb. 1st" (. . . . Blair), the Thoth of this Nabonassar year. "Having shifted twenty-five days in one hundred years."

"647 B. C." (= 625 + "22 years" of the Astronom. can., and Clint.), Saosduchinus succeeded by Chinaladanus, as king at Babylon. (The accession of the "brother of Sammughes" as Assyrian king, is placed by Alex. Polyhistor two years later, = 604 + "20 + 21," with "21 years" only assigned to his reign; the two accounts possibly referring to one and the same person).

"646 B. C." (. . . . Clint.), Argaeus succeeded by Philippus, sixth king of Macedonia.

Not earlier than this date (Graha Munjari tables, Puranas, and Bentley as. res. viii, p. 244), Bhurisena reigning in Hindustan.

"644 B. C." (Ma-tuan-lin, E. Biot, and Humb. cosm. iv.), the earliest recorded fall of an *aerolite* in China.

641 B. C. (= 694 y. $183\frac{148}{360}$ d. — "55 years" of twelve lunations of 2 K. xxi. 1, and 2 Chron. xxxiii. 1), Manasseh succeeded at Jerusalem by his son Amon, eighteenth Jewish king.

"640 B. C." (Herodot. iv. 152, and Letronne), Colaeus of Samos on his way to Egypt visiting Platea. Sailing thence, he was driven by continual adverse winds into the Western portion of the Mediterranean, and even "as if led by the divinity" through the straits into the Atlantic: the Greeks not for the first time seeing the main ocean (see above, Carians).

639 B. C. (= 641 y. $51\frac{178}{360}$ d. — "2 years" of twelve lunations of 2 K. xxi. 19, and 2 Chron. xxxiii. 21), at Jerusalem, Amon slain by his servants; and succeeded by his son Josiah, nineteenth Jewish king.

In this year = "26th year of Psammetichus," death of the Apis or sacred bull that was born in the "26th year of Taharka" — (Birch).

"The same year" (Herodot. iv. 156, and Clint.), first settlement of Greeks on the Lybian or North African shore. At Platea, under the direction of Battus.

Thapsia silphium of the Lybian Desert. The "silphiŏn" plant discovered in the following year (638 = "7 years before the building of Cyrene," Theophr. . . , and Plin. xix. 15) in the district around the Greek settlement; — figured on coins of Cyrene, and celebrated among the Greeks for the medicinal and culinary properties of its concrete juice: imported "silphiŏn of Cyrene" is mentioned by Herodotus iv. 169, Aristophanes, Antiphanes, in the Hippocratic treatise 1 Morb. 4, and by Nicander, and Strabo xvii. 3; was already rare in the days of Scribonius Largus xvi. 67; was known to Dioscorides iii. 84, the plant now so rare that a stem sent from Cyrene to the emperor Nero was the only one procured within the remembrance of Pliny xix. 15: T. silphium was re-discovered in 1818 in its original locality by P. Della Cella, in journeying by land from Tripoli to Egypt.

In the same district (Aristot. animal. viii.), there were originally no "phŏnōuntĕs vatrahōi" *frogs* having voice, Rana temporaria?: — implying therefore, that these animals were after some years imported by the Greek settlers. The frogs now frequent all over the island of Madeira, I was assured had been imported by residents.

637 B. C. After "two years" stay, Battus and his companions, leaving behind only one man, returned to Greece. But before the close of "this year" (Herodot. iv. 157, and Clint.), second settlement by the Greeks on the Lybian shore. At Aziris, also under the direction of Battus.

"635 B. C." (Herodot. iv. 157, and Clint.), in Lydia, the city of Sardis captured by the Cimmerians; who had again entered Asia Minor.

The same year (= 616 + "24 years" of ten lunations, Sm. b. d.), Tullus Hostilius succeeded by Ancus Marcius, fourth king of Rome.

Mentha arvensis of Europe and middle Asia. Called in Britain *mint*, in France "menthe" (Nugent), in Germany "minze" (Grieb), in Egyptian "atshinsthōi" or "ashinnsthōi" or "asinstōi" (transl. n. test:); in which we recognize the "menta" of the early Romans, who deduced the name from "mintha,"—commended for its taste and odour by Pliny xix. 47 to xx. 53 "grato menta mensas odore percurrit in rusticis dapibus" agreeably scenting rustic banquets; mentioned also by Cicero, and Ovid met. x. . .; its use in cookery, by Apicius; its cultivation according to Columella, and Pliny, renewed from the "mentastrum" or "silvestre" kind, growing in fallow ground and in the time of Pompeius found to remove "elephantiasin" white scurf on the face: M. arvensis is described by Lobel adv. p. 217; is termed "m. arvensis verticillata hirsuta" by Tournefort inst. 189; was observed by Forskal on Malta; is known to grow in fallow ground as far as Denmark (fl. Dan. pl. 512, Thuil., All., Lam. fl. fr., and Pers.), and is besides cultivated. Eastward, the "ēthuōsmōn" enumerated by Matthew xxiii. 3, and Luke xi. 42 as cultivated in Palestine, by Dioscorides as medicinal and a condiment, mentioned also in Geopon. xii. 24, may be compared: M. arvensis was observed by Sestini in the environs of Constantinople (Sibth.); by Delile, in the gardens of Egypt; and is known to grow about Caucasus (Royle). Farther East, is known to grow along the Himalayan mountains as far as Cashmere (Royle in Kitt. bibl. cycl.); was observed by Graham "in gardens" in the environs of Bombay; by Roxburgh, in other parts of Tropical Hindustan. By European colonists, was carried to Northeast America, where it continues under cultivation, and according to A. Gray has been found springing up spontaneously "Penn. and Ohio, rare, odor like that of decayed cheese." Is one of three species enumerated by Lindley as having "been in repute as stomachics and emmenagogues." (See M. aquatica, and M. crispa).

"634 B. C." (Herodot., and Clint.), Phraortes slain by the Assyrians; and succeeded by his son Cyaxares, third Median emperor. Whose siege of Nineveh was arrested before the close of the year by Scythians from beyond the Black Sea overrunning Asia Minor. — The Scythians remained "twenty-eight" years, and extended their incursions as far as Palestine.

One hundred and tenth generation. Sept. 1st, 634, mostly beyond youth: the Egyptian priest Sonchis preceptor of Solon: the Jewish prophets, Zephaniah, and Habakkuk: the Greek poets, Aristoxenus of Selinus, Lesches of Mytilene, Xanthus, Pisander of Camira, and Mimnermus.

"633 B. C." (. . . . Clint.), at the mouth of the Danube, the city of Istrus founded by Milesian Greeks.

"631 B. C." (Euseb., and Clint.), in Lybia, the city of Cyrene founded by Greek colonists under Battus.

Continuing South, the Scythians were dissuaded by Psametik from entering Egypt; but on their way back, some of their number plundered the temple of the Uranian Venus in Ascalon, of the deity called "Alilat" by the Arabians. This was the oldest temple of Venus known to Herodotus i. 105 to iii. 8, having preceded and given rise to that on Cythera built by the Phoenicians, and the one on Cyprus. The origin of the Enarean Scythians was attributed to the above-mentioned desecration.

Tilia argentea of Eastern Europe. A *linden* tree called in Greece "phlamōuria" (Fraas) or "lipa" or "philōuria" (Sibth. app.); in which we recognize the "philurēn" used in divination by the Enarean Scythians, an art according to their account taught them by Venus — (Herodot. iv. 67), furnishing the splints or stays worn by the poet Cinesias, accused by the orator Lysias (Ruel i. 138): the "philura" is mentioned also by Xenarchus, Aristophanes av. 1378, and Athenaeus xii. 76 to xv. 24; by Theophrastus iv. 4. 1 and caus. ii. 19. 2 as not flourishing in the gardens of Babylon, the under surface of its leaves whitish, and a "thēlēia" kind distinguished: T. argentea was observed by Sibthorp, and Fraas, on mountains from the Peloponnesus to Constantinople; by Griesebach p. 136, in Macedonia; by Waldstein and Kitaibel, in Hungary; and "lipa," one of the above names current in Greece, is (according to Moritzi and A. Decandolle) Slavonian. Farther South, the importation into Egypt of timber of "nafhaur" or "tilia" is enumerated by Forskal p. lvi. (See T. Europæa).

"630 B. C.," and "in the reigns of Psammetichus and Cyaxares" (Strab. xvii. 1. 18, and Clint.), in Egypt, the city of Naucratis founded by Milesian Greeks.

"629 B. C." (= 678 — "49 years" of Herodot. i. 16, and Clint.), Ardys succeeded by Sadyattes, as king of Lydia.

"626, Feb. 3d." In "spring, on the day Kouei-hai, in the second month in the 26th year of Siang-wang" (Khoung-tseu, the Li-tai-ki-sse, and Pauth. 107), *eclipse of the sun.*

About this year (Percev. i. 55), Malik, son of Himyar, obtaining possession of Oman, maintained the independence of the province against his brother Wathil.

"625, Jan. 27th" (= 604 + "21 years" of the Astronom. can., and Clint.), Chinaladanus succeeded by Nabopolassar as king at Babylon. (By Alex. Polyhistor, "twenty" years only are assigned to his reign; but in another place where he is called "Sardanapallus, 21" are given. See also Syncell. p. 210).

"The same year" (Diog. Laert., and Clint.), Cypselus succeeded by his son Periander, as king of Corinth. By some writers, Periander is enumerated as one of the "Seven sages."

"623 B. C." (Herodot., and Clint.), commencement of war between the Lydian king Sadyattes and the Milesian Greeks. — The war continued "eleven" years.

The same year (= 639 y. $73\frac{22}{360}$ d. — "18th year" of twelve lunations of 2 K. xxii. 3, and 2 Chron. xxxiv. 8), the lost "book of the law" given by Moses, discovered in the temple at Jerusalem by the high priest Hilkiah, and brought to king Josiah.

"621, Saturday April 22d, five hours after midnight" (as reduced by Ptolemy to the meridian of Alexandria, Blair), Fourth Babylonian *eclipse of the moon*.

"The same year = 33d year of Siang-wang" (the Li-tai-ki-sse, Sse-ma-thsian, Gaubil, and Pauth.), death of Mou-koung prince of Thsin; at whose funeral "one hundred and seventy-seven" persons immolated themselves; a custom now first introduced into China from the "Tartars of the West." — The custom is mentioned as existing among the Scythians, by Herodotus.

"The same year" (Tat., Clem. Alex., and Clint.), the Laws of Dracon adopted at Athens.

620 B. C. = "45th year of Psametik," the date (according to Boeckh and Franzius) of the *earliest Greek inscription* known; that at Abousimbel in Nubia, recording the passage of king Psametik's army and presenting the following forms of letters, . . Λ, Δ, ⊟, ⊗, K, Λ, M, N, V, Φ, X, Ψ.

The "Third" epoch in Nubian or Ethiopian history (according to Lepsius eg. and sin. 17, 29, 152 to 219), is that of kings independent of Egypt: the kings of Meroe, whose dominion extended not only over Upper Nubia, but as far down the river as Philæ. — At Meroe, near Begerauieh, the names of "fifteen" different kings were found by Lepsius p. 152; and among "about thirty different names of kings and queens" at the pyramids there, he remarked the "emblems of Sesurtesen" used "for the fourth time as the throne name of an Ethiopian king." The temple of Amara was "built by the kings of Meroe and Naga:" and Napata continued to be a residence of the "Ethiopian kings even in the time of Herodotus." The *Ethiopian demotic* was "more in use and more generally known than hieroglyphic" writing; was "similar to the Egyptian demotic in its characters" of "between twenty-five and thirty signs," and was in like manner "read from right to left;" but there is a "constant separation of words by two points:" the Bega language of the Bishari, is regarded by him as "most probably the key to the ancient Ethiopian inscriptions written in simple characters."

"618 B. C. = 1st year of King-wang, of the Tcheou" or Fifth dynasty (Chinese chron. table).

"617 B. C." (= 629 + "12 years" of Herodot. i. 16, Clint. i. p. 184), Sadyattes succeeded by his son Alyattes, as king of Lydia.

"616 B. C." (= 578 + "38 yrs.," Sm. b. d.), Ancus Marcius succeeded by Tarquinius Priscus, fifth king of Rome, and the calendar Year of "ten months" abrogated (Jun. Gracchan.). Tarquinius Priscus was a son of Demaratus of Corinth, one of the expelled Bacchiadae.

Hardly earlier than this date (Graha Munjari tables, Puranas, and Bentley as. res. viii. p. 244), Sucshetra reigning in Hindustan.

"In the reign of Alyattes" (Herodot.), the Cimmerians finally expelled from Asia Minor.

"613 B. C." (Humb. cosm. iv. 185), a *comet* observed in China: the earliest — in the collection of Ma-tuan-lin.

In this year = "52d year of Psammetichus," death of an Apis or sacred bull. Its mummified body was the first one deposited in the new gallery at the Serapeum; built together with additions to the great temple of Ptah at Memphis by Psammetichus — (Birch).

"612 B. C. = 1st year of Kouang-wang, of the Tcheou" or Fifth dynasty (Chinese chron. table).

"April 28th." On the "first day of the Sixth month." (Khoung-tseu, Gaubil, and Pauth.), *eclipse of the sun*.

"610 B. C." (Euseb., and Clint.), escape from pirates of Arion the inventor of dithyrambic poetry. A commemorative votive offering of a small bronze statue of a man seated on a dolphin, was placed on the Taenarum promontory; — where it remained more than seven hundred years, being mentioned by Herodotus, and Aelianus xii. 45.

The same year (= 609 y. 10 mo. 2 d. + the portion of his "1st year" preceding the "first day" of the eleventh month "Epiphi" of the stela at Leyden = 570 + "25 + 6 + 16 years" of Herodotus — 7 years excess shown by stelæ), Psammētihōs succeeded by Nĕhaŏ II, fifth king of the Twenty-sixth dynasty. The name of king Nekau II. occurs at Rosetta (Glid. analect.), also on stelæ or sepulchral slabs.

609 B. C. (= 569 + "27th + 65 y. 10 mo. 2 days" of the stela at Leyden), the "first day of the month Epiphi in the first year of Nekau II.," not later than this date.

The same year (= 639 y. $73\frac{92}{360}$ d. — "31 years" of twelve lunations of 2 K. xxii. 1 and 2 Chron. xxxiv. 1), Josiah striving to arrest the march of an Egyptian army under Nekau II., slain in battle at Megiddo. He was succeeded by his son Jehoahaz. But at the end of "three months," Jewish independence was overthrown by Nekau II.; who removed Jehoahaz to Egypt, and appointed his brother Eliakim king at Jerusalem, under the changed name of "Jehoiakim" (2 K. xxiii. 30, 2 Chron. xxxvi., and Herodot. ii. 159).

608 B. C. (= 570 — "35th year . . . . on the 2d of Paopi + 71 y. 4 mo. 6 days" of the stela at Florence), "first day of Paoni in the third year of Nekau II."

607 B. C. = "4th year of Nekau II.;" the latest date in his reign found on the monuments (C. Mull. fr. Man. p. 594). But the "9 years" shown by stelæ to be deficient in the Afr.-Maneth. table, probably belong to this reign; especially as Herodotus' account corresponds.

Cucumis melo of the Southern border of the Caspian. Called in Britain, France, and Spain *melon* (Prior), in Germany "melone," in Italy "melone" or "popone" (Lenz), in Greece "pĕpōnia" or "karpōusia" (Fraas), by the Turks and Tartars "kaun" (A. Dec.) and one variety in Egypt "qaoun" (Del.), the seeming origin of the Hebrew קִשֻּׁאִים kykywn in Jonah iv. 6, — and early Greek "kikuōn:" the "sikuŏn" is mentioned by Alcaeus, Laches, and Matron; the "sikuthiōn," by Phrynichus; the "sikuōn," by Praxilla, Cratinus, Aristophanes acharn. 520, Polemon diæt. ii., Anaxilaus, Theophrastus, Zenobius iv. 21, and that of Antioch is identified by Athenaeus iii. 4 with the "sikuŏnian" of Megalopolis, and "sikuan inthikēn:" the "sikuan tōn pĕpōna" is mentioned by Speusippus; the "sikuōs pĕpŏn" by the comic poet Plato, Theopompus (Athen. ii. p. 68), Aristotle probl. xx. 22, by Aeneas Tacticus 29 as used in smuggling spear-heads; the "pĕpŏn" by Cratinus (Athen.), Florentinus (geopon. xii. 20), by Dioscorides as diuretic, and Galen fac. alim. ii. 5 expressly states that the inner portion containing the seeds is not eaten: C. melo was observed by Chaubard, and Fraas, under cultivation in Greece; by Abd-allatif, Forskal, Delile, and Clot-Bey, under cultivation in Egypt; by myself, the fruit in market at Mocha and Muscat. Westward, "melones" are mentioned by Columella xi. 3. 53, Palladius iv. 9. 6, and "pepones" by Pliny xix. 23 to xx. 6: C. melo is described by Matthioli pl. 368, and Dalechamp pl. 623; but in Southern France, according to Olivier de Serres, began to be extensively cultivated only "in 1629." Eastward from Syria, is called in Persian and Hindustanee "kharbuza" (A. Dec.), also in Hindustanee "jamali," in Bengalee "phuti" (D'roz.), and though having no Sanscrit name (Roxb., and Pidd.) is "cultivated all over India" (Graham): was observed by Mason v. p. 456 "exotic" in Burmah and called "tha-khwa-hmwæ," a "very indifferent" kind "cultivated by the natives generally;" by Loureiro p. 726, in Anam and China, also an indifferent kind; by Blanco, well known on the Philippines and called in Tagalo "tabogo;" by Kaempfer, and Thunberg, abundantly cultivated in Japan and called "tenkwa" or usually "kara uri," the term "kara" signifying exotic from China. By Columbus, was carried to America (F. Columb. 53), where it continues under cultivation, and in the United States is called *musk-melon;* and by the Portuguese (according to Rumphius v. 404) was carried to the Malayan archipelago. (See Ricinus communis).

In the reign of Nekau II. (Herodot. iv. 40), Africa circumnavigated, and as far as known for the first time. (In passing around the Southern Extreme of Africa, the navigators landing at intervals doubtless met with tribes belonging to the *Hottentot Race* of man; living on the spontaneous productions of the country, — as for the most part to the present day).*

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* *Aphyteia hydnora* of Austral Africa. The lower portion constituting the fruit, eaten by the Hottentots and by various quadrupeds — (Thunb., and Pers.).

Euclea undulata of Austral Africa. The fruit eaten by the Hottentots — (Thunb. trav. iii. 4).

Brabejum stellulifolium of Austral Africa. The fruit eaten by the Hottentots, — and used for coffee (by the colonists ?), according to Thunberg ii. 2.

Strelitzia of Austral Africa. The fruit eaten by the Hottentots — (Thunb. iii. 4).

Schotia speciosa of Tropical and Austral Africa. The beans eaten by the Hottentots — (Thunb.). Farther North, growing also in Senegal (Jacq. rar. i. pl. 75, and Pers.).

Myrica cordifolia of Austral Africa. The wax on the berries eaten by the Hottentots, — and used for candles (by the colonists), according to Thunberg: the plant described also by Burmann afr. pl. 98 (Pers.).

Stapelia incarnata of Austral Africa. Eaten by the Hottentots — (Thunb.).

Stapelia articulata of Austral Africa. Eaten by the Hottentots — and colonists (Thunb., and Mass. pl. 30). As transported to Europe, described by Aiton.

Zamia cycadifolia of Austral Africa. The pith among the Hottentots, a substitute for bread — (Thunb. iii. 4). Transported to Europe, Z. cycadifolia is described by Jacquin fragm. pl. 25, and Gaertner.

"606 B. C. = 1st year of Ting-wang, of the Tcheou" or Fifth dynasty (Chinese chron. table).

The same year (= 608 y. $322\frac{287}{360}$ d. — "4th year" of twelve lunations, Jerem. xlvi. 2), defeat of the Egyptian army under Nekau II. described in burning words by Jeremiah xlvi. Before the close of the year (Herodot. i. 106, and Clint.), capture and destruction of Nineveh by the Medes under Cyaxares and their Babylonian allies.

The ϥⲛⲙⲉ shmyr of Jeremiah xvii. 1, may be compared with "smiris" the Greek name of *emery;* which when pulverized is used in gem-engraving. — The "shmyr" is also mentioned in Ezech. iii. 9, Zach. vii. 12; and the "smiris" or "smuris," by . . . . The mineral is procured from . . . . , one of the Greek islands; and this locality continued the chief or only source of commercial supply until the recent discovery of a locality in New England.

Juniperus drupacea of Syria. The imported berries of a species of juniper are called in Egypt "arar" (Forsk. mat. med.), in which we recognize the "arar" of Ebn Baitar, and ϥⲟϥⲟ oror growing in the wilderness according to Jeremiah xvii. 6 and xlviii. 6: — "arkĕuthithŏn mĕizōna" are among the ingredients of "kuphi" incense enumerated by Manetho (Plut. is. and osir. 80): two kinds of "arkĕuthōs" are also mentioned by Dioscorides i. 103 to 105, one having berries as large as a "karuōu:" J. drupacea was found by Labillardiere ii. pl. 8 on mount Casius in Syria, its fruit tubercular and subrotund, three times longer than the leaves; and Robinson journeying from Hebron among Desert mountains to Petra met with a species of juniper "ten or fifteen feet" high abounding in rocky situations, but in the valleys becoming a larger tree, its berries having something of "the aroma of the pine." (See J. macrocarpa, and J. excelsa).

Sapindus emarginatus of Tropical Hindustan. A kind of *soapnut* imported "from India" was found by Forskal, and Delile, employed in Egypt to wash the finer woollens, and called "ryteh;" in which we recognize the ϯⲛϥϩ bryd used in washing according to Jeremiah ii. 22, — and Malachi iii. 2. Eastward, S. emarginatus, a tree of medium size, is called in the environs of Bombay "rhete" (Graham), in Bengalee "buro-reetha," in Canara "aratavala," in Telinga "konkoodoo," in Tamil "poovandie" or "ponnanga" (Drury); was observed by Gibson, and Graham, about villages from Guzerat to Bombay and the Deccan, the nuts "used medicinally" and "for washing the finer kinds of silk;" is known to occur also in Mysore, the Northern Circars, and Bengal (Roxb., Ainsl., Wight, and Drury). By European colonists, or at least recently, was carried to Burmah, where according to Mason v. p. 517 it "appears to flourish."

Cyanella Capensis of Austral Africa. Eaten by the Hottentots — (Thunb.). Transported to Europe, described by the younger Linnæus, Andrews pl. 191, and Jacquin hort. iii. pl. 35.

Vieusseuxia edulis of Austral Africa. An Iris-like plant, the bulbous root eaten by the Hottentots, — and when cooked having the taste of potatoes (Burm., and Thunb. iii. 1). Transported to Europe, V. edulis is described by Delarbre, Linnæus, Andrews pl. 83, and Jacquin hort. iii. pl. 20.

Gladiolus plicatus of Austral Africa. Eaten there, — according to Thunberg. Transported to Europe, described by Jacquin rar. ii. pl. 237, and Gawler.

Aponogeton distachyon of Austral Africa. Its tuberous root broiled and eaten there — (Thunb. iii. 1, and Pers.). Transported to Europe, A. distachyon is described by the younger Linnæus, and Aiton p. 495; and has become naturalized in a stream near Montpellier (Godron, and A. Dec.).

Lobelia of Austral Africa. The root eaten by the Hottentots — (Thunb.).

Mesembryanthemum edule of Austral Africa. Growing in the sand of the seashore, the fruit eaten, and the juice employed medicinally — (Herm. lugd. pl. 245, Thunb. iii. 2, and Pers.). Transported to Europe, described by Dillenius pl. 212.

Mesembryanthemum emarcidum of Austral Africa. The flowers eaten by the Hottentots to quench thirst — (Thunb.). Transported to Europe, described by Haworth.

Albuca major of Austral Africa. The stem chewed by the Hottentots to quench thirst — (Thunb.). Transported to Europe, flowered in 1633 at Paris and was termed "ornithogalum luteovirens" by Cornuti pl. 161; and as cultivated elsewhere, is described by Morison iv. pl. 24, Dryander act. holm. 1784, and Jacquin rar. pl. 36.

Hermas gigantea of Austral Africa. A large Umbelliferous plant used for tinder by the Hottentots — (Thunb.): corresponding therefore to the Ferula communis employed in the Mediterranean countries by Prometheus. From transported specimens, H. gigantea is described by the younger Linnæus suppl. p. 435, and Lamarck enc. iii. p. 121.

Anthyllis of Austral Africa. Cords made of the bark by the Hottentots — (Thunb.).

Fucus buccinalis of the sea-margin of Austral Africa. A gigantic seaweed, furnishing the Hottentots with trumpets.

Rhus of Austral Africa. The wood employed for bows by the Hottentots — (Thunb.).

Aloe dichotoma of Austral Africa. Furnishing the Hottentots with quivers for their arrows — (Patters. iter. pl. 3 to 5, and Thunb.).

"604, Jan. 21st" (Astronom. can., and Clint.), Nabopolassar succeeded by Nebuchadnezzar, as king at Babylon. He built the celebrated wall around the city (Abyden., and others, see also Dan. iv. 30); was the first Babylonian king who "acquired extensive dominion;" and reigned "forty-three" years (according to Alex. Polyhistor, and the Astronom. can.).

"The same year," on the "fourteenth day of the Ninth month" (Pauth. p. 111), "in the kingdom of Thsou" (now the provinces of Hou-pe and Hou-nan), birth of Lao-tseu, founder of the doctrine of Tao. — The Tao-te-king, written by him and containing his doctrines, has been translated by Pauthier.

In this year (= 552 + "52 years reign" of the Mahavamsi i. p. 28), accession of the Hindu king Bimsara.

603 B. C. = "8th year of Necho," in tablets at Hammamat — (Birch).

"May 17th" (Bayer, Hales, and Clint. i. p. 419), *eclipse of the sun.* Probably the one interrupting a battle on the Halys between the Medes under Cyaxares and Lydians under Alyattes, and terminating the war. The eclipse had been predicted by Thales (Herodot. i. 74).

Thales learned geometry and astronomy in Egypt, at this time considered the school of philosophy and source of all learning and science (Plut. is. x., and Leps. eg. and sin. p. 384); he first among the Greeks "found out the passage of the sun from Tropick to Tropick," and divided the year into "four" seasons (Eudem., and D. Laert. i. 23). He also thought the gods omnipresent, That all things are filled with them (Aristot. psych. i. 5).

601 B. C. (= 598 — "3 years" of 2 K. xxiv. 1, see also Ezek. xxi. 21), the Babylonian king Nebuchadnezzar having arrived "at the parting of the way," used *divination* by means of arrows, he also "consulted with images, he looked in the liver" (haruspicium of the Romans), and was directed to Jerusalem. — Divination with arrows is practised among the Arabians to the present day, and the arrows "acdah" are described by D'Herbelot as "without head or wing, they took three on which they wrote 1st 'command me Lord,' on the 2d 'forbid me lord,' the 3d blank" (J. Roberts introd. Sakaa Thevan in Orient. transl. lond.).

Erinna about this time composing poetry. She was known to Sappho, but "died at the age of nineteen" — (Sm. b. d.).

Carthamus lanatus of the Mediterranean countries. A thistle-like plant called in Italy "scardiccione" or "ceceprete" (Lenz), in Greece "atraxulē" (Sibth.), or "tēs gunaikas t'atrabti" (Fraas), by the prophets "aphĕthrōs," in Egyptian "hēnŏ" (Syn. Diosc.); and doubtless known to Erinna when she entitled one of her poems HVAKATH distaff; — the term "atraktōs" is used for distaff by Herodotus iv. 162: the "knēkōu agrias" according to Theophrastus vi. 4. 5 more upright than the "ēmĕrŏ" kind and used by the women of antiquity for a distaff, is identified through Syn. Diosc. with the "atraktulis" of Dioscorides, resembling "knikŏ" though much smaller, leafy at the summit but the greater part naked and rough, used for an "atraktōu" by women: C. lanatus was observed by Sibthorp, Chaubard, and Fraas, frequent from Crete and the Peloponnesus to Cyprus; Westward, the "knikōs agria" or "atraktulis" or "amurōn" or "aspithiōn" is further identified in Syn. Diosc. with the "prĕsĕpiōum", or "phōusōugrĕttis" or "klōnōuka rōustika" of the Romans; but the account by Pliny xxi. 53 to 107 of the "cnicon silvestris" with rigid stem employed in ancient times for a distaff and therefore by some called "atractylida," seems taken from the Greek: C. lanatus is described by Matthioli p. 593 (Spreng.), and Lobel pl. 13; is termed "cnicus atractylis lutea dictus" by Tournefort inst. 451; was observed by Lenz frequent in Italy, by Forskal near Marseilles, and is known to occur in waste places in other parts of Southern France (Dec. fl. fr., and Pers.).

Carlina corymbosa of the Mediterranean countries. Having general resemblance to the preceding, and also called in Greece "atraxulē," but sometimes "atraklutha" or "sumlaga" (Sibth.); and possibly a distaff-thistle, — the "knēkōu agrias" having according to Theophrastus black "karpōn" seeds: C. corymbosa was observed by Sibthorp, Chaubard, and Fraas, abounding from the Peloponnesus throughout the Greek islands to mount Athos. Westward, is termed "c. umbellata apula" by Tournefort inst. 500; and is known to grow in Carniolia, Italy, Barbary, and as far as France (Pers.).

"Sept. 20th." On the "first day of the Seventh month in the 6th year of Ting-wang" (Khoung-tseu, Gaubil, and Pauth. 108), *eclipse of the sun.*

One hundred and eleventh generation. Jan. 1st, 600, mostly beyond youth: the Chinese philosopher Lie-tseu (Pauth. p. 96): the prophet Obadiah: the Greek poets, Damophyle, Stesichorus, Chersias of Orchomenos, and Sacadas.

"The same year" (= 480 + "120 years" of Scymn. and Clint., see also Herodot., and Strab. iii. 4. 2), Massalia or Marseilles founded by colonists from Phocaea in Asia Minor. The Phocaeans according to Herodotus, were the first Greeks who made long *sea-voyages*, as far as "Spain and Tartessus;" and according to Strabo, Maenaca near Malaga was their most Western settlement. — Their colonial descendants of Massalia soon became powerful enough to defeat the Carthaginians in a *naval combat*, mentioned by Thucydides i. 13.

The Gauls or French are regarded as having probably learned the art of making *iron* and *glass* from these Greek colonists: the Age of Iron commencing at about this date in France, Switzerland, and Northern Europe, as shown in the contents of tombs and by various debris (see Troyon p. 326 and 355).

Agrostemma coeli-rosa of the West Mediterranean countries. The "luhnis agria" identified in Syn. Diosc. with the "apōkathēmĕnēs taurōs" of the prophets, "sĕmqura" of the Egyptians, — and described by Dioscorides as in every respect resembling the "ēmĕrŏ" kind (A. coronaria), its seeds in like manner employed against the sting of scorpions, may be compared: the "luhnis agria" or "tragŏnŏtōn" or "atōkiōn" or "iĕrakōpōthiōn" or "lampas" is further identified in Syn. Diosc. with the "intivŏum agrĕstĕm" or "lapatōu kaphagōuina" or "stĕrithōs" of the Romans: A. coeli-rosa is described by Morison v. pl. 22; is termed "lychnis foliis glabris calyce duriore" by Tournefort inst. 337; was observed by Boccone sic. pl. 14, and Sibthorp, frequent in grain-fields in Sicily; is known to occur also in Barbary (Pers.).

Agrostemma flos-jovis of the mountains of Southern Europe. The "luhnis agria" or plant in question — is however referred here by Gesner hort. germ. f. 266 (Spreng.): A. flos-jovis, a tomentose species, is described by Boccone mus. pl. 42; is termed "lychnis umbellifera montana helvetica" by Tournefort inst. 334; is known to grow in Switzerland, Southern France, the Palatinate (Lam. fl. fr., and Pers.); and was observed by Sestini not far from Constantinople (Sibth.).

"599 B. C. (= 135 years after Syracuse," . . . . Sm. b. d.), Camarina in Sicily founded.

Rhus cotinus of the Mediterranean and Tauro-Caspian countries. The *smoke-bush* is called in France "fustet" (Fée), in Germany "perücken-sumach," in Italy "scotano" or "cotino" (Lenz), in Greece "mpōia" (Fraas) or "hrusōxulōn" (Sibth.); in which we recognize the "hrusōxulōn" of schol. Theocr. or "thapsōs" identified with the ΕΚΥΘΙΚΟΝ : ΞΥΛΟΝ of Sapphŏ — by Photius: the word "thapsinŏs" yellow-coloured occurs in Aristophanes vesp. 1404; the "thapsŏ" plant is mentioned in connexion with colouring by Theocritus ii. 88, and Paulus Aegineta iii. 2; and the city of Thapsos was sometimes called Hrusoxulos: the "kōkkugĕas" of Theophrastus iii. 16. 6, a small tree with "anthrahlē"-like leaves and fruit dissipating in pappus (an account copied by Pliny xiii. 41) is referred here by writers: R. cotinus was observed by Sibthorp, Chaubard, and Fraas, abounding on the mountains of Attica and the Peloponnesus and its wood used for dyeing a beautiful orange, being (according to Daubeny) the *sumach* of commerce; is known to grow also in Siberia (Pers.). Westward, "in appenino frutex" in the days of Pliny xvi. 30 was called "cotinus ad linamenta modo conchylii colore insignis:" R. cotinus is described by Dodoens pempt. 780; is termed "cotinus coriaria" by Tournefort inst. 610; and is known to grow in Carniolia, Italy, and Southern France (Jacq. austr. pl. 210, Scop., Hall. helv., and Lenz). Eastward from Siberia, was observed by Nuttall to all appearance indigenous along the Arkansas river: but clearly by European colonists, was introduced into our Atlantic States, where it continues under cultivation for ornament.

Anethum graveolens of the Mediterranean countries. Called in Britain *anet* or *dill*, in Old Norse or ancient Danish "dilla" (Prior), in Germany "dill" (Grieb), in France "anet" (Nugent), in Italy "aneto" (Lenz), in Egypt "sjœbet," in Yemen "schibt" (Forsk.), in Egyptian "arahou" (Syn. Diosc); in which we recognize the ΑΝΗΤΟ of Sapphŏ, — Alcaeus (Athen. xv. 16), Theophrastus ix. 7. 3, or "anēthōn" of Aristophanes, Theophrastus i. 11. 2, Theocritus, Moschus, and Dioscorides; identified in Syn. Diosc. with the "gōnōs kunōkĕphalōu" or "trihĕs kunōkĕphalōu" or "gōnōs ĕrmōu" of the prophets: A. graveolens was observed by Forskal, and Sibthorp, in Greece and at Constantinople both wild and cultivated; by Forskal, Delile, and Clot-Bey, under cultivation in Egypt; by Forskal, under cultivation in Yemen; and the "sabet" is enumerated by rabbi Schwarz as cultivated in Palestine. Westward, the "anēthōn" or "anikētōn" or "pōlgithōs" is further identified in Syn. Diosc. with the "pōlpōum" of the Dacians, "sikkiria" of the Numidians, and "anēthōum" of the Romans: the "anethum" is mentioned by Horace, Virgil, Columella, Pliny, Apicius, Palladius, and Apuleius: A. graveolens is described by Lobel pl. 776; is termed "a. hortense" by Tournefort inst. 318; and is known to be cultivated throughout middle Europe (fl. Dan. pl. 1572, and Pers.). Eastward from Syria, is known to occur at Astracan (Lindl.); was "occasionally seen" in Burmah by Mason v. p. 496, "exotic" and called "sa-mwot," the seeds "constantly for sale in the bazars;" may therefore through native tribes have reached Timor (Lindl.). Clearly by European colonists, was carried to Austral Africa (Lindl.); and before 1669 (Joss.) to Northeast America, where it continues sparingly cultivated. The fruits according to Lindley are "carminative and stimulant, and taken with food may be regarded condimentary."

598 B. C. (= 608 y. $322\frac{37}{880}$ d. — "11 years" of twelve lunations of 2 K. xxiii. 36, and 2 Chron. xxxvi. 5), Jehoiakim succeeded at Jerusalem by his son Jehoiachin. But after "three months," the city was captured by Nebuchadnezzar; who plundered the temple and royal palace, carried Jehoiachin with "ten thousand" of the principal men "into captivity" to Babylon, and appointed Mattaniah ruler of Jerusalem under the changed name of "Zedekiah." (The same date for these events, is deduced by Clinton i. p. 319 and 328 from the Babylonian regnal years in the Astronomical canon).

"597 B. C. = 11th year of Ting-wang" (Chinese chron. table), beginning of the Thirty-fifth cycle.

"596 B. C." (Clint., see Cic., Plut., and Diog. Laert.), Epimenides the priestly bard of Crete, now in old age, visiting Athens.

Ornithogalum Pyrenaicum of Europe and the adjoining portion of Asia. Called in Britain *French sparrow-grass* (Prior), in Greece "agria skulla" (Fraas); and the "ĕpiměnithĕiōu skillēs" — distinguished by Theophrastus vii. 12. 1 as esculent, having narrower and smoother leaves than the others, an account copied by Pliny xix. 30, is referred here by Fraas: O. Pyrenaicum was observed by him, Sibthorp, and Chaubard, in the Peloponnesus and on the mountains of Crete. Westward, is termed "o. angustifolium majus floribus ex albo virescentibus" by Tournefort inst. 379; and is known to grow in Carniolia and middle Europe as far as Britain (Jacq. austr. pl. 103, Pers., and Sm. fl. brit. 363).

Ornithogalum stachyoides, given as a distinct species — but also called in Greece "agriōskilla" (Sibth.); the "asphŏthĕlōs" of Galen fac. alim. ii. p. 652 having a single root rivalling the squill in shape and bitterness, but in times of scarcity rendered edible by being prepared like lupines, is referred here by Dodoens pl. 209, and Sprengel: O. stachyoides was observed by Sibthorp frequent from the Peloponnesus throughout the Greek islands to Constantinople. Westward, is described by Renealme pl. 90; is termed "o. majus spicatum alterum" by Tournefort inst. 379; and is known to grow as far as France (Lam. fl. fr., and Steud.).

"595 B. C." (.... Clint.), commencement of war by the Amphictyons against Cirrha near mount Parnassus. Called the "Sacred war," — and continuing (according to Callisthenes) "ten" years.

In this year = "16th year of Necho," death of an Apis or sacred bull — (Birch).

The same year (= 589 + "6 years" of Herodotus, and the Afr.-Maneth. table), Nĕhaŏ succeeded by Psammis or Psammōuthis or Psammĕtihōs II., sixth king of the Twenty-sixth dynasty. The name of Psametik II. occurs on stones once part of a propylon at Memphis, on a sarcophagus at the bottom of the remarkable insulated pit at Gizeh discovered by Vyse, on stones employed in reparations at Thebes, on the rocks at Philæ, on foundation stones of Diocletian's column at Alexandria (Leps. eg. and sin. p. 42), on an obelisk (now in Rome), and on various articles (now in the museums of Europe).

His name occurs also in an "*arched* tomb" at Sakara (Glid. analect.); in the series with "stone vaulted roofs, whose single blocks have the correct concentric cut;" examples of the stone arch, as early as any in Rome, being "coeval with the Cloaca Maxima and Carcer Mamertinus" (Leps. eg. and sin. 74).

"594 B. C." (Sosicr. and Clint.), the *laws of Solon*, archon for this year, adopted at Athens. Including the Egyptian law on surveying land, by which every one was obliged to declare the amount of his income; — a law that continued in force in the days of Herodotus ii. 177 (Leps. eg. and sin.).

Defensive measures against the oppressions of the wealthier classes, were also provided in the laws of Solon; — and from this time, Athens began to acquire prominence in the affairs of Greece.

Solon, Thales of Miletus, Pittacus of Mytilene, and Bias of Ionia, were universally reckoned among the "Seven sages;" and with less unanimity, Cleobulus of Lindus, Myson of Chenes, and Chilon of Laconia: all of them contemporary persons who appear to have been chiefly statesmen.

"The same year" (= 559 + "35 years" of Herodot. i. 102, and Clint.), Cyaxares succeeded by Astyages, fourth Median emperor.

The hieroglyphic oval of king Psametik II. is in one instance accompanied with an inscription in *Assyrian* or *cuneiform writing*.

Inscriptions in *demotic* or *enchorial writing* occur also under the Twenty-sixth dynasty. Regarded by Birch, as "an outgrowth of the hieratic writing, which it superseded for the legal and ordinary purposes of life;" and as "an attempt to assimilate the Egyptian system of writing to the alphabetic Phœnician." — In the form of the characters, some general resemblance may be remarked between demotic and the "Arabic" writing of the present day.

"593 B. C." (Burm. hist., and Mason 39), the brother of the "seventeenth" king of Tagoung proceeding into the forest to hunt a wild boar that had committed ravages. — He ultimately chose the life of an ascetic; and his adopted daughter married the son of the king of Tagoung, and became the mother of king Dwattaboung.

The Mergui Archipelago along the coast of Burmah occupied by the Selungs or Salones, a Malayan tribe living in boats, as early probably as this date.*

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* *Zalacca edulis* of the Moluccas. A palm called in Burmah "yen-gan-khyen" or "yen-gan-khyo" (Mason); and its trunk "as light and of the consistency of cork" used perhaps already for making the "unequalled" sea-boats of the Selungs: — Z. edulis was observed by Mason 459 to 544 "exotic"

592 B. C. = "4th year of Psametik II.;" the latest date in his reign found on the monuments —(C. Müll. fr. Man. p. 594).

"The same year" (Sosicr., D. Laert. i. 101, and Clint.), arrival in Athens of the philosopher Anacharsis; a relative of the king of Scythia (Southern Russia). The flute or pipe "aulōs" was at this time unknown in Scythia; but he brought certain inventions, including the "zōpura" *bellows*, and "amphivōlōn agkuran," *many-pronged anchor* — (Ephor., and Strab. vii. 3. 9 and xv. 1. 22).

"591 B. C." (Parian marble, schol. Pind., and Clint.), Simon or Simonides being archon at Athens, first success of the Amphictyons under Eurylochus against Cirrha.

About this time (Abyden., and Euseb.), on the Persian Gulf at the mouth of the Euphrates, the city of Tĕrēthŏn or Teredon founded by Nabuchadnezzar. — The city is called "Thirithŏtis" by Nearchus (Arrian ind. 41); is also mentioned by Amyntas, Eratosthenes, Strabo, Pliny, Dionys. Perieg., Aelian, n. a. v. 14 and xvii. 16, Ammianus, and Stephan. Byzantius.

589 B. C. (= 570 + "19 years of the Afr.-Maneth. table, the Euseb.-Maneth. table giving 822 y. 8 mo. — "44 — 44 — 44 — 12 — 7 — 6 — 8 — 45 — 6 — 17" = 589 y. 8 mo. = 339 + "6 + 4 + 6 + 20 + 21 y. 4 mo. + 6 + 120 y. 4 mo. + 42 + 25 years"), Psammētihōs II. succeeded by Ouaphris, seventh king of the Twenty-sixth dynasty; the Hophra of Jeremiah xliv. 30, and Apriēs of Herodotus. King Uahprahet completed the temple begun by Psammetichus near Naharieh (Leps. eg. and sin. 43); and his name occurs at Beghe in Nubia (Glid. analect.), on the rocks at Philæ, on stones (recently employed in building the citadel at Cairo), on an obelisk (now in Rome), and on moveable articles (now in the museums of Europe).

"The same year," or shortly afterwards (Sm. geogr. dict., see also Strabo xiii. 2. 3, and Clint.), arrival in Babylon of Antimenidas; regarded as the first Greek who reached that city. The visit is mentioned by his brother, the poet Alcaeus.

587, Jan. 2d. (= 587 y. $107\frac{239}{860}$ d. = 597 y. $353\frac{62}{860}$ d. — "11 years" of twelve lunations of 2 K. xxiv. 18 and 2 Chron. xxxvi. 11), Zedekiah having rebelled, Jerusalem again captured by the Babylonians under Nebuchadnezzar. The city wall was now broken down, and the principal buildings and temple destroyed. (In Josephus, the interval from the Captivity of the ten tribes is "130 y. 6 mo. 10 days;" while the above computation gives 717 y. $287\frac{104}{860}$ d. — 587 y. $107\frac{239}{860}$ d. = 130 Jul. y. 6 mo. $\frac{288}{860}$ days. The same year for the Destruction of the temple, is deduced by Clinton i. p. 319 and 329 from the Babylonian reigns in the Astronom. canon; is given by Clemens Alexandrinus, and is further identified by him with the "2d year of Hophra").

In this year (= "16th year of Bimsara," Mahavamsi. i. p. 28), Budha or Gautama "made his sermon."

Hardly earlier than this date (Graha Munjari tables, Puranas, and Bentley as. res. viii. p. 244), Havishman reigning in Hindustan.

"586 B. C." (= "tenth" year of Callisth., Demetr., and Clint.), Damasias being archon at Athens, conquest of Cirrha by the Amphictyons. The city captured by medicating the principal source of the supply of water — (Paus. x. 37. 7).

Veratrum album of Europe and the adjoining portion of Asia. Called in Britain *white hellebore* (Prior 109), in Italy "veladro" or "veratro" (Lenz), and perhaps the "ĕllĕvōrŏu" whose roots were used for this purpose — (Paus.): the "veratrum" is identified by Pliny, xxv. 21 with the "sōsamōithēs," mentioned by Hippocrates vict. acut. 66 as purging upwards; by Dioscorides, as called on

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in Burmah, its "red scaly fruit" often seen in bazar, but eaten by the natives only; is known to grow wild in dripping woods from Eastern Java and Baley to Banda (Pers., and Reinw.). From transported specimens, is described by Bauhin i. 401 (Spreng.).

Pandanus furcatus of Tropical shores from Burmah to the Samoan Islands. A strong-leaved *screwpine* called in Burmah "tha-bau" (Mason); and perhaps already used for making mats by the Selungs, — their "only means of livelihood" besides fishing at the present day (Wade, and Mason 100): P. furcatus was observed by Mason 521 in Burmah, growing "abundantly on the lowlands near tide-waters," and supplying "the large coarse mats in universal use;" was not seen by myself in the Malayan archipelago, but was frequent near the sea on the Feejeean and Tongan Islands, and clearly indigenous on mountain-summits exposed to the sea on the Samoan: by Polynesian colonists, was carried to the Hawaiian Islands, where it continues cultivated and naturalized; was perhaps also carried to Taheiti and throughout the Paumotuan coral-archipelago; and on the Radack and Caroline coral-archipelagos, in addition to the universal use for mats, the softer basis around the seeds is said to be eaten; on Wake's coral-island, which may have escaped the visits of natives, the Pandanus was absent. Westward from Burmah, the species from whose leaves matting and package-bags are made on the Mauritius Islands (Graham, and Drur.), may be compared.

Anticyra "ĕllĕvōrōn" and mixed with "lĕukŏ ĕllĕvōrŏ" (a mixture according to Pliny sternutatory): the "sēsamŏĕithĕs" is mentioned also by Galen fac. simpl. viii. p. 120, and Erotian; and the "lĕukōn sēsamŏĕithĕs" by Rufus Ephesius: the "ĕllĕvōrōs" having "sēsamŏthē" fruit and used on Anticyra, is mentioned also by Theophrastus ix. 9. 2, together with the "ĕllĕvōrōs lĕukōs" having according to some authorities "prasŏthĕs" leek-like leaves: the "ĕllĕvōrōs lĕukōs" is mentioned by Philonides, is described by Dioscorides as sternutatory and having plantain-like leaves, and is identified in the added Synonyms with the "vĕratrōum alvōum" of the Romans: V. album was observed by Hawkins on the highest portion of mount Pindus; is known to grow also on Caucasus. Westward, the "veratrum" is mentioned by Lucretius as an acrid poison, also by Columella vi. 38. 3; and the "album veratrum" by Celsus iii. 23 to vi. 7. 5: V. album is termed "v. flore subviridi" by Tournefort inst. 273; and is known to grow in mountainous situations as far as Spain and Denmark (Jacq. austr. pl. 335, fl. Dan. pl. 1120, and Pers.). Its root according to Lindley is "a local irritant" inducing "violent sneezing," and if taken in large quantities "violent vomiting, purging, and other consequences that produce death."

Veratrum nigrum of Eastern Europe and the adjoining portion of Asia. An allied species, called in Greece in common with Helleborus Orientalis "skarphē" (Sibth.), and probably the "ĕllĕvōrōu" in question: — V. nigrum was observed by Sibthorp on the mountains of the Peloponnesus; by Grisebach, in Albania; is known to grow also in Siberia (Pers.). Westward, the two kinds of "veratrum" according to Celsus v. 8 possess similar properties, and "veratrum nigrum" is separately mentioned by him, and Pliny xxv. 77: V. nigrum is termed "v. flore atro-rubente" by Tournefort inst. 273; is known to grow as far as Hungary and the mountains of Austria (Jacq. austr. pl. 336, A. Dec., and Lenz); and from transported specimens is described by Morison xii. pl. 4.

Helleborus niger of Europe and the adjoining portion of Asia. Called in Britain *christmas rose* from the time of flowering, or *black hellebore* (Prior), and possibly the "ĕllĕvōrōu" in question: — "ĕllĕvōrian" is a word used by Callias; "ĕllĕvōrōs" and "ĕllĕvōrizĕis," by Aristophanes vesp. 1489, Demosthenes, Diphilus, Lucian, and Athenaeus: the true "ĕllĕvōrōs lĕukŏs" according to authorities quoted by Theophrastus ix. 10. 1 is a low plant with deeply-lobed leaves, differing from the "mĕlas" kind only in the colour of the roots, which is white: H. niger (with root-fibres "whitish internally," Lindl.) was observed by Sibthorp from mount Athos to the Peloponnesus; by Pococke, in Palestine; and roots of "helleborum album" were found by Forskal mat. med in the drug-shops of Egypt. Westward, the "album" kind is distinguished by Pliny xxv. 21 as acting "vomitione," the Gauls tingeing their arrows with "elleboro" in hunting: H. niger is described by Lobel pl. 681; is termed "h. niger angustioribus foliis" by Tournefort inst. 272; is known to grow in mountainous situations in Italy and middle Europe (Jacq. austr. pl. 201, and Pers.). The fibres of the rhizoma according to Lindley continue to be employed medicinally, but have sometimes induced "vomiting" with delirium and violent convulsions terminating in death. (See H. Orientalis).

The war against Cirrha being over, the Pythian Games instituted by the victors — (Paus., and Clint.).

"585 B. C. = 1st year of Kien-wang, of the Tcheou" or Fifth dynasty — (Chinese chron. table).

"The same year" (Sosicr., Diog. Laert., and Clint., see also Aristot. rep. v. 9. 22), death of Periander. He was succeeded as king of Corinth by his nephew Psammetichus.

"582 B. C." (Thucyd. vi. 4, and Clint.), in Sicily, Agrigentum founded by Greek colonists from the neighbouring city of Gela.

Synmu or Jinmu, first dairo of Japan, is placed as early as this date (although only 17 reigns are counted in ann. Jap. from 399 A. D.): he came, according to some writers, from the Loo-Choo Islands — (Klapr. note to San-kokf 169). The succession continues in his family, the dairos for the last few centuries exercising only spiritual authority.

"In the reign of Jinmu, ending in 581 B. C." (Jap. centen. comm. 59), from his residence "in Kashiwara, in the province of Yamato," an order given to Wakanetsu Hiko-no-mikoto, one of his officials, "to manufacture various kinds of *pottery* to be used in the temples for religious festivals."

The soldiers of Synmu on one occasion made nets of the "katsoura" (tradit. myth); giving rise to the name Katsoura ti of the city or fort selected by his successor Sour Seï for the seat of government (ann. Jap. transl. Titsingh).*

"581 B. C." (Aristot., and Clint.), at Corinth, end of the reign of Psammetichus and of the Cypselidæ dynasty.

About this time (Percev. i. 55), Chammir, grandson of Himyar, ruling Yemen. — As he is said to have acknowledged the authority of the Persians, he must have continued reigning in the time of Cyrus.

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* *Dolichos hirsutus* of Japan. The "katsoura" plant in question — is referred here by Klaproth: D. hirsutus was observed in Japan by Kaempfer pl. 41, and Thunberg.

As early perhaps as this date (Diod. xxxi . . . .), marriage of Pharnaces, "king" of Cappadocia, with Atossa, sister of Cambyses the father of Cyrus. — Pharnaces became "the progenitor of the kings of Cappadocia" (Sm. b. d.).

Centaurea centaurium of the mountains of Italy. The "centaurion" attributed to Chiron but claimed for king Pharnaces and hence called "pharnaceon" — (Plin. xxv. 13 to 30, and Pomp. Fest.) is sufficiently identified by Pliny with the "kĕntauriōn mĕga" of Dioscorides; having serrated leaves resembling those of the walnut, blue flowers, involute fruit as in "knikŏ," root two cubits long and full of red juice, and abounding in the Peloponnesus and Lycia and around Smyrna (but according to Pliny cultivated). Westward, the "kĕntauriōn mĕga" or "narkēn" or "marŏnēn" or "plēktrōnias" or "hĕirŏnias" is identified in Syn. Diosc. with the "aima ēraklĕōus" of the prophets (compare Pliny), and the "phiĕrrĕi" or "ōunĕphĕra" or "phĕllĕrai" of the Romans; "centauria graveolentia" are mentioned by Virgil geor. iv. 270; the "centaurion," by Pliny as wild on the Alps; and C. centaurium is described by Matthioli, Clusius hist. ii. p. 10, and is known to grow from the Southern slope of the Alps along the mountains of Italy to Garganus in Apulia (Pers., Spreng., and Lenz).

"580 B. C." Some of the Greek inscriptions on the island of Thera (according to Franzius) are as early as this date. Among the forms of letters is Γ.

A Greek inscription of about this date (Boeckh, and Franz. 24) on a bronze plate found at Olympia, presenting the following form of the letter N.

About this time (. . . . Parian marble), poetry combined with dramatic exhibitions by Susarion, and *Greek comedy* thus instituted.

"578 B. C." (= 534 + "44 yrs," Sm. b. d.), Tarquinius Priscus succeeded by Servius Tullius, sixth king of Rome.

"The same year" (Buddhist ann., and Buns. iv. 7. 2), Bimbisara, son of Bhattiya and friend of Buddha, establishing himself as king of Magadha, South of the Ganges.

In this year = "12th year of Hophrah or Apries," death of an Apis or sacred bull — (Birch).

Daniel and Job — are mentioned by Ezekiel; who was a son of Buzi, like Barachel the father of Elihu (Ez. i. 3 to xiv. 20, and Job xxxii. 6).

Suæda baccata of Arabia and Egypt. Called in both countries "mullæah" (Forsk.), in which we recognize the ᛗᛚᛋᛉ mlwh of Job xxx. 4: — S. baccata was observed by Forskal p. 69 as far South as Lat. 19° in Arabia; and by him, Hasselquist, and Delile, throughout Lower Egypt to the Mediterranean.

Atriplex coriacea of Egypt. Called there "rætæm" (Forsk.), and therefore possibly the ᛗᛁᛋᛉ rdm of Job xxx. 4 — (already referred with more probability to Genista monosperma). A. coriacea was observed by Forskal p. 175, and Delile, on the Mediterranean border of Egypt, in sands near the sea.

Aconitum album of Syria. The ᛒᛖᛋᛉ bashĕ of Job xxxi. 40 — is referred by Celsius to an *aconite*; and the "bisha of Moses" is distinguished by Avicenna, and Ebn Baitar: A. album is said to be the only species growing in Syria, though "not anywhere very common" (see Royle in Kitt. bibl. cycl.).

Sedum confertum of middle Asia. Called in Egypt "hay a'lem" (Del.), and the ᛏᛚᛗᛋᛗ hlmwd of Job vi. 6, that cannot be eaten without salt, — may be compared: S. confertum was observed by Forskal p. lv to lxvi in the gardens of Egypt, mixed with other food for women in childbirth.

"575 B. C." (Diodor., Euseb., and Clint.), "twelfth" change in naval dominion. Leaving the Lesbians, the "Empire of the sea" acquired by the Phocaean Greeks. — Held by them "forty-four" years.

"May 9th." On the "first day of the Sixth month in the 11th year Kien-wang" (Khoung-tseu, Gaubil, and Pauth. 108), *eclipse of the sun*.

The same year (= 597 y. $353\frac{62}{360}$ d. — "25th year" of twelve lunations = 587 y. $107\frac{230}{360}$ d. — "14th year" of twelve lunations, Ezek. xl. 1), Ezekiel's vision of the restoration of Jerusalem.

Salix serotina of Syria and middle Asia. A *willow* called in Egypt "khalaf" or "ban" (Forsk.), at Aleppo "safsaf," in which we recognize the "tziphtzaph" identified by rabbi Ben Melech with the ᛒᛏᛚᛏᛚ tzphtzphĕ of Ezekiel xvii. 5: — the "safsaf" is described by Rauwolf as a peculiar species from the flowers of which "a very precious and sweet water" is distilled; a practice according to Royle (in Kitt. bibl. cycl.) extending into Northern Hindustan: the "tziphtzaph" is identified by Avicenna with the "chilaf," mentioned together with the oil from its flowers by Abu Hanifa, Gafeki, Temimi, and Ebn Baitar: S. serotina, observed by Sibthorp near Smyrna, and by Hasselquist in Palestine, was found by Alpinus 62, Forskal p. 170, and Delile, in the gardens of Egypt, and the water distilled from the barren flowers much used medicinally.

Rocella tinctoria of coast-rocks along the Mediterranean. A lichen called in commerce *archal* or "*orchil*" (Prior), and the "blue and purple from the isles of Elishah" brought according to Ezekiel xxvii. 7 to Tyre, — may be compared: the "phukōs" of Aristophanes thesm. 2, Theophrastus,

Diodorus, Dioscorides, Plutarch, and Clemens Alexandrinus, is referred here by Tournefort and others: R. tinctoria was observed by Tournefort, Sibthorp, and Bory, on the rocks and walls of Amorgos and other Greek islands, and exported both to Egypt and Britain. Westward, the "fucus" is mentioned by Plautus, Catullus, Cicero, Horace, Propertius, and Pliny: R. tinctoria was observed by Desfontaines on the ruins of Carthage, and is known to grow along the coast of Algeria, Spain, Southern France, Corsica, and the Balearic Islands (Bory).

The ΜΔ7 wdn and †7ΔΟ V2Q9 brzl oshwd manufactured iron of Ezekiel xxvii. 19, — are referred by Gesenius to the city of Aden and its *damascus blades*: "swords of India" are mentioned by the Arab poet Ascha (De Sacy chrest.); and "lames de sabre damasquinées" are enumerated by Edrisi i. 51 as imported into Aden (Jaubert).

"572 B. C." (= "Ol. 52" of D. Laert., Nicol. Damasc., Clint., and Sm. b. d.), Croesus son of the Lydian king Alyattes made satrap of Adramyttium and the plain of Thebe. He commenced a career of successful conquest in Asia Minor.

Dipsacus sylvestris of Europe and the adjoining portion of Asia. Called in Britain *teasel*, in Anglo-Saxon "tæsel" from "tæsan" tease (Prior), in France "chardon" (Nugent), in Germany "karde" (Grieb), in Italy "dissaco" or "cardo da cardare" or "labbro di venere," and the wild kind "cardo selvatico" or "verga pastore" (Lenz), in Greece "skoultara" or "nerokratès" (Sibth.), in Egyptian "sĕsĕnĕōr" or "hĕir" or "mĕlēta" (Syn. Diosc.); and knowledge of var. fullonum with hooked flower-bracts seems implied in the "gnaphōu" instrument with which Pantoleon was put to death by his brother Croesus, in the lifetime of their father — (Herodot. i. 92): the word "gnaptōmĕnōi" occurs in Aeschylus pers. 568; "ĕgnaptĕtŏ," in Sophocles aj. 1031; "knaphĕion" fulling-mill, in Herodotus iv. 14; and the "knaphōn pĕristihŏĕn" plant is mentioned by the comic poet Alcaeus, Antiphanes, Herodian, and the Etym. magnum; but the cultivated form together with the art of raising nap on woollen cloth has disappeared from Greece and Egypt: the "thipsakōs" of Dioscorides with a tall prickly stem surrounded at intervals by connate opposite leaves, is referred by writers to D. sylvestris in the wild state with straight flower-bracts; observed by Sibthorp, Chaubard, and Fraas, frequent from the Peloponnesus to Smyrna. Westward, the "thipsakōs" or "ōnōkarthiōn" or "aphrōthitēs lōutrōn" is identified in Syn. Diosc. with the "skiarē" of the Dacians, and "lavrōum vĕnĕris" or "karthōum vĕnĕris" of the Romans; the "carduus nondum fullonibus aptus" is mentioned by Serenus Sammonicus: D. sylvestris is described by Fuchsius 225; is termed "d. s. aut virga pastoris major" by Tournefort inst. 466; is known to occur along roadsides from Italy throughout middle Europe (Jacq. austr. pl. 402, and Pers.); and var. fullonum, described by Lobel ii. pl. 17, continues abundantly cultivated for manufacturing purposes. By European colonists, the wild form was carried to Northeast America, where I have occasionally met with it springing up spontaneously in our Northern and Middle States.

"571 B. C. = 1st year of Ling-wang, of the Tcheou" or Fifth dynasty (Chinese chron. table).

"570 B. C." (Euseb., and Clint.), in Sicily, accession of Phalaris as king at Agrigentum. — He reigned "sixteen" years.

"The same year" (Clint. i. p. 214 and 236 = 526 + "44 years" of Herodotus and the Afr.-Maneth. table), Ouaphris succeeded by Amasis II. or Amŏsis II., eighth king of the Twenty-sixth dynasty. The name of king Aahmas II. occurs at Beghe in Nubia (Glid. analect.), at Elephantine, on the rocks at Philæ, on stones (employed in building the citadel of Cairo), and on moveable articles (now in the museums of Europe).

Aahmes II. overthrew the independence of Cyprus (Herodot. ii. 178 and 182). He also permitted the Greeks to build a temple at Naucratis, near one of the mouths of the Nile; perhaps the first introduction of *Greek architecture* into Egypt.

One hundred and twelfth generation. May 1st, 567, mostly beyond youth: the Greek poet Eugamon of Cyrene; the musician Pythocritus; the philosopher Anaximenes; Cadmus of Miletus who first wrote history in prose.

The Greek philosopher Pherecydes, preceptor of Pythagoras, visited Egypt (Clem. Alex. i. p. 129, and Leps. eg. and sin. p. 385), and is regarded by Cicero tusc. i. 16 as contemporary with Servius Tullius, sixth king of Rome.

"564 B. C." (Euseb., and Clint.), at Delphi, Aesop arriving with presents from Croesus, giving rise to some dispute, slain by the Delphians.

"In this year" (= 544 + "20 years" of Herodot., and Clint.), Alalia in Corsica founded by Phocaean Greeks.

"563 B. C." (Buddhist ann., and Buns. iv 7. 2), reform in the Hindu religion commenced by Buddha, now in his "35th" year teaching.

Mangifera Indica of Tropical Eastern Asia. Called in Sanscrit "amra" (Roxb., and Pidd.), in Bengalee "am," in Hindustanee "amba." (D'rozar.) in Telinga "mamadi-chitoo," in Tamil "mangas marum" (Lindl.); and the shrine of the seven "manguiers" is mentioned in the Sutra Mandhatri,

discourses of Budha with his pupil Ananda: — branches with leaves and fruit figured in cave-temples at Ellora were remarked by myself: the "an-mo-lo" was observed in Hindustan by Hiouen-Thsang, the "aniba" by Jordanus, the "anba" by Ebn Batuta, the "amba" by Nicolo Conti; M. Indica by Garcias, C. Acosta, Rheede, and Graham; by myself, abounding throughout the low country and but for the fine quality of the fruit readily mistaken for an indigenous forest-tree. Farther East, is said by the natives to "grow wild" in Burmah, and is enumerated as indigenous by Mason v. p. 447; was observed by Loureiro in Cochinchina, but is known in China and called "mong-kwa" (Bridgm.); is called in Tagalo "manga," and was observed by Blanco, and myself, on the Philippines; has only Sanscrit and Telinga names on Java and the neighboring islands (Crawf.), is regarded by Blume as exotic there and only naturalized, and was introduced within the memory of man into some remote portions of the archipelago (Rumph. i. p. 95, and A. Dec.). Westward, the "ambag" is mentioned by Ebn Haukal (Gildem.): M. Indica was observed by myself abundantly planted on Zanzibar; fruit brought to Mocha, produced as appears from Forskal in Yemen; and seeds occurring even in Egypt. By European colonists, M. Indica was carried to the Mauritius Islands (Bojer); to Brazil, and thence in the middle of the Eighteenth century to the West Indies, where it is called *mango* (Hughes p. 177, and Macfad. i. p. 221); to the Hawaiian Islands, where at the time of my visit the trees were not full grown: is described by J. C. Scaliger, and C. Bauhin, from transported specimens. "M. sylvatica" regarded by A. Decandolle as perhaps not distinct, was observed by Vaupell "near Kennery caves" in the environs of Bombay (Graham), by Roxburgh i. p. 644 on the Eastern border of Hindustan in Sylhet; and is enumerated by Mason v. p. 447 and 774 as indigenous in Burmah, distinguished by the natives and said by them to "grow wild." *

Ficus religiosa of Tropical Eastern Asia. The *poplar-leaved fig* is called in Sanscrit "pippula". or "bodhi-drooma" or "chuladula" or "koonjurashuna" or "aswattha," in Bengalee "aswat" or "asood," in Telinga "rai," in Cingalese "bogaha". (Lindl.), in Hindustanee "pippul," in Tamil "arasum-marum" (Drur.); in which we recognize the "bodhi" tree under which Gautama discoursed — (Sutra Mandhatri); also the "ierŏn aigĕirŏna" in the days of Artemidorus on the African side of the entrance to the Red Sea (Strab. xvi. 4. 14), carried there by Banyans or Hindu merchants: F. religiosa, introduced by them, was observed by myself at Muscat and on Zanzibar. Eastward, the "pi-po-lo" was seen in Hindustan by the Chinese traveller Hiouen-Thsang 8: F. religiosa in Hindu mythology is the second "shadow-giving" tree on mount Meru, and from Guadama's dream while

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* *Shorea robusta* of Tropical Hindustan. The *saul* tree is called in Hindustanee and Bengalee "sal," in Sanscrit "uswukurnika" or "sala" (Lindl.); in which we recognize the "salas" woods of the Sutra Mandhatri, — and the "sala" of the Institutes of Manu viii. 246, Bhavabhuti mal. ix., Kalidasa ragh. i. 14, and the Vishnu purana ii. 7: S. robusta is known to grow from the Godavery to the Ganges at Hurdwar and along the base of the Himalaya as far as the Brahmaputra, sometimes exclusively occupying the forest (Roxb. cor. iii. pl. 212, Royle, and Bedd.); yields the resin known as *dammer* in the bazaars of Bengal, and its timber is highly valued and in very general use, being stronger than teak but not so durable (Drur.).

Syzygium jambolanum of Tropical Hindustan and Burmah. A large and handsome tree called in Sanscrit "jambu" (Pidd.), in Hindustanee "jamoon," in Bengalee "kallajam," in Telinga "naredoo," in Tamil "nawel" (Drur.), in the environs of Bombay "jambool" (Graham); in which we recognize the "djambu" under which Gautama was sometimes seated — (Avadan. Asok., and Burn. i. 385), also the fourth and last "shadow-giving" tree on mount Meru in Hindu mythology (Mason v. 415): the "djambu" is mentioned also by Valmiki ramayan. iv. 44 (transl. Gorr.); the rose-apple black with the ripening of its abundant fruit, by Bhavabuti maha-vir. v; and the "kakajambu" of Susrutas chik. 24 is referred here by Hessler: S. jambolanum is described by Rumphius i: pl. 42; was observed by Rheede v. pl. 29 in Malabar; by Graham, "in various parts of the Concan" and "the commonest tree on the table-land of Mahableshwur," its fruit having "an astringent rough flavour" "sold in the bazars;" by Ainslie, Roxburgh, Wight, and Drury, as far as Tinnevelly and Bengal, its timber valuable. Farther East, according to Mason p. 451, 511, and 745, seems known to the Burmese, and may yield the bark "used as a mordant for blue and black dyes" and the "small black plum" often "seen in bazar."

Eragrostis? cynosuroides of Tropical Hindustan. Called there "cusa" or "cusha" (W. Jones); in which we recognize "Kusigramaka," the name of a city in the Sutra Mandhatri, — and the "kusa" grass of the Vedas, or "darbha" of the Atharva Veda: eating with the tip of a blade of "kusa" grass is mentioned in the Dhammapada 70; cinctures of "kusa" are mentioned in the Institutes of Manu ii. 43; and the "kusa" or "darb'ha" is prescribed medicinally by Dhanvantari (stanzas in Susrut. chikits. 5): E. cynosuroides was observed by Graham in the environs of Bombay; by Koenig, Retz, and Roxburgh, in other parts of Hindustan as far as Bengal; and according to W. Jones asiat. res. iii. 255, its leaves are very long, serrated, and sharp-pointed.

sleeping beneath one is "the most sacred of trees with the Buddhists" (Mason v. 415 to 424); was observed by Rheede i. pl. 27 in Malabar; by Graham, in the environs of Bombay, "always to be met with planted about temples;" by myself, around temples and villages to the end of my journey inland; by Ainslie, Roxburgh, Wight, and Drury, in other parts of Hindustan, the natives very unwilling to cut it down, and the seeds leaves and bark employed medicinally. Farther East, was observed by Mason indigenous in Burmah, and called "nyoung-bau-de;" and is known to occur in Tropical China, paintings on the dried leaves being often exported. (See F. populifolia).

"562, March" (= 562 y. $28\frac{309}{660}$ d. = 597 y. $353\frac{62}{360}$ d. — "37th year" of twelve lunations, "the twelfth month on the seven and twentieth of the month" 2 K. xxv. 27, and Jerem. lii. 31), at Babylon, Jehoiachin released from prison by Evil-merodach "in the year that he began to reign," and provided with a "daily" maintenance from the royal table (according to oriental custom with captive kings, as witnessed by myself at Zanzibar. The date deduced by Clinton i. p. 319 to 329 from the Astronomical canon does not correspond, being "561, Jan. 11th" for the accession of Ilvarodamus or Evil-merodach. See below).

560 B. C. (= 538 + "17 + 0 y. 9 mo. + 4 years," and after reigning "two years," Beros. in Jos. c. A. i. 20), Evil-merodach slain, and succeeded as king of Babylon by his brother-in-law Neriglissoor. — Who reigned "four" years. (See above).

"In this year" (Lacharme note to Chi-King i. 5. 7), Siang-kong reigning in China* (see birth of Confucius).

"The same year" (. . . . Clint.), at Athens, supreme authority usurped by Pisistratus; who however continued to administer the government according to the laws of Solon. Pisistratus is regarded as the first Greek who collected a *Library* (A. Gell. vi. 17, and Athen. i.). This he rendered accessible to the public. He also caused the poems of Homer to be collected, collated, and written out in a connected form, under the charge of Onomacritus, Zopyrus, Orpheus of Croton, and Concylus; the earliest instance on record of *editing* books.

Cirsium acarna of the Mediterranean countries. A *thistle* called in Greece "agri aggathō" (Forsk.) or "agriagkatha" (Fraas) or "asprē agkatha" (Sibth.); and the extensive "akanthōthēs" tract ordered to be cleared by Cyrus while inciting the Persians to revolt — (Herodot. i. 126) may be compared: the "agriagkathōn" is identified by Skarlatos with the "pōluakanthōs" of Theophrastus vi. 4. 3: C. acarna was observed by Forskal, Sibthorp, and Fraas, abounding from the Peloponnesus throughout the Greek islands to the Dardanelles, according to Chaubard often so abundant on arid plains as to prove impenetrable; is known to grow also farther East. Westward, the "polyacanthos" is enumerated among pubescent thistles by Pliny xxi. 56: C. arcana is termed "c. polycephalos canescens aculeis flavescentibus munitus" by Tournefort inst. 451, and is known to grow as far as Spain (Cav. i. pl. 53, and Pers.).

Onopordum Illyricum of the Mediterranean countries. Called in Greece "agkathi" or "gaithar-agkathō" (Sibth.), and possibly the thistle in question: — the "akantha" having dry pappus according to Theocritus iv. 50 and vi. 15, is referred here by Hogg: O. Illyricum was observed by Forskal, and Sibthorp, from the Peloponnesus throughout the Greek islands to the Dardanelles, according to Chaubard one of the most abundant thistles, and when the stem hardens in the autumn rendering certain places impassable. Westward, is termed "carduus tomentosus acanthi folio angustiori" by Tournefort inst. 441; was observed by Hogg in Sicily; and is known to grow also in Southern France (Lam. fl. fr., and Pers.).

"559 B. C." (Herodot., and Clint. i. p. 180, 204, and 259), Astyages succeeded by his son Cyrus; who uniting Media, founded the Persian empire.

In the "first" year of the reign of Cyrus (2 Chron. xxxvi. 22, and Ezr. i. to vi. 5), a decree issued by him, granting the Israelites permission to rebuild their temple at Jerusalem.

Carissa edulis of Tropical Arabia. Called in Yemen "antur" or "arm," and the ענם arn planted in Babylonia according to the later Isaian prophecies xliv. 14, — may be compared: the "aran" according to Abu'l Fadli (Celsius, and Kitt. cycl. bibl.) is "said to be a tree of Arabia Petræa, of a thorny nature, inhabiting the valleys, but found also in the mountains, where it is however less thorny; the wood is said to be much valued for cleaning the teeth; the fruit is in bunches like small grapes; the berry is noxious while green and bitter like galls; as it ripens it becomes red, then black and somewhat sweetish, and when eaten is grateful to the stomach, etc., and seems to act

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* *Cydonia Sinensis* of Eastern Asia. A species of *quince*: the "coignassier" of a Tcheou nan ode — (Chi-King i. 5. 10) may be compared: C. Sinensis was observed by Bunge under cultivation in Northern China, its fruit inferior in quality (A. Dec.). Westward, was carried to Bengal (Roxb. ii. 512); and by European colonists to the environs of Bombay (Graham). From transported specimens, is described by Poiret, and Thouin.

as a stimulant medecine ;" is also mentioned by Ebn Baitar: C. edulis was observed by Forskal p. 63 frequent among the mountains of Yemen, the berries black and edible.

The סִינִים Synym of the later Isaiah prophecies xlix. 12, is referred by Gesenius and others to China. And may therefore prove the earliest notice of the *Chinese* by a Western writer.

"556 B. C." (D. Laert., Cyrill, and Clint.), Chilon ephor at Sparta. Already mentioned as by some writers enumerated among the "Seven sages."

"The same year" (= 538 + "17 + 9 y. 9 months" of Berosus in Jos. c. A.), Neriglissoor succeeded as king of Babylon by his son Laborosoarchod: a boy, who reigned "nine months."

555 B. C. (= 538 + "17 years" of Berosus in Jos. c. A.), at Babylon, Laborosoarchod slain by conspirators, and succeeded by Nabonnedus. — Who reigned "seventeen" years, being the last king of Babylon.

"553 B. C." (. . . . Clint.), in Sicily, Camarina "forty-six" years after its foundation captured and destroyed by the Syracusans.

"551 B. C." On the "thirteenth day of the Eleventh month or near the Winter solstice, in the 22d year of Siang-koung king of Lou" (Chinese chron. table), birth of Khoung-tseu or Confucius; "in the town of Tseou-y of the province" (now called Chan-toung).

550 B. C. (= 743 + "8th year" in Singal. ann., Burnouf ii. 487), Bimbasara succeeded by his son Adjatasatru, now king of Magadha on the Ganges. Sucriti in the Graha Munjari tables and Puranas (Bentley as. res. viii. 244) seems at least contemporary.

"Nearly two thousand four hundred years ago," according to the Cingalese, their ancestors came to Ceylon "from the Eastward" (Maunder). The colonists were doubtless acquainted with the *Negrillo Race* of man, either as inhabiting the Andaman Islands or farther South. — The Andaman Islands and their inhabitants are mentioned in one of the voyages of Sindbad.*

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* *Elæocarpus than-lwen* of Burmah. A Tiliaceous tree that gave its name to the river Salwen, — or according to the pronunciation of residents the *salwen tree;* as pointed out by the natives to Mason v. 537.

Elæocarpus . . . . sp. . . . of Burmah. Its hard and valuable timber used from early times for carts and in house and boat building: — observed by Mason v. 537 growing very abundantly in the neighbourhood of Rangoon, and not uncommon in some parts of Tenasserim.

Hopea odorata of Burmah. A Dipterocarpous tree called there "then-gan" (Mason); and from early times, *dammar* the general substitute for pitch and rosin procured from it: — observed by Mason v. 517 to 527 the most valuable indigenous timber tree of the Southern provinces, used there "for building purposes" and especially for "the best canoes." Westward, is described by Roxburgh.

Vateria pan-theet-ya of Burmah. Another Dipterocarpous tree, whose wood from early times was valued and employed by the natives: — observed by Mason v. 527 "common" in Tavoy and Mergui, its timber "whiter than Hopea and equally good."

Sterculia ornata of Burmah. A tree called there "shau-nee" (Mason), and from early times ropes made of its bark: — observed by Mason v. 487 to 520 one of the three trees from whose bark "ropes are more frequently made," and identified with the "S. ramosa" of McClelland yielding an "exudation similar to tragacanth." S. ornata is described by Wallich, and may therefore prove distinct.

Eriochlæna htwa-nie of Burmah. A Sterculioid tree, its red wood from early times used for paddles, rice-pounders, and building purposes: — observed by Berdmore (Mason v. 536).

Acacia kuk-ko of Burmah. A very large tree, used from early times for making canoes, and according to Burmese geography "an immense specimen growing on the great Eastern island:" — under the former Burmese government, according to Brandis, "a higher sum was required for permission to fell" the "kuk-ko" than for any other tree (Mason v. 529).

Inga bung-mai-za of Burmah. A tree, its hard and black heart-wood from early times used for small canoes and wooden bells for cattle: — observed by Berdmore, and Mason v. 529.

Aeschynomene paludosa of Burmah. Subaquatic, growing half under water, and called by the Burmese "pouk" or "nya" (Mason); its bark from early times used for making a coarse hemp: — observed by McClelland, and Mason v. 519.

Lagerstræmia hlee-za of Burmah. A Lythraceous tree, its red-coloured wood used from early times for paddles and for building: — observed by Berdmore, and Mason v. 538.

Pentaptera . . . . sp. . . . of Burmah. The *bitter-wood* is a small Combretaceous tree, from early times used for boats, said to be exempt from attacks of the teredo: — observed by Mason v. 533, its bark "sold in bazar to chew with betel," but is regarded by him as possibly not distinct from P. arjuna.

"549, June 19th." On the "first day of the Seventh month in the 23d year of Ling-wang" (Khoung-tseu, Gaubil, and Pauth. p. 108), *eclipse of the sun*.

"The same year" (Hieronym., and Clint.), in Sicily, Phalaris king of Agrigentum slain in an insurrection.

The metope-reliefs of Perseus and Medusa, and of Hercules and Kerkopes, on the central temple of the acropolis at Selinunt in Sicily, are referred to "the middle of the sixth century" — by Lubke and Lutrow; the remaining five Doric temples being regarded as later than this century.

548 B. C. = "23d year of Amasis II.," death of an Apis or sacred bull — (Birch).

"In this year" (Pausan., and Clint.), the temple at Delphi in Greece destroyed by fire, (according to Herodotus ii. 180) accidentally. The temple was rebuilt by the Amphictyons; Amasis II. of Egypt contributing.

"In this year (= Ol. 58" of Plin. ii. 6, and Sm. b. d.), the Obliquity of the Ecliptic discovered by Anaximander of Miletus. Who also constructed the first map on record (Blair).

"546 B. C." (Solin., and Clint), in anticipation of aid from the Babylonians and Egyptians, and trusting to an oracle, war commenced by Croesus against the Medes and Persians. He was defeated in battle; and before the close of the year, the city of Sardis was captured and Lydian independence overthrown (Herodot. i. 77).

"544 B. C. = 1st year of King-wang, of the Tcheou" or Fifth dynasty (Chinese chron. table).

"The same year" (Clint. i. p. 238, see Herodot.), in Asia Minor, the city of Phocaea besieged by the forces of Cyrus, and abandoned by the inhabitants; who sailed away in their ships.

Ibycus of Rhegium may have been at this time composing poetry. — He is said to have passed much time with Polycrates at Samos (Sm. b. d.).

Potentilla fragariastrum of Europe and the adjoining portion of Asia. The ΟΙΝΑΝΘΙΑΕΣ of Ibycus, — and others, described by Theophrastus vi. 6 to 8 as vernal and scentless with racemed white flowers, by Dioscorides as a span high, growing in stony places, and in the added Synonyms identified with the "kĕraskōmiōn" or "lĕukanthōn," may be compared: P. fragariastrum was observed by Sibthorp, and Chaubard, in the Peloponnesus. Westward, is described by Tournefort inst. 296; and is known to grow throughout middle Europe as far as Britain (Curt. lond. iii. pl. 20, and Pers.).

Hardly later than this date ("620 to 540," Franz), a Greek inscription, found near Petilia (Policastro) in Italy, presenting the following form of the letter ⊙.

"543 B. C." (Singalese ann., Lassen, Buns. iv. 7. 2, and Burnouf ii. 487, "1116th year before the founding of Pegu" = 542, Mason ii. 20), in the "eighth" year of king Adjatasatru, death of Gaudama or Buddha, founder of Buddhism. On the "third week" afterwards, the First Buddhist council assembled by the high priest Kasyapa, Ananda not having as yet attained the state of ashat. The "sermon-books" were "committed to memory" by different priests (Mahavams. ii.).*

"In this year" (Fa-Hian, and roy. asiat. soc. vi. 247), a piece of ground bought by king Prasene's minister of Sravasti for a garden to a temple of Buddha.

"540 B. C.". Not earlier than this date (Franz), the Greek inscription on a vase found at Agylla in Italy, presenting the following forms of letters: Τ, Υ. Other inscriptions of about this date, present the forms: Β, Γ, Η, Ι, Υ.

Maba buxifolia of Tropical Hindustan and Burmah. A small Diospyroid tree called in Tamil "erumbelie," in Telinga "pishanna" (Drur.); in Burmah "mai-byoung" (Mason), and from early times its hard tough knotty wood selected by Taveyers for anchors for large boats, — wooden anchors "laden with stones constituting the greater part in use" to the present day (Mason v. 543). Westward, was observed by Roxburgh cor. i. pl. 45, and Wight, in Hindustan, on the Circar mountains, its berries edible, agreeable to the taste, and its dark-coloured durable wood useful for various economical purposes (Drur.).

* *Garcinia Roxburghii* of the Siamese countries. Called on the Neilgherries "heela" (Drur.), in Burmah "toung-da-lai" (Mason); and the yellow produced by a Clusioid tree adopted as the sacred colour by the Buddhists (Lindl.) as early perhaps as this date: — G. Roxburghii was observed by Mason v. 480 to 514 indigenous and very abundant in Tenasserim, its gum-resin affording "a beautiful permanent *yellow varnish* for metallic surfaces." Westward, is perhaps the tree regarded by Murray as carried from Siam to Ceylon: is known to occur on Ceylon (Drur.); was observed by Roxburgh cor. iii. pl. 298, Beddome, and Wight, in various parts of the peninsula; by Law, and Graham, in the vicinity of Bombay, "some very large trees" in "a grove at Belgaum;" its exudation "is semi-transparent, very adhesive, and unsuitable as a paint" (Drur.). "G. gambogia, G. Zeylonica" and "G. cowa" of Roxburgh, according to Graham, and "G. kydia, G. papilla" of Wight, and "Cambogia gutta" of Linnæus, according to Drury, are all identical.

The same year (= "60th olympiad"), the well-ascertained date of the poet Hipponax — (according to Pliny xxxvi. 4).

Chelidonium majus of Europe and the adjoining portion of Asia. Called in Britain *celandine* (Prior), in France "chelidoine" (Nugent), in Germany "schöllkraut," in Italy "celidonia" or "chelidonia maggiore" (Lenz), in Greece "hĕlithōniŏn" (Sibth.), in Egyptian "mōthōth" (Syn. Diosc.); in which we recognize the ΧΕΛΙΔΟΝΟΝ : ΦΑΡΜΑΚΟΝ of Hipponax, — "hĕlithōniŏn" supposed according to Aristotle to restore sight to young swallows, and the "hĕlithōniŏn mĕga" of Dioscorides having acrid yellow juice and fruit like that of the "kĕratitithōs mēkŏnōs" horned poppy: the "chalidunium" is mentioned also by Arab writers: C. majus was observed by Sibthorp, and Fraas, around villages in Greece and seemingly wild on the Bithynian Olympus. Westward, the "hĕlithŏniŏn mĕga" or "paiŏnia" or "krataia" or "panthiōs ŭza" or "philōmēthĕiŏn" is identified in Syn. Diosc. with the "krŏustanē" of the Dacians, "thŏna" of the Gauls, and "phaviōum" of the Romans: the "chelidoniam maior" two cubits high with yellow flowers, is mentioned by Pliny xxv. 50; and two species of "chelidŏniae," by Macer Floridus 52: C. majus is described by Dodoens, and Gerarde; is termed "ch. m. vulgare" by Tournefort inst. 231; and is known to occur in waste places from Italy to Denmark (fl. Dan. pl. 676, Pers., and Wats.). By European colonists, was carried before 1669 (Joss.) to Northeast America, where it continues a garden weed in our Northern and Middle States. Its juice according to Lindley "is a popular remedy for warts, and has been employed successfully in opacities of the cornea."

Brassica oleracea of the seashore of Northern Europe. Called in Britain *cale* or *cole* or *colewort* or *cabbage* (Prior), in France "chou" and the headed variety "chou cabus" (Nugent), in Germany "kohl," in Italy the headed variety "capuccio" or "cavolo capuccio" (Lenz), in Greece "lahanōn" (Sibth.), in Egypt "krumb" (Forsk.); in which we recognize the "kramvē" identified by Aristotle, and Athenæus, with the ΡΑΦΑΝΟΣ of Hipponax, — Ananias, Epicharmus, and others, imitating a tree in its trunk according to Theophrastus i. 3. 4; known to the earlier Greeks in three varieties, and especially commended by Pythagoras, Dieuches, and Chrysippus (Plin. xx. 33): the "kramvē" is mentioned also in the Batrachomyomachia, and by Teleclides, Eupolis, Timæus, Apollodorus of Carystus, Nicander; its leaves according to Diphilus Siphnius, and Dioscorides, deteriorating in Egypt after the first year, but seeds produced there commended for medicinal use: the headed or leafy variety of B. oleracea according to Clot-Bey deteriorates in Egypt; and the only kinds seen there by Alpinus were the "brassica raposa" *turnip-stemmed*, and the *cauliflower* called there "karnabid," in Greece "karnaviti" (Forsk.), by Florentinus "karnavathiōn" (geopon. ix. 28), and by Theodorus Ptochoprodromus "karnavathin:" B. oleracea was seen also by Forskal, and Delile, under cultivation in Egypt; and by Forskal, Sibthorp, Chaubard, and Fraas, under cultivation in Greece. Westward, the "kramvē kōpaia" is identified in Syn. Diosc. with the "vrassika" of the Romans; the "brassica" (from the Celtic "bresic") is mentioned by Cato 156, Columella, and the "brassica capitata" by Pliny: B. oleracea is described by Dodoens pempt. p. 626; is termed "b. maritima arborea seu procerior ramosa" by Tournefort inst. 220; is cultivated from Italy throughout middle and Northern Europe, and is known to grow wild on the sea cliffs of Northwestern France, Britain, and Denmark (Pers., Bosc, Bab., and Fries). Eastward from Syria, is called in Tartar "kapsta" (Moritzi), in Hindustanee and Bengalee "kobi" (D'roz.) or "kopee" (Pidd.), but has no Sanscrit name (A. Dec.); was observed by Graham in the environs of Bombay, "commonly cultivated during the cool season;" by Royle him. 70, in Northern Hindustan; by Mason, "exotic" in Burmah and called "them-bau-mung-la;" by Loureiro, under cultivation in Anam and China. By European colonists, was carried to Northeast America, where it continues abundantly cultivated; also to the islands of the Pacific, observed by myself naturalized on the Hawaiian Islands, Taheiti, Tongatabu, and New Zealand.

Mentha crispa of Europe and the adjoining portion of Asia. Called in Italy "sisembro" (Matth.): the ΜΙΝΘΗ, coronary according to Hipponax, — mentioned also by Cratinus (Athen. ii), by Theophrastus ii. 4, 1 and caus. ii. 16. 4 as a supposed degenerate form of "sisumvriōn" from neglected cultivation, may be compared: the "sisumvriōn" of Cratinus, Pherecrates, Strattis, Antiphanes, Philinus, Athenæus xii. 78, mentioned as coronary by Theophrastus vi. 1, 1, Nicander, and Dioscorides, is referred here by Matthioli: M. crispa was observed by Sibthorp wild in the Peloponnesus; and is enumerated by Clot-Bey and Figari as long known in Egypt. Westward, the "sisumvriōn" or "aphrōthitēs stĕphanōn" is identified in Syn. Diosc. with the "ōustĕralis" or "ĕrva vĕnĕrĕa" of the Romans; the "sisymbrium" is mentioned by Ovid; by Pliny xix. 55 and xx. 91, as fragrant and growing near water, its branches pulled and cultivated: M. crispa is described by Rivinus mon. pl. 50; is termed "m. rotundifolia crispa spicata" by Tournefort inst. 189; and is known to grow near water in Italy, France, and middle Europe (Linn., Pers., and Dec.).

Mentha rotundifolia of Europe and the adjoining portion of Asia. Resembling and sometimes confounded with the preceding, called in Greece "agriōēthuōsmōs" (Sibth.), and possibly the

"minthē" of Hipponax, — and Theophrastus: the "agriōn ēthuōsmōn" is described by Dioscorides iii. 36 as larger every way than the "sisumvriōu" with the leaves more hairy and a ranker odour: M. rotundifolia was observed by Sibthorp, and Chaubard, frequent in abandoned gardens and among ruins from Crete and the Peloponnesus to the Bithynian Olympus; is enumerated by Clot-Bey and Figari as only recently introduced into Egypt. Westward, is termed "m. sylvestris rotundiore folio" by Tournefort inst. 189; was observed by Forskal near Marseilles; and is known to grow in wet places and along roadsides as far as Britain (Engl. bot. pl. 446, Lam. fl. fr., and Pers.). Is one of the species enumerated by Lindley as having "been in repute as stomachics and emmenagogues." (See M. arvensis, and M. aquatica).

"538 B. C." (. . . Blair, and Clint.), capture of Babylon by the Medes and Persians under Cyrus; and Babylonian independence overthrown. (The same date, probably marking the same event, occurs in the Egyptian Chronicle = 715 — "177 years;" and nearly the same, in the Afr.-Maneth. table, 1072 y. 2 mo. — "130 — 120 — 89 — 6 — 40 — 7 — 6 — 8 — 54 — 6 — 6 — 19 — 44" = 537 y. 2 mo. = 339 + "4 + 3 + 2 + 38 + 20 y. 4 mo. + 6 + 124 y. 4 mo. + 0 y. 6 months").

Euphorbia antiquorum of Tropical Arabia and Hindustan. Cactiform, called by the Arabs "shrfth" (Spreng.), in Yemen "kerf" or "kælah" or "gholak" (Forsk.), in Hindustanee "seyard" or "narashij," in Bengalee "narsij," in Telinga "bonta-jammoodoo," in Tamil "shadray kullie" (Drur.); and the ארף srphth of the later Isaian prophecies lv. 15 — is referred here by Sprengel: also the "kaulōs" with stout spines and copious fig-like juice observed by Aristobulus (Arr. exp. vi. 22), or leafless "akanthan" growing in Gedrosia according to Theophrastus iv. 4. 13; the "snuh" or "snuhi" or "sud'ha" or "vajrakantaka" or "mahavriksha" milk prescribed by Susrutas sutr. 36 to chikits. 1, is referred here by Hessler: E. antiquorum was observed by Rheede ii. pl. 42 in Malabar, the bark of the root bruised and taken as purgative; by Graham, "in gardens Bombay" and "wild in the jungles about the falls of Gockauk, Southern Mahratta country;" by Buchanan, and Roxburgh, and Royle, in other parts of Hindustan; by Drury, "common in waste places in the peninsula," and the juice employed by the natives for various medicinal purposes. Westward, was observed by Forskal p. 93 in Tropical Arabia, cooked in pits and given to camels; and as appears from Persoon is known even in Egypt.

"537 B. C. = 8th year of King-wang" (Chinese chron. table), beginning of the Thirty-sixth cycle.

"536 B. C." (. . . and C. Mull. geogr. min. i. p. xx), the island of Corsica abandoned by the Phocaean Greeks; yielding naval dominion over the Western portion of the Mediterranean to the Carthaginians.

Scilla maritima of Egypt and the Mediterranean countries. The *squill* is called in Greece "skilla" or "vōlkikōs" (Sibth.), in Egypt "basal el-far" or "askyl" (Del.); in which we recognize ΣΚΙΛΛΑ of Theognis 537, — Pythagoras, Cratinus, Diphilus, Theophrastus i. 6, Theocritus, Dioscorides, and Clemens Alexandrinus; and the "iskil" of Avicenna: S. maritima was observed by Sibthorp, Chaubard, and Fraas, abounding in Greece and on the Greek islands; by Delile, on the Mediterranean border of Egypt. Westward, the "scilla" or "scylla" or "squilla" is mentioned by Varro, Virgil, Celsus, Columella, Ausonius, Apuleius 42, and by Pliny xix. 30 as growing also on the Balearic Islands and in Spain; S. maritima is described by Anguillara p. 120, and Tournefort inst. 381; was observed by Desfontaines i. p. 297 in Barbary; and is known to grow in Sicily, Spain, and Portugal (Pers., and Spreng.). Preparations from the bulbous root continue to be much used medicinally.

Spartium (*Calycotome*) *villosum* of the Mediterranean countries. Called in Greece "xulagkatha" (Fraas) or "aspalatōs" or "aspalathēia" (Sibth.); and the ΑΣΠΑΛΑΘΟΙ: ΤΑΠΗΣΙΝ of Theognis — may be compared: "aspalathōus" are mentioned by Pherecrates (Athen. xv. p. 685), and Theocritus iv. 57: the "mēlaina riza" of 2 Mul. morb. 660 is identified by Galen with the "aspalathōn arōmatikōn:" the "aspalathōs" is described by Dioscorides as a woody and thorny shrub, growing in Syria as well as on Nisyrus, Rhodes, and other Greek islands, and employed for thickening ointment; and in the added Synonyms, the "aspalathōs" or "ĕrusiskēptrōn" or "sphagnōn" or "phasganōn" is identified with the "thiaxulōn" of the Syrians: S. villosum is termed "cytisus spinosus creticus siliqua villis densissimis longissimis et incanis obducta" by Tournefort cor. 44; was observed by Sibthorp, Chaubard, and Fraas, from the Peloponnesus throughout Greece and the Greek islands. Westward, the account by Pliny xxiv. 69 of the "frutex humilior" growing on Nisyrus and Rhodes, and called "erysisceptrum" or "adipsatheon" or "diacheton," seems in great part taken from Dioscorides: S. villosum was observed by Desfontaines ii. 135 in Barbary (Pers.), and was received by Sprengel from Corsica and the vicinity of Naples. (See Myrica sapida).

Genista horrida of the Mediterranean countries. Also called in Greece "xulagkatha" (Fraas);

and the "aspalathŏs" with which kings are chastised in Hades — (Plat. leg. 10) is referred here by Sprengel: the aspalathŏs ětĕrŏn" is distinguished by Dioscorides as white and scentless and inferior in quality: G. horrida was observed by Sibthorp, and Chaubard, and Fraas, frequent on mountains from the Peloponnesus throughout the Greek islands. Westward, the "frutex humilior," is further described by Pliny xxiv. 69 as growing in many places but "non ubique odoratus:" G. horrida is termed "genista spartium minus saxatile aculeis horridum" by Tournefort inst. 645; was observed by Villars in Southern France, and is known to grow as far as Spain (Pers.).

"535 B. C." (Suid., and Clint.) in Greece, *tragedy* first exhibited by Thespis.

Peplis portula of Europe and the adjoining portion of Asia. Called in Britain *water purslane* (Prior), in Greece "anthrakĕitha" or "anthrahnē" (Sibth.); in which we recognize the ΑΝΘΡΑΧΝΗ herb habitually used by Thespis — (Suid.), the salted "anthrahnē pōtamiē" of Polemon diaet. ii. 25, and the "anthrahnē" mentioned by Theophrastus vii. 1. 2 as cultivated, by Dioscorides as esculent, and by pseudo-Aristot. color. 5 as turning red in ripening: P. portula was observed by Sibthorp abounding in moist cultivated ground around Athens, and eaten in salads. Westward, the "andrachne" herb is identified by Pliny xiii. 40 and xx. 81 with the "portulacae" or "porcilaca" mixed in salads "in acetariis sumta;" the "portulaca" is mentioned also by Varro iv. 28, and Columella x. 356; P. portula is termed "glaux palustris flore striato clauso foliis portulacæ" by Tournefort inst. 88, is known to grow throughout middle Europe as far as Denmark (fl. Dan. pl. 64, and Pers.).

Hardly earlier than this date (Graha Munjari tables, Puranas, and Bentl.), Satya reigning in Hindustan.

One hundred and thirteenth generation. Sept. 1st, 534, mostly beyond youth: the poet Phocylides (writing in Greek but a Jew according to Bernays, note in Steinschn. i. 2); the Greek poets, Melanippides, Telesilla of Argos, and Lasus of Hermione; Choerilus the tragic poet; Theagenes of Rhegium (who wrote on Homer); the historians, Eugeon of Samos, Polyzelus, Deiochus of Proconnesus, Eudemus of Paros, Democles, Acusilaus, and Amelesagoras of Chalcedon.

"The same year" (= 509 + "25 yrs," Sm. b. d.), Servius Tullius succeeded by Tarquinius Superbus seventh and last king of Rome. In whose reign, Petronius Sabinus is said to have obtained from M. Tullius or M. Atilius the *Sibylline books* to take a copy of them (Val. Max i. 1. 14, and Dionys. iv. 62).

Tectona grandis of Tropical Hindustan and Burmah. The *teak* tree is called in the environs of Bombay "saag" (Graham), in Bengalee "segoon," in Telinga "teka," in Tamil "thaikoo marum" (Drury); in which we recognize the material of which ships were built at Tyre at the entrance to the Persian Gulf — that continued sailing "more than two hundred years" to the time of Theophrastus v. 6: T. grandis was observed by Rheede iv. pl. 27 in Malabar; by Graham, "in considerable abundance in the forests" along the Taptee "and in various parts of the" Concans; by myself, a fine large forest-tree frequent in the Concans or lower country along the sea; is known to grow from Goojerat to the end of the peninsula, and as far as Rajahmundry on the Eastern coast (Roxb. cor. i. pl. 6, and Drury); was observed by Mason v. p. 525 abounding in Burmah and called "kywon," furnishing "the staple timber" of the country; and is known to grow as far as Java (Rumph. iii. pl. 18, and Pers.). Westward, a tradition is mentioned by Eutychius of Alexandria that "saj" timber was employed for building the ark (Smith bibl. dict.); the "sadj" is mentioned also by Edrisi, Ebn Baitar; and is described by Forskal p. lvi as an incorruptible kind of wood imported from Hindustan for the keel of Egyptian vessels.

"In the second half of the Sixth century B. C." (Mason i. 2), founding by Budhists of the seaport city of Rangoon in Burmah.*

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* *Pterospermum aceroides* or "tha ma jam wai-soke," and *P. subacerifolium* or "na-jee," both of Burmah. — In company with *P. acerifolium* "growing with teak in all the forests," attaining according to McClelland the girth of ten or twelve feet and a lofty height, the timber extremely valuable and strong as either teak or oak (Mason v. 536).

Grewia ta-yau of Burmah. A small Tiliaceous tree, from early times furnishing spars to vessels at Tavoy: — observed by Mason v. 537 growing "on the sea-board."

Berrya ammonilla of Burmah. A Tiliaceous tree, its light strong timber valued from early times, — and known in commerce as *Trincomalee wood:* growing according to Helfer on King's Island, opposite Mergui (Mason v. 537). Westward, is described by Roxburgh.

Vatica koung-mu of Burmah. The largest Dipterocarpous tree in the country, from early times used for making large boats, — but yielding "no oil," and "its places of growth are usually of difficult access by water;" according to O'Riley, the wood is also "well adapted for spars for vessels" (Mason v. 528 to 757).

Aglaia spectabilis of Burmah. An Aurantiaceous tree, its light serviceable timber known from early times: — observed by McClelland (Mason v. 539).

"532 B. C." (. . . . Sm. b. d.), supreme authority at Samos acquired by Polycrates.

"The same year" (Clint. i. p. 234, see also Herodot. i. 67, and Strab. vi. 1. 1), on the Italian coast not far from Paestum, the city of Hyela or Elea or Velia founded by Phocaean Greeks.

"531, June 10th = first day of the Seventh month in the 24th year of King-wang" (Khoung-tseu, Gaubil, and Pauth. p. 108), *eclipse of the sun.*

"530 B. C." (Athen. i. p. 3, and Clint. i. p. 372), a *library* founded by Polycrates king of Samos. Pythagoras after receiving instruction in Egypt from Onnuphis of Heliopolis (Leps. eg. and sin. p. 386), now at the age of "forty" quitting Samos (Aristoxen., Iamblich., and Porph.): all accounts make him contemporary with Polycrates and Tarquinius Superbus (Sm. biogr. dict.).

Anemone coronaria of the East Mediterranean countries. The *garden anemony* is called in Italy "anemone" or "anemolo" (Lenz), in Greece "paparouna" (Sibth.), in Arabic "schkiak naman" (Camus, and Spreng.); in which we recognize the "aněmŏnē" identified in Syn. Diosc. with the "knikōs agria" of the prophets, ΑΤΡΑΚΤΥΛΙΣ of Pythagoras, — and "vērtliōs" or "ōrniōs kĕraniōs" of Osthanes: the "aněmŏnē" is mentioned also by Pherecrates, Theophrastus, Theocritus, Bion, Moschus, Athenaeus vi. p. 268, is prescribed in 1 Morb. mul. 598, and the "aněmŏnē ēmĕrŏs" according to Dioscorides has either red, pale, milk-white, or purple flowers: A. coronaria with flowers appearing in March and either scarlet, white, violet, or blue, was observed by Sibthorp, Chaubard, and Fraas, frequent on dry hills from the Peloponnesus throughout Greece. Westward, the "aněmŏnē" is identified in Syn. Diosc. with the "hōuphphōis" of the Numidians, and "ōrki tōunikam" of the Romans; the "anemone" of cultivated ground, flowering only when the wind blows, is mentioned by Pliny xxi. 94: A. coronaria is described by Dodoens pl. 434 and 435, Lobel pl. 277; is termed "peregrinum" by Caesalpinus xiv. 9, "a. tenuifolia" by Tournefort inst. 278; was carried according to Clusius from Italy to Spain; has become naturalized in Italy, Sicily, Algeria, Sardinia, and Southern France (Munby, Moris, and A. Dec.); and is cultivated for ornament throughout middle Europe (Pers.). Is according to Christison, and Lindley, "among the most active of the poisonous species." (See Parietaria officinalis).

Anemone stellata of the Mediterranean countries. Also called in Italy "anemone" or "anemolo," but distinguished as "fiore stella" (Lenz), in Greece "agria paparouna" (Sibth.); in which we recognize the "agria aněmŏnē," included through Syn. Diosc. in the "atraktulis" of Pythagoras, — and described by Dioscorides as larger with harder and broader leaves, and from its red flower confounded with "argĕmŏnēn" and rōiatha mĕkŏna:" the "aněmŏnē lĕimŏnia" enumerated among vernal plants by Theophrastus vi. 8. 1, may also be compared: A. stellata was observed by Sibthorp, Chaubard, and Fraas, from the Peloponnesus throughout Greece, the flowers in Spring giving a bloody tinge in tracts. Westward, the account of the "silvestris anemone" by Pliny xxi. 94 seems chiefly taken from Dioscorides: A. stellata is described by Dodoens pl. 434; is termed "a. latifolia simplici carneo flore" by Tournefort inst. 276; is known to grow wild in Italy and Switzerland (Pers.),

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Calophyllum longifolium of the Siamese countries. A tree called in Burmah "tha-ra-bee" (Mason), and from early times used for spars: — observed by Mason v. 534.

Garcinia pa-ra-wa of Burmah. A Calophylloid tree, the largest of its genus, its timber from early times valued by the natives: — observed by Mason v. 534.

Walsura piscidia of Burmah. A large Meliaceous tree, its heavy and strong timber from early times familiarly known: — according to McClelland abundant in Pegu (Mason v. 539).

Connarus speciosus of Burmah. A large tree, its heavy and strong timber from early times familiarly known: — observed by McClelland, and Mason v. 532, its "remarkably bright scarlet pod" "often seen in the jungles."

Elæodendron integrifolium of Burmah. A Celastroid tree called "ksouk" (Mason), and its strong timber from early times familiarly known: — observed by McClelland, and Mason v. 544. Described also by Trattinick (Steud.).

Canarium geniculatum of Burmah. A large Terebinthoid tree, its timber valued from early times: — growing according to McClelland in the Pegu valley (Mason v. 539).

Acacia elata of Burmah. A large tree, its timber from early times familiarly known: — observed by McClelland, described also by Graham (Mason v. 529).

Terminalia violata of Burmah. A Combretaceous tree called "lai-bwai" (Mason), its timber — useful, as in all the species known to Mason v. 533.

Conocarpus robustus of Burmah. A very large Combretaceous tree, its strong timber from early times familiarly known: — growing according to McClelland in Pegu (Mason v. 541).

Tectona ternifolia of Burmah. An inferior species of teak called "ta-hat," and from early times familiarly known: — growing "on the banks of the Irawaddy," described also by Buchanan (Mason v. 526).

is besides cultivated as a garden flower (Lenz). Is enumerated with the preceding by Christison, and Lindley, "among the most active of the poisonous species." (See Adonis æstivalis).

Anemone (Pulsatilla) pratensis of the plains of Northern Europe and Asia. The "aněmŏnē mĕlaina," included through Syn. Diosc. in the "atraktulis" of Pythagoras, — and described by Dioscorides as more acrid than the preceding and having black "phulla" petals, may be compared: P. pratensis was observed by Sestini as far South as Constantinople (Sibth.). Westward, is termed "p. flore minore nigricante" by Tournefort inst. 284; is known to grow in open situations in middle Europe as far as Denmark (fl. Dan. pl. 611, Vill., and Pers.): and is enumerated by Stoerk, and Lindley, among medicinal plants. (See Adonis autumnalis).

Anemone (Pulsatilla) vulgaris of the plains of Northern Europe and Asia. An allied species, possibly the "aněmŏnē mĕlaina" in question: — P. vulgaris was observed also by Sestini as far South as Constantinople (Sibth.); is known to grow also throughout Siberia as far as Daouria (Dec., and Steud.). Westward, is termed "p. folio crassiore et majore flore" by Tournefort inst. 284; is known to grow in open situations in middle Europe as far as Denmark (fl. Dan. pl. 153, Engl. bot. pl. 151). The root according to Lindley is so acrid that the operator requires protection in pulverising it.

Sinapis nigra of Europe and the adjoining portion of Asia. Called in Britain *mustard* (Lindl.), in France "moutarde" (Nugent), in Germany "senf," in Italy "senape" or "senapa" (Lenz); in which we recognize the "sinapi" whose penetrating power is commended by Pythagoras — (Plin. xx. 87): the "khardal" of Badigoras (Pythagoras), Maserjawia, and Rhazes, is distinguished by Ebn Baitar: S. nigra was observed by Sibthorp in the Peloponnesus and around Constantinople; but according to Clot-Bey and Figari has only recently been introduced into Egypt. Westward, the phrase "teritur sinapi" occurs in Plautus (Beda. orthogr.); the "sinape" or "sinapi" is mentioned also by Columella, and Palladius; by Pliny xix. 54 as growing wild, improved by being transplanted, difficult to exterminate where once sown, and one of three kinds "simile rapi foliis:" S. nigra is termed "s. rapi folio" by Tournefort inst. 227; was observed by Lenz in Italy under cultivation as well as wild; and is known to occur in waste and cultivated ground throughout middle Europe (Pers.). By European colonists, was carried to Northeast America, where it continues springing spontaneously in cultivated ground and around dwellings. The seeds according to Lindley are employed medicinally in different preparations, including their flour "in the form of a poultice" as a local irritant.

Sinapis alba of Europe and the adjoining portion of Asia. Called in Britain *white mustard* (Lindl.), in Germany "weisser senf," in Italy "senape bianca" (Lenz), in Greece "agriōvrouva" or "napi" or "sinapi" (Fraas); and possibly the "sinapi" of Pythagoras: — the phrase to look "napu" occurs in Aristophanes eq. 631; and the "napu" of Polemon diaet. ii. 25, the Hippocratic Affect. 40 and 1 Morb. mul. 30, and Theophrastus, identified by Dioscorides with the "sinĕpi" of Nicander and others, is referred here by Fraas: S. alba was observed by Sibthorp, Chaubard, and Fraas, frequent in the Peloponnesus both wild and in gardens; is enumerated by Clot-Bey and Figari as only recently introduced into Egypt. Westward, the "napu" is identified in Syn. Diosc. with the "sinapĕ" of the Romans; and one of the three kinds of "napy" or "sinapi" is described by Pliny xix. 54 as resembling the "erucae:" S. alba is termed "s. album siliqua hirsuta semine albo et rufo" by Tournefort inst. 227; was observed by Lenz wild in Italy; is cultivated and known to occur in waste ground throughout middle Europe (Pers.). By European colonists, was carried to Northeast America, where it continues under cultivation, and according to A. Gray has been found springing up spontaneously. The seeds "in their entire state" are according to Lindley a stimulating cathartic, and their flour is employed "in the composition of common *table mustard*."

Ruta Montana of the Mediterranean countries. A species of *wild rue* called in Greece "agriŏs pēganōs" (Fraas); in which we recognize the "ruta silvestris" of Pythagoras — (Plin. xx. 51), and "pēganōn agriōn" and "ōrĕinōn" of Dioscorides: the "ruta" distinguished from the "pēgana" by Cratinus (Athen.) may also be compared: R. montana was observed by Sibthorp, and Fraas, in mountainous dry situations in Asia Minor and Greece. Westward, the "pēganōn agriōn" and "ōrĕinōn" or "rutēn ōrĕinēn" is identified in Syn. Diosc. with the "rōuta mōntana" of the Romans; the account of the "ruta sylvestris" by Pliny seems in part taken from Dioscorides; but R. montana is described by Clusius hist. ii. p. 136, is termed "r. sylvestris minor" by Tournefort inst. 257, was observed by Desfontaines in Barbary, and is known to grow in Southern Europe as far as Switzerland (Thuill., and Pers.).

Ruta Patavina of the East Mediterranean countries. The kind of "ruta silvestris" distinguished as "marem" by Pythagoras, having smaller leaves herbaceous in colour or brighter green — (Plin. xx. 51), may be compared: R. Patavina was observed by Sibthorp on mount Parnassus; by Micheli n. g. xxii. pl. 19, near Padua in Italy (Pers.).

Ilex aquifolium of Europe and the Caucasian countries. Called in Britain *holly* or *holm* or *hollen*, in Anglo-Saxon "holen" or "holegn" (Prior), in France "houx" (Nugent), in Germany

"stechpalme," in Italy "alloro spinoso" or "agrifoglio" or "aquifolio" (Lenz), in Greece "lĕōpōurna" (Hawk); in which we recognize the "aquifolia" whose flower is said by Pythagoras to congeal water, — identified by Pliny xxiv. 72 and xxvii. 40 with the "crataegon" or "crataegona" of Theophrastus iii. 15. 6, who describes it as a tree not large and the only one of its kind, bearing round berries turning yellowish or blackish in ripening: I. aquifolium was observed by Hawkins, Sibthorp, Grisebach, and Fraas, around Constantinople and on the mountains of Greece; by Tchihatcheff, in Asia Minor, but has not been met with beyond Caucasus (Pallas, Ledeb., Bieb., and A. Dec.). Farther South, the "krataigōs" or "krataigŏn" was known to Athenaeus ii. 34 in Egypt. Westward, "vectes aquifolios" are mentioned by Cato; the "aquifolium" is described by Pliny xv. 29 and xvi. 38 as a tree bearing berries, its leaves prickly and not deciduous: I. aquifolium after the conversion of Britain was substituted in church ceremonies for the olive, and hence one of its English names *hulver* from the French "olivier" (Googe's Naogeorgus, and Prior); is termed "aquifolium sive agrifolium vulgo" by Tournefort inst. 600; is known to grow on the Alps and Pyrenees and throughout middle Europe as far as "Lat. 62° 15′" in Norway (fl. Dan. pl. 508, Gunner, and A. Dec.). By European colonists, was carried to Madeira (Webb). The bark according to Lindley affords *bird-lime*, is besides employed medicinally together with the leaves and root.

Anthriscus sylvestris of Europe and the adjoining portion of Asia. Called in Britain *wild cicely* or *cow parsley* or *cow weed* or *kecks* or *kecksies* or *kixes*, in a manuscript of the Fourteenth century "keiex," the "stemmes both of this herbe and hemlocke" used according to Lyte "for quills and caxes to winde yarne upon" (Prior): the "cicutam" of Pythagoras, — Horace, Ovid, Seneca, Persius, the stem eaten but seeds noxious according to Pliny xxiv. 101 to xxv. 95, may be compared: the "kikŏutam" of the Romans is mentioned also in Syn. Diosc. iv. 79; and a pandean pipe of seven "cicutis," by Virgil: A. sylvestris is described by Fuchsius p. 524 (Spreng.); is termed "ch. sylvestre perenne cicutæ folio" by Tournefort inst. 314; is distinguished as "magna ramosissima odore tetra" by Persoon; is known to grow wild on the mountains of Italy and Spain (Boiss., and A. Dec.), occurring besides in cultivated ground "a common weed" as far as Britain (Jacq. austr. pl. 149, Curt. lond. iv. pl. 24, Pers., and Lindl.). Eastward, was observed by Forskal, and Sibthorp, from the Peloponnesus to Constantinople; is known to occur as far as Caucasus (Lindl.); and was observed by Schimper among the mountains of Abyssinia. Is according to Lindley the "herba cicutariæ" of the shops, and is "reputed to be similar in its effects to hemlock only rather less narcotic." (See Caucalis daucoides).

Anthriscus vulgaris of Europe and the adjoining portion of Asia. Called in Britain *rough cicely* or *rough chervil* or *hemlock-chervil* (Prior); and possibly included with the preceding in the "cicutam" in question: — the "wudu ceruille" or "wudu cerfillu" of the Anglo-Saxon translation of Apuleius 86 may also be compared: A. vulgaris is termed "ch. sylvestre seminibus brevibus hirsutis" by Tournefort inst. 314; is known as "a common annual weed" on the borders of cultivated ground from Italy to Britain (Scop., All., Jacq. austr. pl. 154, Curt. lond. i. pl. 19, Pers., Steud., and Lindl.). Eastward, was observed by Sibthorp from the Peloponnesus to Cyprus; is known to occur also in the Crimea (Bieb., and Lindl.). The plant according to Lindley is "deleterious," and an instance of several persons poisoned by its being placed by mistake in soup is related by Burnett.

Mandragora officinalis of the Mediterranean and Tauro-Caspian countries. Called in Germany "alraun" (Grieb), in France "mandragore" (Nugent), in Italy "mandragora" (Lenz), in Greece "manthragŏura" (Sibth.), in Palestine "yabrochak" (Royle), in which we recognize the "manthragŏras" identified in Syn. Diosc. with the Egyptian "apĕmōun," the "ēmiōnōus" or "gōnōgĕŏnas" of the prophets, ΑΝΘΡΩΠΟΜΟΡΦΟΝ of Pythagoras, — and "thiamōnōn" or "arbinēn" of Zoroaster: the "manthragŏras" is mentioned by Euryphon 2 morb. 39, Alexis, Demosthenes 133. 1, Aristotle somn. 3, Apollodorus iii. 15, and Lucian tim., its root is prescribed in Locis in hom. 48, considered a love-charm according to Dioscorides, and Venus sometimes termed "manthragŏritēs" according to Hesychius: the "manthragŏras" is mentioned in the Septuagint translation of Gen. xxx. 14, confirmed by Josephus; the "ybrwhyn" in the Syriac translation, and the "ybruh" is mentioned by Abulfadli, Avicenna, and Ebn Baitar: M. officinalis continues known in Egypt from its imported root, enumerated by Forskal mat. med. as employed medicinally; was observed by Hasselquist, and Mariti ii. p. 195, growing in Palestine, its fruit edible "of the size and colour of a small apple, exceedingly ruddy, and of a most agreeable odour" (Royle in Kitt. bibl. cycl.); by Sibthorp, Chaubard, and Fraas, frequent from the Peloponnesus throughout the Greek islands, its fruit remaining during winter and the flowering of the succeeding Spring; is known to grow also in Siberia (Pers.). Westward, the "manthragŏras" or "kirkaian" is identified in Syn. Diosc. with the "mala tĕrrĕstria" or "mala canina" of the Romans; the "mandragora" is mentioned by Celsus v. 25, its fruit by Pliny xxv. 94 as sometimes eaten; and the "semihominis mandragorae" by Columella . . . : M. officinalis is described by Platearius f. 241 (Spreng.), Tragus 126, Lobel pl. 267, and Stapel), is termed "m. fructu rotundo" by Tournefort inst. 76; and is known to grow in Italy, Switzerland, and Spain (Pers.,

and Lenz). The English term *mandrake* comes from the fraudulent substitution of a different root cut into human shape (Brown pop. err. ii. 6, and Prior).

Pimpinella anisum of Central Asia. The imported seeds called in Britain *anise*, in France and Germany "anis" (Nugent, and Grieb), in Italy "granelli d' anice" (Lenz), in Greece "anisōn" or "glukanisōn" and the plant "glukanthēs" (Fraas), in Egypt "yansoun" (Del.); in which we recognize the ΑΝΙΣΟΝ commended by Pythagoras — (Plin. xx. 72), the Hippocratic writings, Evenor, Iollas, Dieuches, Dalion, Sosimenes, Heraclides, Tlepolemus, the best according to Dioscorides produced on Crete, and the next best in Egypt; the Egyptian kind is mentioned also by Columella xii. 51, and Pliny: P. anisum was observed by Delile, and Clot-Bey, under cultivation in Egypt; by Sibthorp, and Fraas, seldom cultivated in Greece, but springing up spontaneously in cultivated ground. Westward, the "anisōn" or "siōn" is identified in Syn. Diosc. with the "anisōum" of the Romans; and the "anisum" is mentioned by Celsus ii. 72, and Palladius: P. anisum is described by Matthioli ii. pl. 113; is termed "apium anisum dictum semine suaveolente" by Tournefort inst. 305; and is known to be sometimes cultivated as far as France (Pers., Targ-Tozz., and Lenz). Eastward from Syria, is called in Hindustanee "anisun" or "saunf," in Bengalee "jira," known to D'rozario as a kind of parsley; was not seen by Mason v. 496 in Burmah, though the seeds are "much used by the native" physicians; was observed by Kaempfer, and Thunberg, sparingly cultivated in Japan and called "kvajko," or usually "uikjo" or "koikjo" or "kureno ommo" or "seri nisi." By European colonists, was carried before 1669 to New England, where Josselyn found the seeds seldom ripening. "The official preparations" according to Pereira, and Lindley, are in frequent medicinal use.

Origanum majorana of Persia? Called in Britain *marjoram*, in medieval Latin "majorana" (Prior), in France "marjorlaine" (Nugent), in Germany "majoran," in Italy "maggiorana" or "amaraco" or "persa" or "samsuco" (Lenz), in Greece "masōuran" (Forsk.) or "mantziōurana" pronounced "manschurana" (Fraas), in Egypt and Yemen "mardakusj" or "mardakusch" (Forsk.); in which we recognize the "amarakōn" identified in Syn. Diosc. with the Egyptian "sōphō," the "muōurōn" of the Armenians, "ōnōs iĕrĕōs" or "ēkigōnōs isĕōs" of the prophets, and ΟΡΑΜΒΗΣ of Pythagoras: — the "amarakōs" is mentioned also by Pherecrates, Chaeremon, Eubulus, Antiphanes, Theophrastus, Nicander, Meleager, Dioscorides i. 68, and is identified by Diocles of Carystus with the "sampsōuhōn," produced according to Dioscorides iii. 41 of the best quality at Cyzicus and on Cyprus, and the next best in Egypt; "sampsuchum" is given as the Syrian and Egyptian name (Plin.); and the "naukratikē" wreath, mentioned by Anacreon, was according to Athenaeus of "sampsuhōs:" the "morsanjush" is mentioned by Avicenna: O. majorana was observed by Hasselquist, and Forskal, in the gardens of Egypt; by Forskal, under cultivation in Yemen; and by him, and Fraas, under cultivation in Greece as far as Constantinople. Westward, the "sampsuhōn" is mentioned as occurring in Sicily by Dioscorides; is identified in the added Synonyms with the "maizōurana" of the Romans; the "sampsucum" or "amaracus" is mentioned by Lucretius, Catullus, Virgil, Columella, and directions for its cultivation are given by Pliny xxi. 35: O. majorana is described by Morison iii. pl. 3; and is known to be cultivated from Italy and Portugal throughout middle Europe (Pers.; and Lenz). Eastward from Arabia, is called in Hindustanee "marzanjosh" or "marwa" or "nazbo" (D'roz.); and was observed by Graham "in gardens" in the environs of Bombay. By European colonists, was carried to Northeast America, where it continues well known in gardens.

Sideritis montana of the Mediterranean countries. A horehound-like plant called in Germany "gliedkraut" (Grieb): the "sithēritis" identified in Syn. Diosc. with the Egyptian "sĕnthiōnōr," the "gōnōn" or "aima titanōu" or "ōura skōrpiōu" of the prophets, ΓΑΡΜΙΡΟΝ of Pythagoras, — "vouphthalmōn" of Osthanes, and "xanthōphanĕa" of Andreas, may be compared: the "sithēritis" is described by Dioscorides as an herb a span or more high growing in stony places, its leaves "prasiō"-like but longer as in "ĕlĕlisphakōu" and "thruōs" as well as smaller and rough, stems quadrangular, not unpleasant to the taste and somewhat astringent, surrounded at intervals with whorled balls after the manner of "prasiōu" and containing black seeds, the leaves externally applied agglutinating wounds and arresting inflammation: S. montana was observed by Forskal, and Sibthorp, in stony places and on walls in Greece and Asia Minor as far as the Dardanelles and Smyrna. Westward, the "sithēritis" or "ĕraklĕian" is further identified in Syn. Diosc. with the "ōuthēthōni" of the Numidians, and "ōuĕrtōumnōum" or "sōlĕastrōum" of the Romans; but the account of the sideritin "quadrato caule" by Pliny xxv. 19 seems chiefly taken from Dioscorides: S. montana is termed "marrubiastrum sideritidis folio caliculis aculeatis flore flavo cum limbo atro-purpureo" by Tournefort inst. 190; is known to grow in Italy and Austria (Jacq. austr. v. pl. 434, and Pers.).

Atriplex hortensis of Tartary. Called in Britain *orach*, in old English "arach," by Galfridus pr. pm. "arage," in France "arroche" (Prior), in Germany "melde" (Grieb), in Italy "bietolone" or "spinacione" or "atriplice" (Lenz), in Greece "vlita" or "spanakia" (Fraas), in Egyptian "ŏhēi" (Syn. Diosc.); in which we recognize the "atriplex" condemned by Pythagoras — (Plin. xx. 83),

and J. Lydus mens. iv. 39; identified through Syn. Diosc. with the "atraphaxis" or "atraphaxun" or "anthraphaxis" of Pherecrates, Hippocrates, Diocles, Theophrastus, Lycus of Neapolis, Dionysius, Dioscorides, and Athenaeus ii. 57: A. hortensis was observed by Sibthorp, and Fraas, in cultivated ground in Greece and as far as Constantinople, rare; by Hasselquist, in gardens at Damietta; and is enumerated by Alpinus among the esculent plants of Egypt. Westward, the "atraphaxis" or "hrusōlahanōn" is identified directly in Syn. Diosc. with the "atriplĭkĕm" of the Romans; the "atriplex" is said by Solon Smyrnaeus to be cultivated with difficulty in Italy, incorrectly according to Pliny; is mentioned also by Columella x. 337, and Palladius: A. hortensis is described by Matthioli i. pl. 417, and C. Bauhin pin. 119; is termed "a. hortensis alba sive pallide virens" by Tournefort inst. 505; was observed by Lenz cultivated here and there in Italy; and according to Loudon, is cultivated to considerable extent in the neighborhood of Paris. Eastward from Syria, was observed by Lush, and Nimmo, under cultivation "as a spinage" in Bombay and on the Deccan (Graham), but no native name is given. By European colonists, was carried to Northeast America, where it was observed by Pursh, and myself, springing up in cultivated ground in our Northern and Middle States, but may have disappeared, being according to A. Gray "rarely cultivated as a pot-herb."

Pedalium murex of the seashore of Eastern Africa and Hindustan. A prostrate herb called in Telinga "yea-nugapulleroo;" in Tamil "ana-neringie," in Malabar "kaka-mooloo," in Hindustanee "burra-ghokeroo" (Drur.); and the "coracesia" and "callicia" said by the Magians and Pythagoras "aquam glaciari".— (Plin. xxiv. 99) may be compared: P. murex was observed by Rheede x. pl. 72 in Malabar; by Graham, as far as Bombay, "the fresh leaves have the property of thickening water and rendering it mucilaginous;" by N. L. Burmann pl. 45, Ainslie, Roxburgh, and Drury, "common about Cape Comorin on the sea-shores" and as far as the "shores of Coromandel," its leafy stems thickening butter-milk, and its seeds used as diuretic in dropsy.

Gmelina parviflora of Southern Hindustan. A woody Verbenaceous plant, possibly included with the preceding: — observed by Roxburgh cor. pl. 32 in Coromandel, its leaves like those of P. murex having the power of rendering water mucilaginous (Pers., and Drur.).

"529 B. C." (Euseb., and Clint.), "Thirteenth" change in naval dominion. Leaving the Phocaeans, the "Empire" over at least the East Mediterranean waters, acquired by the Samian Greeks under Polycrates.

"The same year" (= 538 — "9 years" of Alex. Polyhistor in Euseb., see Clint. i. p. 258 and ii. p. 12), Cyrus slain in battle on the "plain of Dahar." His tomb (visited by Alexander, and described by Strabo, and Arrian) is extant near Murghab (Lubke and Lutrow). He was succeeded by Cambyses, second Persian emperor.

A hieroglyphic inscription on the rock on the Kosser road, in which the chief architect traces his lineal ancestors as far back as the "Twenty-fourth" generation, to an ancestral mother Nofratnue; "at a rough calculation about the end of the Nineteenth dynasty" (Leps. eg. and sin. 458).

"527 B. C." (. . . . Clint. app. 2), Pisistratus succeeded by his eldest son Hippias, now with his brother Hipparchus joint rulers of Athens.

The same year = "44th year of Aahmas II.;" the latest date in his reign found on the monuments (C. Mull. fr. Man. p. 594).

Momordica (*Ecbalium*) *elaterium* of the Mediterranean countries. The imported drug is called in Britain *elaterium* (Lindl), the plant in gardens *spurting cucumber*, in Germany "springgurke" (Grieb), in France "concombre élastique" (Fée), in Italy "elaterio" or "cocomero asinino" (Lenz), in Greece "pikra aggoura" (Forsk.) or "agriagkŏuria" (Sibth.), in Egypt "katte el homar" (Forsk.): an instance of "ĕlatērĭōn" from the "sikuōs agriōs" — lasting two hundred years, was known to Theophrastus ix. 14. 1 to 15. 6; "ĕlatērĭōn" is mentioned also by Aeschylus choeph. 962, Hippocrates; the "sikuōs agrōtĕrōs," by Nicander ther. 867; and "sikuōs agriōs" growing about dwellings and in sandy situations, by Dioscorides: M. elaterium was observed by Forskal, Sibthorp, Chaubard, and Fraas, frequent among rubbish from the Peloponnesus throughout the Greek islands to Constantinople; by Forskal mat. med., its fruit imported from Syria and Sinai into Egypt, the plant itself was received from Egypt by Linnæus. Westward, the "sikus agriōs" or "ĕlatērĭōn" or "valis" or "vōuvaliōn" is identified in Syn. Diosc. with the "kōusimĕzar" of the Numidians, and "kōukōumĕrĕm rōustikōum" or "agrĕstĕm" of the Romans; "elaterium" from the "cucumin silvestrem" is mentioned by Pliny xx. 2: M. elaterium is termed "c. s. asininus dictus" by Tournefort inst. 104; was observed by Forskal near Marseilles; and is known to grow wild in Italy and other parts of Southern Europe (Pers., and Lenz). The extract according to Lindley is "a violent cathartic and hydragogue."

"526 B. C." (Clint. i. p. 236), Amŏsis II. succeeded by Psammĕhĕritēs or Psammēnitŏs, ninth king of the Twenty-sixth dynasty. Who reigned "six months" only (according to the Afr.-Maneth. table, and Herodotus iii. 14). The name of Psametik III. occurs at Karnak, and on a moveable article — now in Rome (Glid. analect.).

"525 B. C." (Clint. = "5th year of Cambyses," Maneth.), invasion of Egypt by the Persians under Cambyses, aided on their march by the galleys of Polycrates. Obtaining possession, Cambyses became the head of a new Egyptian dynasty, the "Twenty-seventh." Hieroglyphic ovals containing the name of Kambatet occur on the Kosser road, and on moveable articles (now in Cairo, and others in Rome, Glid. analect.).

At Thebes, Cambyses split in twain one of the colossal statues of Amenatep III. — This statue afterwards became the "vocal memnon," and when visited by Pausanias i. 42. 3, the upper half remained, lying neglected on the ground.

"In the time of Hipparchus" (Plut. vitios. pud., and Sm. b. d.), Xenophanes of Colophon maintaining the unity of the Deity, without beginning without end, the animating power of the universe, seeing everything, hearing everything, understanding everything, unlike man in mind and person, and who cannot be known. He denounced the imputing human passions and weaknesses in the poetical myths of Homer and Hesiod, and is quoted as the founder of *Eleatic philosophy*. He mentions Pythagoras, and the founding of the city of Elea or Velia, — and is mentioned by Heracleitus, and Epicharmus (D. Laert., and Sm. biogr. dict.).

He also maintained, that the land had risen out of the sea: shells occurring inland and in mountains; relics of fishes and seals in the quarries at Syracuse; an ΑΦΥΑ, *herring*, imbedded in rock on Paros; crusts of all marine productions on Mĕlitŏ; and when the land sinking shall change back again into mud, mankind will perish, and a new creation will succeed (Orig. Philos. iv.). Perhaps the earliest *geological observations* on record.

The star-like "thiōskōurōus," *electric lights* on the rigging of ships during storms, are attributed to the same cause as lightning by Xenophanes — (Stob. i. 25, Plut. plac. phil. ii. 18, and Galen xiii); are mentioned also by L. Seneca nat. i., and Pliny; and in the days of Columbus, were termed by Mediterranean sailors "the body of St. Elmo" (F. Columb. 46).

Cerasus avium of Europe, and as far as Caucasus. The *sour cherry* is called in Britain *mazzard* from the medieval Latin "manzar," explained by Galfridus pr. pm. as "spurius, pelignus" (Prior), in France "bigarreaux" (Pers.), in Greece "kĕrasia" (Fraas); in which we recognize the ΚΕΡΑΣΟΝ of Xenophanes — (Poll. vi. 46), Democritus (geopon. iv. 7), and Diphilus Siphnius; mentioned by Theophrastus iii. 13. 1 as a tree twenty-four cubits high, and distinguished as sour-fruited by Galen fac. simpl. vii. p. 22: C. avium was observed by Sibthorp, Chaubard, and Fraas, wild in the mountain woods of Greece; is known to grow also on Caucasus (Ledeb. ii. p. 6). Westward, a beam of "cerasus" forty cubits long by two in diameter throughout, is mentioned by Pliny xvi. 54: P. avium occurs in seeds in the debris of early lake-villages of Switzerland; is described by Bauhin, and Blackwell pl. 425 (Pers.); is known to grow wild in middle Europe (A. Dec.), is besides very generally cultivated. By European colonists, was carried to Northeast America, where it is cultivated indiscriminately with C. cerasus; and to the Mauritius Islands, where it was not seen flowering by Bojer.

524 B. C. = "6th year of Kambatet" or Cambyses on the rocks at Hammamat; the latest date in his reign found on the Egyptian monuments (C. Mull. fr. Man. p. 596, and Birch). In or "about this year" (Clint. i. p. 236, see also Herodot. iv. 165), submission to Cambyses of Arcesilaus III., sixth Greek king of Cyrenĕ.

"523, Wednesday July 16th, one hour before midnight" (as reduced by Ptolemy to the meridian of Alexandria, Blair), Fifth Babylonian *eclipse of the moon*; "above six digits eclipsed on the North part of her disk."

"522 B. C." (. . . . Blair, and Clint.), Polycrates king of Samos put to death by Oroetes, the Persian prefect of Sardis. Anacreon by invitation of Hipparchus now left Samos to reside in Athens (Plat. hipparch. p. 228, and Sm. b. d.).

Smyrnium olus-atrum of Europe and the adjoining portion of Asia. Called in Britain *alisanders* or *horse-parsley*, in France "grande ache" or "ache large" (Prior), in Italy "macerone" or "smirnio" (Lenz), in Greece "skulōsĕlinŏn" or "maurōsĕlinŏn" (Fraas) or "agriōsĕlinŏn" (Sibth.); in which we recognize the "agriōsĕlinŏn" identified through Syn. Diosc. with the ΚΟΨΕΙΟΝ or ΣΜΥΡΝΕΙΟΝ of Anacreon — (schol. Nic. ther. 596), and "ippōsĕlinŏn" of Pherecrates, Aristotle probl. xx. 7, Theophrastus vii. 6. 3, eaten as a potherb according to Dioscorides, also the root either crude or cooked: known to Athenaeus in Egypt, and mentioned as occurring there by Apuleius Barbarus: S. olus-atrum was observed by Sibthorp, Chaubard, and Fraas, from the Peloponnesus to Cyprus and the shore of Caria in Asia Minor. Westward, the "ippōsĕlinŏn" is identified in Syn. Diosc., as well as by Pliny, with the "ōlŏus atrŏum" of the Romans; the "atrum olus" is mentioned by Plautus pseudol. iii. 2, Columella xii. 58, and as a cultivated plant by Pliny xix. 48: S. olus-atrum according to Beckmann was generally cultivated throughout Europe until superseded by celery "about the end of the Seventeenth century;" is described by Fuchsius p. 327; is termed "s. Matthioli" by Tournefort inst. 316; was observed by Lenz wild in Italy; and is known to grow to all appear-

ance wild from Spain to Britain (Pers., Bromf., and A. Dec.). Its fruit according to Lindley "is carminative and used to be officinal."

Asplenium trichomanes of Northern climates. Called in Britain *bristle fern* (Prior), in Italy "tricomane" (Lenz), in Greece "pōlutrihi" (Sibth.); in which we recognize the "trihōmanēs" identified by Galen with the "kallitrihōn," and the latter by Scarlatos with the ΚΑΛΛΙΦΥΛΛΟΝ of Anacreon, — prescribed in potion in 7 Popular. 81: the "trihōmanēs" is described by Theophrastus vii. 14 as having a stem like that of "athiantōn mĕlan" and numerous small leaves opposite each other; by Dioscorides, as resembling "ptĕrithi," small and smooth, with thin lentil-like leaves on blackish stems: A. trichomanes was observed by Sibthorp, Chaubard, and Fraas, frequent on shaded walls and rocks from the Peloponnesus throughout Greece; by Forskal, on mountain-summits in Tropical Arabia. Westward, the "trihōmanēs" or "ptĕriōn" or "ōptĕrŏn" is identified in Syn. Diosc. with the "kapillarĕm" or "pinōulam" or "philiklam" of the Romans; the "trichomanes" is described by Pliny xxvii. 111 as resembling "adianto" but smaller and blacker: A. trichomanes is termed "trichomanes sive polytrichum officinarum" by Tournefort inst. 539, and is known to grow in Italy and throughout Europe (Engl. bot. pl. 576, and Lenz). Farther West is known to grow on Madeira (coll. sicc.); was observed by myself in clefts of rocks in our Atlantic States from Lat. 43° to 40°; by Nuttall, along the Arkansas; and is known to grow on the Alleganies to their Southern termination (Chapm.).

"521 B. C." (= 529 — "7 y. 5 mo. — 7 months" of Herodot., Clint. i. p. 258 and ii. p. 16), Cambyses succeeded by Darius, third Persian emperor. Hieroglyphic ovals containing the name of Ntarius occur at Edfu (Leps. eg. and sin. 117), also on rocks on the Kosser road, on temples in the Oasis el Khargeh and Oasis of Ammon; and (according to Glid. analect.) on papyri in the Demotic character.

"The same year" (according to Blair) "is counted the 227th and 228th year of Nabonassar, as one began January 1st, the other December 31st."

520 (= 519 y. $138\frac{459}{360}$ d. = 587 y. $107\frac{240}{360}$ d. — 70 years of twelve lunations), end of the "threescore and ten years" of 2 Chron. xxxvi. 21; "in the second year of Darius" (according to Haggai i. 1, Zechariah i. 1 to 16, and Ezra iv. 24), — Zechariah vii. 1 to 5, speaking at Jerusalem in the "fourth" year of Darius, alludes to the completion of the period.

"519 B. C. = 1st year of Keng-wang, of the Tcheou" or Fifth dynasty (Chinese chron. table).

518 B. C. = "4th year of his reign," Darius in Egypt offering a premium for the discovery of a new Apis or sacred bull — (Birch).

"April 9th." On the "1st day of the Fifth month in the 2d year of Khing-wang" (Khoung-tseu, Gaubil, and Pauth. p. 108), *eclipse of the sun*.

In this year (= 550 — "32 years" of the Mahavamsi i. p. 29), end of the reign of Ajatasatru. His successor is called Udayibhadra — in the Asoka avadana (Burnouf introd. 358).

516 B. C. = "6th year of the reign of Darius," Ezr. vi. 15), completion of the new temple at Jerusalem. Described by Haggai ii. 3 as an inferior building, in the eyes of those who had seen the first temple, "in comparison of it as nothing."

Hardly earlier than this date (Graha Munjari tables, Puranas, and Bentl.), Tapomurti reigning in Hindustan.

Desmodium triflorum of Tropical Asia. A procumbent diffuse trifoliate plant having no Sanscrit name (Roxb., and Pidd.), but called in Hindustanee "kodaliya," in Bengalee "koodaliya," in Telinga "moonoodna-mooddoo" (Drur.); from early times supplying feed for cattle: — observed by Graham "common in the rains" in the environs of Bombay; by Wight, and Drury, "springing up in all soils and situations" in peninsular Hindustan, the fresh plant applied by the natives "to abscesses and wounds that do not heal well;" by Burmann pl. 54, on Ceylon; by Roxburgh, as far as Bengal; by Mason v. 478 to 767, indigenous in Burmah and the most valuable plant in the country for feeding cattle, being "a good substitute for clover and lucerne;" is known to grow also in China (Pers.), and as far even as Timor (Decaisne). Westward from Hindustan, possibly by Hindu or Arab colonists was carried to Zanzibar, observed by myself seemingly wild there; is known to grow also in Guinea (fl. Nigr.). Probably by European colonists was carried to the Mauritius Islands, observed there by Bojer; to the West Indies, for it is not mentioned by early writers though now well-known there (Swartz obs. pl. 6, Macfad., and A. Dec.), as also in Guayana (Pers.) and Mexico as far as Acapulco (Benth. bot. sulph.).*

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* *Smithia sensitiva* of Tropical Hindustan and Burmah. A small decumbent pinnate-leaved annual, also from early times supplying feed for cattle: — observed by Graham "common in Bombay towards the close of the rains;" by Rheede ix. pl. 38, in Malabar; by Wight, in other parts of peninsular Hindustan; by Mason v. 478, in Tavoy, said to make "excellent hay."

"514, July or August" (. . . . Clint.), at the time of the Panathenaia Magna, Hipparchus son of Pisistratus and ruler of Athens slain by conspirators.

"513 B. C." (Euseb., and Clint.), Fourteenth change in naval dominion. Leaving the Samians, the "Empire" over the Eastern waters of the Mediterranean acquired by the Spartans. — Held by them "two" years.

"511 B. C." (Diodor., and Clint. i. p. 174), in Southern Italy, the city of Sybaris destroyed by the inhabitants of Crotona, led by Milo the wrestler.

"The same year" (= 513 — "2 years" of Diodorus in Euseb.), Fifteenth change in naval dominion. Leaving the Spartans, the "Empire" over the Eastern waters of the Mediterranean acquired by the Naxian Greeks.

"Nov. 14." On the "first day of the Twelfth month in the 9th year of Khing-wang (Khoung-tseu, Gaubil, and Pauth. 108), *eclipse of the sun.*

"510 B. C.," and in the reign of Amyntas, ninth king of Macedonia (Herodot.; Dexipp, Euseb., and Clint.), the dynasty of the Pisistratidæ expelled from Athens.

"509, Feb. 24th" (Blair), Tarquinius Superbus and family expelled from Rome, and government by consuls instituted. Shortly afterwards, the Romans subdued by Porsena lars or king of the Etruscans; a sceptre, golden crown, ivory throne, and triumphal robe, sent him by the senate, and the Romans prohibited by treaty from using *iron* for any other purpose but agriculture (Virg. aen. viii. 646, Tacit. iii. 72, Dionys. v. 34, and Plin. xxxiv. 39). — The Etruscan domination lasted only about three years, and was checked at Aricia by the united forces of Latium and the Greeks of Cumae (Liv. ii. 15, and Dionys. vii. 5). To the Etruscan period are assigned by universal tradition the great architectural works in Rome of the Cloaca Maxima and the Capitol (Sm. geogr. dict.).

"The same year" (Sm. b. d., and C. Mull. geogr. min. i. 20), first treaty between the Romans and Carthaginians.

"508 B. C." About this time (Wesseling, and Clint. ii. p. 379), Darius crossing the Danube on his Scythian expedition. During "more than sixty days" that he continued North of the river, he appears to have reached central Europe.

The Paeonians of Lake Prasias, near the border of Macedonia, escaped the dominion of the Persians in consequence of having their village on piles or posts at a distance from the shore, communicating only by a narrow bridge (agreeing therefore with the lake-villages of ancient Switzerland). Within the village, polygamy was in vogue; young children were tied by the foot to prevent their falling overboard; and in the absence of hay, horses and beasts of burden were fed on fish (Herodot. v. 16, and Troyon p. 206). — In Norway and along the colder portion of the European coast, according to Thorm. Torffaeus, cattle are fed on fish: I have seen a horse eat raw fresh-water fish here in New England.

"507 B. C." (. . . . Sm. b. d.), P. Valerius Popticola and M. Horatius Pulvillus consuls at Rome, and dedication by the latter of the temple on the Capitol.

"506 B. C." (. . . . Sm. b. d.), after the return of Darius, Megabazus was left in charge of the countries West of the Bosphorus, and a saying of his in praise of the site of Byzantium has been preserved (Herodot. iv. 144). He sent to Amyntas the Macedonian king a demand for earth and water in token of submission; in complying a difficulty arose in which the Persian envoys were slain, and Megabazus was pacified by receiving in marriage Gygaea daughter of Amyntas.

The conquests of Darius extending to or including a portion of Hindustan; at least, a satrap or local governor was appointed (Herodot.).

Zoroaster, according to the Zend Avesta, lived in the reign of Vitaçpa (Gushtap of the Persians or Darius Hytaspis): and Zoroaster of Proconnesus (according to Pliny xxx. 2) "paulo ante" a little before — Osthanes and the invasion of Greece by Xerxes.

Lactuca virosa of Europe and the adjoining portion of Asia. A species of *wild lettuce* called in Italy "lattuga selvatica" or "lattuga velenosa" or "scariola" (Lenz), in the environs of Constantinople "galatzitha" (Forsk.), in Egypt "libbeyn" (Del.), in Egyptian "lobonsos" (Apulei. 31); in

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Ulmus integrifolia of districts more or less mountainous in Hindustan and Burmah. The *Indian elm* is called in Telinga "naulie" (Drur.), in the environs of Bombay "woula" or "keul" or "papura" (Graham); and from early times one of the trees selected to keep straw and unthrashed grain in the forks of the branches, out of the way of cattle: U. integrifolia was observed by Law in the Southern Mahratta country, by Auld in the Kandesh jungles, by Nimmo, and Graham, in the environs of Bombay, the leaves "deciduous in October" and the wood used for "the same purposes as that of" the English elm, for "carts, door frames, etc.;" was observed by Buchanan on the ghauts near Arcot; by Roxburgh cor. i pl. 78, on the Circar mountains (Pers.); is known to grow on the foot of the Himalaya (Drur.); and was observed by McClelland in the Prome district of Burmah (see U. alternifolia).

which we recognize the "laktōuka sulvĕstris" of the Romans identified in Syn. Diosc. with the "aima titanōu" of the prophets, ΦΕΡΟΥΜΒΡΟΣ of Zoroaster, — and "agria thrithax" described by Dioscorides as bitter to the taste, with juice having similar properties and sometimes mixed with that of the poppy: L. virosa was observed by Sestini near Constantinople (Sibth.); by Forskal p. 215, at the Dardanelles and near Alexandria in Egypt; and by Delile, near Cairo. Westward, "lactucae atrae" abounding in milk "meconis vocatur a copia lactis soporiferi" is mentioned by Pliny xix. 38 as the only kind known to the ancient Italians, and hence the name "lactucae:" L. virosa is described by Lobel, and Dalechamp p. 528 (Spreng.); is termed "l. sylvestris odore viroso" by Tournefort inst. 473, was observed by Forskal near Marseilles; and is known to grow along walls and hedges as far as Britain (Engl. bot. pl. 1957, and Pers.). Its inspissated "milky juice" according to Lindley "has been used as a substitute for opium." (See L. scariola).

Lactuca coriacea of the East Mediterranean countries. Called in Greece "agria marōulia" (Fraas); and possibly the "phĕrōumvrōs" of Zoroaster: — the thrithakinē agria" growing according to Theophrastus vii. 2. 8 to 6. 2 in cultivated ground, lower and more branchy than garden lettuce, leaves shorter and at length becoming prickly, and its acrid juice collected and used medicinally, termed "lahanōn agriōn" a wild esculent by Galen alim. fac. ii. 40, is referred here by Fraas: L. coriacea, described by Schultz bip., was observed by Fraas frequent in low cultivated ground in Attica and the Peloponnesus.

Citrullus colocynthis of the African and Arabian Desert, and as far as Hindustan. The *colocynth* is called in Egypt and Yemen "hamdal," or sometimes in Yemen "dahak" (Forsk.), in Nubia "horky" (Del.); and the "kōlōkunthis" is identified in Syn. Diosc. with the ΘΥΜΒΡΗ of Zoroaster, —and "autōgĕnĕs" of Osthanes; the "kōlōkunthis" or "kōlōkinthis" is prescribed in 1 Morb. mul. 108, is mentioned also by Aristotle probl. xx. 14, Rufus Ephesius, Galen, Marcellus, and the plant is distinctly described by Dioscorides. Westward, the "kōlōkunthis" or "sikuan pikran" is further identified in Syn. Diosc. with the "tōntastra" of the Dacians, and "kōurkōurvita silvatika" of the Romans; the "colocynthis" is mentioned by Pliny xx. 8, but in these countries as well as in Greece seems to have been known only from the imported fruit. Farther South, the "kōlōkuntha alĕxanthrinē" is mentioned in Syn. Diosc.; the "hantsal," by Ebn Baitar: C. colocynthis is mentioned by Mesue, and other Arab writers (F. Adams); was observed by Forskal in the environs of Cairo, growing in the Desert, by Delile in Upper Egypt, and by Forskal in Yemen; is known to grow as far even as Austral Africa (Pers.), where the seeds according to Drury "constitute an important article of food." Eastward, is called in the environs of Bombay "indrayan" (Graham), in Bengalee "makhal," in Telinga "putsa-kaya," in Tamil "paycoomuti" or "varriecoomuttie" (Drury); was observed by Gibson "in great abundance on the sea shores of Guzerat," by Graham "on the plains of the Deccan" and "common in Salsette jungles," and according to Vaupell "there is a sweet variety which is edible and cultivated" (probably the same seen by myself wild on the Deccan, with deeply-lobulated leaves, and globular variegated fruit which in the unripe state was not bitter).

Citrullus pseudo-colocynthis of the plains of Northern Hindustan. Given as a distinct species, —but called "indrayun" or "bisloombha;" the fruit "oblong," marked "with eight broad stripes," its "flesh very bitter" and substituted "for the true colocynth" (Royle ill. pl. 47. f. 2, and Lindl.).

Verbena supina of Central Asia? Perhaps the species called in Arabic at Lahore "ikmubaran" (Honigb. 419, and J. F. Wats. index). The "pĕristĕrĕōna uptiōn" of Zoroaster.—(geopon. xv. 1), the Hippocratic steril. 13, Nicander ther. 860, Dioscorides, Galen, Aetius viii. 15, and Paulus Aegineta, is referred here by Sprengel: the "peristereona" was celebrated among the Magians (Plin. xxv. 59); the name derived according to Cratevas from its leaves incised after the manner of a dove's foot (schol. Nicand. ther.): the "pĕristĕrĕōn uptiōs" is identified in Syn. Diosc. with the "ĕrusiskĕptrōn" of Pythagoras, and "pĕmphthĕmphtham" of the Egyptians; and the "ikmubaran" is mentioned by Maserjawia, and Ebn Baitar: V. supina was observed by Sibthorp near Smyrna and elsewhere in Asia Minor, in depressed situations subject to inundation; by Forskal, Delile, and myself, in Lower Egypt. Westward, is described by Dodoens p. 150, and Lobel . . .; is termed "v. tenuifolia" by Tournefort inst. 200; and is known to occur in Spain (Pers.; see V. officinalis, and Prasium majus).

Bombax (*Salmalia*) *Malabaricum* of Tropical Hindustan and Burmah. The *red-flowered cotton-tree* is called in the environs of Bombay "saur" (Graham); and the "pembeh" of the Zend Avesta —is according to Ritter 9 a tree bearing cotton: wool-bearing trees were seen by Androsthenes on Tyle, their leaves like those of the vine, and fruit as large as quinces containing wool of which cloth is woven (Theophr. iv. 7. 7, and Plin. xii. 21): S. Malabarica was observed by Rheede iii. pl. 52 in Malabar; by Law, and Graham, in the environs of Bombay, "a very large tree," its "leaves digitate, deciduous in the" cool season and succeeded by large red flowers very conspicuous in the forest, as witnessed by myself on the Ghaut; was observed by Gibson as far as Guzerat; by Roxburgh cor. iii. pl. 247 in other parts of Hindustan, and is termed by him "b. heptaphyllum." Farther East, was

observed by Mason v. 487 to 520 "one of the most abundant forest-trees" in Burmah, the silky down around the seeds "used to stuff mattresses and pillows" and "has occasionally been made into cloth."

Cochlospermum gossypium of Tropical Hindustan and Burmah. The *yellow-flowered cotton-tree* is called in Tamil "tanakoo-marum," in Telinga "conda gongu-chettu" (Drur.); and possibly the tree in question; — agreeing better in the shape of the leaf with the wool-bearing trees seen by Androsthenes: C. gossypium is termed "bombax gossypium" by Roxburgh, "b. grandiflorum" by Sonnerat voy. ii. pl. 133; was observed by Gibson in the Sautpoora jungles, by Auld in Candesh, by Graham "a large tree" wild on "chains of hills running inland from the Ghauts," also planted "in gardens," the capsule large as "goose's egg" and "filled with cotton;" by Roxburgh, Royle, Wight, and Drury, not uncommon in Southern Hindustan as far as Travancore and Coromandel, the trunk yielding *kuteera*, a gum substituted for tragacanth in Northwestern Bengal; is known to grow also on Ceylon (Lindl.). Farther East, was observed by Mason v. 520 in Burmah, its "down" used by the natives according to McClelland for stuffing "their pillows."

"504 B. C." (. . . . Sm. b. d.), P. Valerius Poplicola and T. Lucretius Tricipitinus consuls, removal of Appius Claudius from the Sabine city of Regillum to Rome. He was received by the patricians, and lands assigned to his numerous followers; and was the first (according to Pliny xxxv. 3) who set up tablets or portraits of his ancestors in a public temple, that to Bellona.

Hardly later than this date, Hecataeus of Miletus visiting Egypt. — He is mentioned by Heraclitus (Sm. b. d.), and endeavoured to dissuade his countrymen from the proposed Ionian revolt. In his geographical work (written "after 524," Sm. b. d.) he mentions in the West, the city of "Mĕlitta" outside the Mediterranean on the Atlantic coast of Africa; and in the East, various people of Hindustan, the "Kallatiari" (named also by Herodotus), "Opiari, Gandarari," and the city of "Kaspapyrus" (C. Mull. geogr. m. i. p. xxiii).

Inula viscosa of the Mediterranean countries. Called in Greece "psullistra" or "kōnutza" (Sibth.), in Egyptian "kĕti" (Syn. Diosc.); in which we recognize the KONYΣA of Hecataeus, — Pherecrates, Aristotle h. a. iv. 8, Theophrastus, and "kōnuza mĕizŏn" two cubits high according to Dioscorides and strong-scented, strewn to drive away venomous animals including insects, and the juice inducing abortion; identified in the added Synonyms with the "vrĕphuktōnōs" or "anōuvias" or "ĕthĕmias" of the prophets: I. viscosa was observed by Sibthorp, Chaubard, and Fraas, abounding from the Peloponnesus throughout Greek islands; and is known to grow as far as Jerusalem (. . . .). Westward, the "kōnuza mĕgalē" is identified in Syn. Diosc. with the "intuvōum" or "militaris mina" or "thĕlliariōn" or "phĕvriphōuga" of the Romans: I. viscosa is described by Clusius rar. p. 377 (Spreng.); is termed "virga aurea major foliis glutinosis et graveolentibus" by Tournefort inst. 484; was observed by Boccone xiv. pl. 7 in Sicily; is known to grow also in Barbary and Southern France (Lam. fl. fr.; and Pers.).

Inula (*Alunia*) *graveolens* of the Mediterranean countries. Called in Greece "psullistra" (Sibth.), or "vrŏmitza" (Fraas); and possibly included in the "kōnuza" of Hecataeus: — the "kōnuza thēlu" smaller according to Theophrastus vi. 2. 6, humble "kōnuza" of Nicander ther. 70, and "kōnuza mikra" only a foot high of Dioscorides, are referred here by writers: A. graveolens was observed by Sibthorp, Chaubard, and Fraas, frequent from the Peloponnesus throughout the Greek islands to Asia Minor; is known to grow also on the Mediterranean border of Egypt near Alexandria (Dec.). Westward, is described by Lobel adv. p. 146 (Spreng.); is termed "virga aurea minor foliis glutinosis et graveolentibus" by Tournefort inst. 484; and is known to grow near Montpelier and in other parts of Southern Europe (Pers., and Lenz).

The same year (= "69th. ol." of schol. Pind. rem. ii. 1), Cinaethus: supposed by ancient writers to be the blind poet of Chios who composed the Hymn to the Delian Apollo. This hymn contains perhaps no descriptive expressions derived through the sense of sight, and is quoted and considered ancient by Thucydides: but the *date-palm* on Delos found by Homer od. vi. 165 young and flourishing, is in this Hymn old enough for Apollo to have been born underneath; — this date-palm continued standing in the days of Euripides hec. 457 and iph. 1100, Callimachus hymn Del., and of Cicero leg. i. 1; but disappeared before the time of Pausanias viii. 48, and Athenaeus.

"502 B. C." (Euseb., and Clint.), Sixteenth change in naval dominion. Leaving the Naxians, the "Empire" over the Eastern waters of the Mediterranean acquired by the Eretrian Greeks.

"Nov. 19th, Monday, twenty-four minutes before midnight" (as reduced by Ptolemy to the meridian of Alexandria, Blair), Sixth Baylonian *eclipse of the moon*; "three digits eclipsed on the South part of her disk."

In this year (= 518 — "16 years reign" of the Mahavamsi iv.), Udayibhadra succeeded by his son Anurudde, now Hindu king.

"501 B. C." (. . . . Sm. b. d.), at Rome, Postumus Cominius Auruncus and T. Lartius consuls, the dictatorship instituted; and T. Lartius (of Etruscan descent) appointed dictator.

One hundred and fourteenth generation. Jan. 1st, 500, mostly beyond youth: queen Esther (Munk. p. 471): the Greek poets, Timocreon of Rhodes, Praxilla, and Cleobuline; the comic poets, Phormis, Dinolochus, Euetes, Euxenides, Mylus, and Magnes; the tragic poet, Phrynichus; the philosophers, Heracleitus, and Parmenides; the historians, Dionysius of Miletus, Charon of Lampsacus, and Hippys of Rhegium; the sculptors, Ptolichus, and Calamis.

In this year (= "70th olymp." of Suidas . . . .) at Athens, *satyric drama* invented and first exhibited by Pratinas.

"In or about this year" (Leps. eg. and sin. 442), the canal from the Nile to the Bitter Lakes, extended to the Red Sea by Darius, and the connexion first completed. The canal is represented by Lepsius as narrow and not intended for large ships: but the Persian ruins near Suez with *cuneiform inscriptions* and the name and statue of Darius, are described as all in "red granite;" a material that probably came through the canal from Syene. The signet ring of Darius, containing "his name and title in cuneiform characters in three languages, Persian, Median, and Babylonian" — has been found at Suez (Birch).

"499 B. C." (Clint. . . .), revolt of the Ionians; who after burning the city of Sardis, were pursued and defeated near Ephesus. The Athenians now withdrew from the confederacy (Herodot. v. 99 to 102). The affair — led eventually to the invasion of Greece by the Persians.

Mago the Carthaginian military commander and agricultural writer, from being termed the father of Agriculture (Columell. i. p. 13) seems to have at least preceded Democritus. (See Plin. xviii. 5).

Cladium mariscus of Europe and the adjoining portion of Asia. Called in Britain *twig rush*, from its tough twiggy branching growth (Prior); and the "junco" called by Mago "mariscon," to be cut for weaving mats from June to the middle of July — (Plin. xxi. 69), is referred here by writers: C. mariscus is described by Valerius Cordus (Spreng.), and Morison viii. pl. 11; is termed "scirpus palustris altissimus foliis et carina serratis" by Tournefort inst. 528; is known to grow throughout middle Europe as far as Sweden (flor. Suec. p. 35, Engl. bot. pl. 950, and Pers.). Eastward, was observed by Sibthorp, and Chaubard, in the marshes of Southern Greece. (Compare Juncus spinosus).

Juncus acutus of the seashore along the Mediterranean and North Atlantic. A species of *rush* called in France "jonc maritime" (Fée), in Germany "strandbinse" (Fraas), in Greece "vourla" or "vourlo" (Sibth.): the "alterum genus juncorum" of Mago, — maritime according to Pliny xxi. 69 and the "oxyschoenon" of the Greeks, may be compared: the "oxuschoinos" is mentioned in the Batrachomyomachia 164, Aristophanes ach. 230, as sharp-pointed by Dioscorides iv. 52; and the "schoinos oxus" is one of the three kinds distinguished by Theophrastus iv. 12: J. acutus is described by Anguillara 264 (Spreng.), and Barrelier pl. 203; is termed "j. acutus capitulis sorghi" by Tournefort inst. 246; was observed by Sibthorp, Chaubard, and Fraas, abounding on the seashore of Greece and Crete, and used for basket-work (Walp. p. 243); by Forskal, and Delile, on the Mediterranean shore of Egypt; and is known to grow along the sea from Italy and Barbary to Portugal and Britain (Savi, Desf., Brot., Dec., and Engl. bot. pl. 1614). Farther West, is known to grow on Madeira (herb. Schw.), and as far as our Atlantic seashore from New Jersey to Carolina and Florida (Pursh, Muhl., Ell., A. Gray, and Chapm.).

Iris pseudacorus of Europe and the adjoining portion of Asia. The *yellow iris* is called in Italy "acoro adulterino" or "iride gialla" (Lenz), in Greece "nerokrinos" or by the Turks "alak ingivi" (Sibth.); and a yellow-flowered kind is included in the "iris" identified in Syn. Dioscorides with the "glathiolon" of the Romans: the "gladiolum alterum" called "cypiron" should according to Mago be cut to the root in July, and for three successive days carried under cover before sunset, nocturnal dew injuring cut marsh-plants — (Plin. xxi. 68); I. pseudacorus is described by C. Bauhin pin. 34; is termed "i. palustris lutea" by Tournefort inst. 360; was observed by Lenz frequent in Italy; and is known to grow throughout middle Europe as far as Denmark (fl. Dan. pl. 494, Curt. lond. iii. pl. 4, and Pers.). Eastward, the "cypiron" of Apollodorus is identified by Pliny with the "gladiolus" growing on Crete and Naxos as well as in Phoenicia and Egypt; and an "iris" having yellow flowers is expressly mentioned by Dioscorides; I. pseudacorus was observed by Sibthorp, Chaubard, and Fraas, frequent in marshy situations from the Peloponnesus to Constantinople.

Triglochin palustre of Northern climates. Called in Britain *arrow-grass* (Prior); the "sagittam" of the Romans called "pistanam" by the Greeks, to be peeled and dried according to Mago from the Ides of May to the end of October — (Plin. xxi. 68), may be compared: T. palustre was observed by Desfontaines in Barbary; is known to grow in Portugal, and throughout middle and Northern Europe as far as Lapland and Iceland (Brot., fl. Dan. pl. 490, Hook., and Wats.). Eastward is known to grow in Tauria and throughout Siberia in both fresh-water and saline marshes (Gmel., and Bieb.): and farther East, in Alaska, and throughout Canada in fresh-water and saline marshes to Ohio, Onondaga, and Lat. 49° in Newfoundland (Wats., Pursh, La Pylaie, and A. Gray). "T. bulbosum," figured by Barrelier pl. 271 and perhaps not distinct, was observed by Bory in the Peloponnesus.

"498 B. C." = "2d year of the Ionian war" (Herodot., and Clint.), Cyprus recovered by the Persians.

"In or about this year" (. . . Sm. b. d.), Amyntas succeeded by his son Alexander, now tenth king of Macedonia.

Sonchus asper of Europe and Northern Asia. The "sonchos niger" regarded by Cleemporus as unfit for food, — but employed medicinally by Agathocles (Plin. xxii. 44), may be compared: as also the "sōghōs" described by Theophrastus vi. 3 as having prickly leaves, and by Dioscorides as "agrictheōtĕrōn" and more prickly: S. asper has not been observed in Greece by modern travellers, but may have been confounded and overlooked. Westward, the "sōghōs trahus" is identified in Syn. Diosc. with the "kikĕrvita aspĕra" of the Romans, and "gathōuōnēm" of the Numidians; S. aspera is described by Fuchsius 8, and is known to grow in waste and cultivated ground nearly to the Arctic region (Fries, and A. Dec.). Eastward from Greece, is known to grow along the Altaian mountains and as far as Daouria (Ledeb.), and was obtained by Wallich 362 in Hindustan (herb. Dec.). By European colonists, was carried to Northeast America, where it was observed by La Pylaie on Newfoundland, by myself along salt marshes from Lat. 42° 30′ to 38° in Maryland, by Chapman in Florida, and by Short in Kentucky; was carried to Brazil (Lund); to Chili (Peppig); to Austral Africa (Drege); to Southwest Australia (Steetz); to New Zealand, where I found it naturalized; and to the Hawaiian Islands, occurring near the salt-works, to all appearance introduced with the wholesale manufacture of salt.

"495, July 22d." On the "first day of the Eighth month in the 25th year of Khing-wang" (Khoung-tseu, Gaubil, and Pauth. 108), *eclipse of the sun.*

Hardly later than this date, Simonides in Thessaly composing his Epicinian ode on the victory of the Thessalian chief or king Scopas II. in the chariot-race. The death of Scopas II. and accession of Aleuas II. followed the recitation (Herodot. vii. 6, Phan., Callim., and Athen. x. p. 438).

The following forms of letters termed Simonidean, Μ, Ξ, Ω, are as early possibly as this date. (See Franz).

"494 B. C." (. . . . Sm. b. d.), A. Virginius Tricostus Caeliomontanus and T. Veturius Geminus Cicurinus consuls, and M. Valerius Volusus Maximus dictator, the populace of Rome withdrawing discontented to mount Sacer, persuaded to return and tribunes of the people and aediles of the people instituted.

"The same year" = "6th year" of the Ionian war (Herodot. vi. 21, and Clint.), *naval combat* near Miletus; the city captured by the Persians, and the war terminated. Soon afterwards, a drama by Phrynichus on the capture of Miletus so excited the feelings of the Athenians that its repetition was prohibited.

"In this year" (. . . . Sm. b. d.), victory in the chariot-race at the Pythian games gained by Xenocrates of Agrigentum through his son Thrasybulus, and the event celebrated by Pindar in his second ode in point of time.

Quercus suber of the West Mediterranean countries. The *cork oak* is called in Italy "sughero" or "sovero" or "suvero" (Lenz), in Greece together with the bark "phĕllōs" (Fraas); in which we recognize the ΦΕΛΛΟΣ of Pindar pyth. ii., — Aeschylus choeph. 499, Theophrastus, Lucian ii. 107, and Oppian h. iii. 374; its timber in the days of Pliny xvi. 13 sometimes imported into Greece: Q. suber is said by Fraas to occur in some instances in the Peloponnesus and Asia Minor (perhaps planted?). Westward, the "phĕllōs" is described by Theophrastus iii. 16 as a tree of Italy and Spain; the "suber" is mentioned by Vitruvius, Sidonius, and as growing in Italy by Columella, and Pliny: Q. suber is known to grow also in Barbary and Spain (Duham. ii. pl. 80, and Pers.). Its imported bark must have reached Egypt at an early period; and mainly through European colonists, has become scattered almost universally over the Globe.

"492 B. C." (Herodot., and Clint.), the successful Persian fleet, proceeding under Mardonius against Greece, dispersed in part near mount Athos by a storm; and the portion of the forces that succeeded in reaching land led back to Asia. Macedonia was now compelled to submit to Mardonius, and its king Alexander became vassal to the Persians.

Under Darius (Lubke and Lutrow), commencement of the imperial palace at Persepolis: — the building into which Alexander threw burning torches; at the present day called "Tschihil Minar," being "the grandest and most wonderful monument" of Persian architecture extant.

Cichorium intybus of Central Asia. Called in Britain *succory* or *chicory*, in France "chicorĕe" (Prior), in Germany "cichorie" or "wegewarte" (Grieb), in Italy "cicoria" or "radicchio" (Lenz), in Greece "rathiki" or "pikrōlithi" or "papathōulia" (Sibth.), in Egypt "sjikurie" or "hendeb" (Forsk.) or "cichorium" (Plin.), in Egyptian "hrintōu" (ms. Par.) or "annōtshĕr" (Edw.) or "iannōtshĕr" (Kirch.) or "agōn" (Syn. Diosc.); in which we recognize the "cichorium" used for anointing by the Magians and called "chreston", or "pancration" — (Plin. xx. 30), also the "kihōriōn" of Theophrastus vii. 9. 2 to ix. 12. 4, and Nicander alex. 429, identified by Dioscorides with the "sĕris agria:" C. intybus was observed by Forskal, Sibthorp, Chaubard, and Fraas, around

cultivated ground from the Peloponnesus throughout Greece and the Greek islands; by Forskal, and Delile, a weed in Egypt and sometimes cultivated (A. Dec.); is known to occur also around Caucasus and in the Talusch country (Ledeb.). Westward, the "cichorium" of Egypt is identified by Pliny with the "erraticum intubum," in Syn. Diosc. with the "intuvōum agrĕstĕm" of the Romans; the "cichoreum" is mentioned by Horace i. 31. 17, and the "intybum" by Columella x. 111, and Palladius: C. intybus is described by Bauhin hist. ii. 1007; is termed "c. sylvestre sive officinarum" by Tournefort inst. 479; is known to occur in fallow ground and along roadsides from Italy nearly to Lapland (fl. Dan. pl. 607, Pers., and A. Dec.). Eastward from Caucasus, is known to grow as far as Lake Baikal (Ledeb.); was observed by Bunge in gardens and waste ground around Pekin, but regarded there as exotic; by Kaempfer, and Thunberg, abundantly cultivated as an esculent in Japan and called "kio," or usually "tsisa." By European colonists, was carried to Northeast America, where it has become naturalized, occurring especially along New England roadsides. The root, besides being used medicinally, is according to Lindley (A. D. 1838) "extensively cultivated, especially in France, as a substitute for coffee."

Cichorium endivia of Hindustan. Called in English gardens *endive*, in Spain "endivia" (Prior), in Germany "endivie," in Italy "endivia" or "e. maggiore" (Lenz), in Greece "ēmĕra rathikia" (Fraas) or "rathikē," or by the Turks "hiddiba," in Egypt "hendibe" (Forsk.), in Egyptian "saris" (Akerblad) or "serin" — (Plin.); in which we recognize the "sĕritha" of Epicharmus, and "sĕris kēpĕutēs" cultivated as an esculent according to Dioscorides: C. endivia was observed by Forskal, Sibthorp, Chaubard, and Fraas, from the Peloponnesus to Constantinople and Cyprus, cultivated and seemingly wild, its leaves eaten as a substitute for lettuce; by Forskal, and Delile, under cultivation in Egypt. Westward, the "serin" of the Egyptians is identified by Pliny xix. 39 to xx. 29 with the "cichorium sativum" or cultivated "intubum;" the herb called "seris" is mentioned by Varro iii. 10. 5; "amaris intuba fibris," by Virgil geor. iv. 120; and the "sĕrin" of the Greeks a kind of "intubi," by Columella viii. 14. 2: C. endivia is described by Dodoens pempt. 634, and Bauhin hist. ii. p. 1007; is termed "c. latifolium sive endivia vulgaris" by Tournefort inst. 479; was observed by Forskal seemingly wild near Marseilles; and is known to be cultivated from Italy throughout middle Europe as far as Britain (Blackw. pl. 378, and Mill.). Eastward from Egypt, is called in Hindustanee "hindaba" or "kasni" (D'roz.), in Tamil "kashi" (Pidd.); was observed by Law, and Graham; "in gardens" from Surat to Bombay; is known to grow wild from Patna and Kamaon to Nepaul (Hamilt., Wall., and Dec.), and a species perhaps identical was observed by myself clearly indigenous on the Deccan. Farther East, is cultivated in Northern China (Lour., Staunt., and A. Dec.); was observed by Thunberg around Jedo in Japan, esculent and called "fanna tsisa." By European colonists, was carried to Northeast America, where it continues under cultivation in our Middle States.

Antirrhinum orontium of the Mediterranean countries. The *calves-snout* is called in France "mufflier rubicond" (Fée); in which we recognize the "antirrhinōn" regarded by the Magians as cosmetic and to be worn as an amulet — (Plin. xxv. 80), mentioned also by Hippocrates, by Theophrastus ix. 19. 2 as rootlets (annual) and having fruit like the nostrils of a calf, referred here by Matthioli and others: the "anarrhinōn" is mentioned also by Nicander fr. 13, Dioscorides, and is identified in the added Synonyms with the "anarrinōn" or "luhnitha agrian," by Galen with the "vōukraniōn:" A. orontium was observed by Sibthorp, and Fraas, in cultivated ground in Greece and on the Greek islands. Westward, the "antirrhinon" or "anarrhinon" or "lychnis agria" is described by Pliny as resembling flax: A. orontium according to Euricius Cordus has fruit like the head of a calf "tam exquisita similitudine ut etiam os et nares appareant" (Spreng., and Prior); is termed "a. arvense majus" by Tournefort inst. 168; was observed by Forskal on Malta and near Marseilles; and is known to occur in waste and cultivated ground in Sicily, Algeria, and throughout middle Europe as far as Britain (Pers., Guss., Munby, and A. Dec.).

Antirrhinum majus of the Mediterranean countries. Called in Britain *snap-dragon* (Prior), in France "grand mufflier" (Fée), in Germany "grosses lowenmaul," in Italy "bocca di leone" or "antirrino" (Lenz), in Greece "agria phōuskōuni" (Fraas); and possibly the "antirrinon" of the Magians: — clearly the flower having a lion's mouth mentioned by Columella x. 98: A. majus was observed by Sibthorp, Chaubard, and Fraas, on walls and rocks from the Peloponnesus and Cyprus to Constantinople. Westward, is termed "a. vulgare" by Tournefort inst. 168; was observed by Lenz in Italy; by Forskal, on Malta and near Marseilles; and escaping from gardens has become naturalized throughout middle Europe as far as Sweden (Fries); in Britain, was known to Gerarde p. 439 only in gardens, is not included among spontaneously-growing plants by Ray and Dillenius, but in 1778 was found by Hudson completely naturalized, occurring even on cliffs (Bab., and A. Dec.).

491 B. C. = "31st year of Darius," birth of an Apis or sacred bull — (Birch).

"April 25th, Wednesday, ten hours and forty minutes after mid-day" (as reduced by Ptolemy to

the meridian of Alexandria, Blair), Seventh Babylonian *eclipse of the moon:* "two digits eclipsed on the South."

Medicago sativa of Tartary. Called in Britain *lucerne* or *medick* (Prior), in Italy "medica" or "erba medica" (Lenz), in which we recognize the "medica" brought by the Medes into Greece during the wars of Darius — (Plin. xviii. 43), or the "mēthikē" of Amphilochus, Aristotle, Theophrastus viii. 7. 7., Epicurus, Strabo, Dioscorides, and Plutarch: M. sativa was observed by Sibthorp frequently cultivated in Greece for fodder, but as appears from Chaubard, and Fraas, its cultivation has nearly ceased: the plant is enumerated by Clot-Bey as introduced only recently under Mohammed Ali into Egypt, where it is called "bersym Heggiasy." Westward, the "medica" and its cultivation in Italy are mentioned by Varro, Virgil, Columella, Pliny, and Palladius; and its French and German name "luzerne" indicates that the plant reached middle Europe by the Greek or St. Gothard pass across Switzerland: M. sativa is described by Bauhin hist. ii. p. 381; is termed "medica major erectior" by Tournefort inst. 410; and is known to occur cultivated and naturalized in Italy, Sardinia, Algeria, Spain, and throughout middle Europe (Oliv. de Serres, Moris, Munby, and Wats.). Eastward from Greece, is known to grow wild from Caucasus to Cashmere and throughout Siberia (Bieb., Ledeb., and Royle); has no Sanscrit name (A. Dec.); was observed by Gibson, and Graham, "cultivated in the Deccan for feeding horses, also in Goozerat where it is coming fast into use." By European colonists, was carried to Northeast America, where though not thriving it continues under cultivation, and has even been found growing spontaneously (Darl., and A. Gray); also to Austral Africa (Drege).

"490 B. C." (Herodot., and Clint.), the Second Persian armament, commanded by Datis and Artaphanes, defeated by the Athenians under Miltiades at Marathon. The tumulus erected over the Athenian slain, — and mentioned by Pausanias i. 32. 3, remains to the present day (Sm. geogr. dict.). Aeschylus fought at Marathon. Natives of Hindustan may have been in the Persian army, for an ΙΝΔΟΣ is mentioned by Aeschylus suppl. 281. — "inthikōs" articles from Hindustan are mentioned by Sophocles antig. 102.

Erica multiflora of Europe. A species of *heath* called in Greece "rēkē" (Sibth.); in which we recognize the ΕΡΕΙΚΗ of Aeschylus ag. 286, — "ĕrikēn" of Eupolis, Plutarch symp. iv. 1, and the "ĕrĕikē" described by Dioscorides as a tree-like shrub resembling the tamarisk but much smaller, whose flowers injure the quality of honey: E. multiflora was observed by Sibthorp abounding on the mountains around Athens, flowering in winter, and the honey collected from it by bees sold much cheaper than summer honey. Westward, the "mel ericaeum" is described by Pliny xi. 15 as of inferior quality and brought after the first showers of autumn, when the "erice" is alone in flower: E. multiflora is described by Clusius hist. i. pl. 42, and is known to grow in Italy and Southern France (Pers.; see E. arborea).

Erica herbacea of the Mediterranean countries. Called in Greece "riki" or "rĕikē" or "ĕrĕikē" (Sibth.); and possibly included in the ΕΡΕΙΚΗ of Aeschylus, — and Theophrastus i. 23: E. herbacea was observed by Sibthorp everywhere frequent in Greece. Westward, is termed "e. procumbens ternis foliolis carnea" by Tournefort inst. 603; and is known to grow as far North as Moravia (Jacq. austr. pl. 32, Pers., and A. Dec.).

Bellis sylvestris of the Mediterranean countries. Called in Greece "lĕmōnōhōrtōn" (Sibth.); and possibly included in the ΑΝΘΕΑ: ΛΕΙΜΩΝΙΑ of Aeschylus, — and Aristophanes nub. 1364: B. sylvestris was observed by Chaubard in the Peloponnesus, vernal, and closely resembling Bellidiastrum Michelii, but devoid of pappus. Westward, is described by Cyrillo ii. pl. 4; and is known to grow in Italy and Barbary (Desf., Pers., Tenore, and Bory).

Morus nigra of the Tauro-Caspian countries. Called in Britain *mulberry* (Prior), in Germany "maulbeere" (Grieb), in France "mure" (Nugent), in Italy "moro nero" (Lenz), in Greece "mŏrĕa" or "sukamĕnĕa" (Fraas), in Egypt "tout chamy" Syrian mulberry (Del.), in Egyptian "nōuhi" (transl. Luke, lex. Oxf., and Kirch); in which we recognize the ΜΟΡΟΝ of Aeschylus phryg., changed from the original Attic name "sukamina" — (according to Galen fac. simpl. viii. p. 102); the "moron" is mentioned also by Sophocles, and Dioscorides, but Athenaeus ii. 36 found the term confined to the Alexandrians only: the "sukaminōs" is mentioned by Pythermus, Eubulus, Amphis, Philippides, Theophrastus caus. vi. 6. 4, Hegesander, by Luke xvii. 6 as occurring in Palestine, and is identified with the "mŏrĕa" by Dioscorides: M. nigra was observed by Forskal cultivated for its fruit at Constantinople, by Chaubard under cultivation in the Peloponnesus, and by Forskal, Delile, and Clot-Bey, in the gardens of Egypt; is known to grow seemingly wild from Lenkoran South of the Caucasus as far as the Caspian (Pers., and Ledeb.). Westward, the "sukaminon" is identified by Celsus iii. 18 with the "morum" of the Romans, and the "morus" tree is mentioned by Horace, Columella v. 10. 20, Pliny xv. 27, and Palladius: M. nigra was employed to feed the silk-worms introduced in "1148 A. D." into Italy (Crescenzio, Targioni, and A. Dec.); continues abundant in Italy (Lenz), and is known to be planted throughout middle Europe. Eastward from the Caspian,

was observed by Kaempfer, and Thunberg, under cultivation in Japan and called "soo," or usually "kuwa." By European colonists, was carried to Northeast America, where it continues sparingly planted for its fruit; and "in 1837" to Bombay (Graham). The bark according to Lindley "said to be cathartic and anthelmintic."

Evonymus Europæus of Europe and the adjoining portion of Asia. Called in Britain *spindle-tree* or *prickwood* or *gadrise* from "being used to make skewers, shoemaker's pegs, and goads," in Germany "pinnholtz" (Prior), in France "fusain" (Fée), in Italy "fusaro" or "fussaggine" or "evonimo" (Lenz); and knowledge of the tree seems implied in the word "ĕuŏnumŏs" signifying unlucky in Aeschylus prom. 488: — the "ĕuŏnumŏn" tree is described by Theophrastus iii. 18. 13 as growing on mount Ordynnus in the island of Lesbos, its flowers having the direful odour of blood, fruit dividing in fours, and together with the leaves if eaten killing sheep and goats; E. Europæus is known to grow in the environs of Constantinople, also about Caucasus, and as far as the Tobol river in Siberia (Georgi, Ledeb., and A. Dec. p. 247). Westward, is described by Turner, Dalechamp, and Miller; was observed by Lenz frequent in Italy; and is known to grow throughout middle Europe as far as Lat. 60° 15′ on Aland in the Baltic (Lam. fl. fr., and A. Dec.).

Evonymus latifolius of Europe and the adjoining portion of Asia. Possibly the species in question, — but agreeing better with the "tĕtragŏnia" of Theophrastus iii. 4. 2 to 6: E. latifolius was observed by Sibthorp, Gittard, and Fraas, in woods on the Bithynian Olympus and other mountains as far as Arcadia in the Peloponnesus. Westward, is described by Miller; was observed by Scopoli, and Lenz, in Italy; and is known to grow as far as middle Europe (Jacq. austr. iii. pl. 289, Lam. fl. fr., and Pers.).

"487 B. C. (= 8 years before the Persian war," Suid., and Sm. b. d.), Chionides exhibiting comedy at Athens.

Saccharum Ravennæ of the East Mediterranean countries. A reedy grass called in Greece "samaki" (Sibth.); in which we recognize the ΣΑΜΑΚΙ of Chionides, — Lysippus, Eratosthenes, Julius Pollux, Hesychius, and Photius: S. Ravennæ is termed "gramen paniculatum arundinaceum ramosum panicula densa sericea" by Tournefort inst. 523; was observed by Sibthorp, Chaubard, and Fraas, frequent in marshy ground from the Peloponnesus to Constantinople; and is known to grow as far West as Italy (Zanon. i. pl. 24, and Pers.). Articles manufactured from this grass have doubtless been sometimes carried to Egypt.

About this time (Percev. i. 59), Abyan, a descendant of Himyar, ruling Yemen. — Near the entrance to the Red Sea, he founded or restored the city of Aden, named after him "Aden of Abyan."

486 B. C. = "36th year of Ntarius" or Darius; the latest date in his reign on the Egyptian monuments (C. Mull. fr. Man.). Before the close of this year (= "4th year after the battle of Marathon and the year before the death of Darius," Herodot., and Clint.), revolt of the Egyptians against the Persians.

"The same year" (. . . . Sm. b. d.), at Rome, Proculus Virginius Tricostus Rutilus and Sp. Cassius Viscellinus consuls, and an agrarian law proposed by the latter. — In the following year, he was condemned by the patricians and put to death.

"485 B. C." (Euseb., and Clint.), Seventeenth change in naval dominion. Leaving the Eretrians, the "Empire of the sea," or dominion over the Eastern waters of the Mediterranean, acquired by the Aeginetan Greeks. — Held by them until the Invasion by Xerxes.

The same year = "5th year after the battle at Marathon and five years before the Invasion of Greece" (Herodot., and Clint.), Darius succeeded by Xerxes, fourth Persian emperor. The hieroglyphic ovals of Hesirsa occur on rocks along the Kosser road; and his name in cuneiform characters, on an Egyptian vase (now in Paris, Glid. analect.).

As early probably as this year (Herodot. vii. 111), an Oracle of Dionysus on mount Haemus under the management of the Bessians of Thrace.

Tussilago farfara of Europe and the adjoining portion of Asia. Called in Britain *coltsfoot* or *cough-wort* (Prior), in France "pas d'âne" (Nugent), in Germany "huflattich," in Italy "farfaro" (Lenz), in Greece "hamaïlĕukē" (Sibth.); in which we recognize the "vēhiōn" or "hamaïlĕukē" identified in Syn. Diosc. with the Egyptian "saartha," and the "asa" of the Bessians — (by whom its alleviating power in asthma may have been discovered): the "vēhiōn" is mentioned by Hippocrates p. 400. 9, Moschion 123, by Dioscorides as having ivy-like leaves but larger green above and white beneath, and a flower-stem quickly perishing; is identified by Ebn Baïtar with the "suala" of Avicenna; T. farfara was observed by Forskal, Sibthorp, Chaubard, and Fraas, from the Peloponnesus to Constantinople; is known to grow also in the Crimea, Persia, Siberia (Lindl.); and dried "tussilago" was found by Forskal mat. med. in the drug-shops of Egypt. Westward, the "vēhiōn" is further identified in Syn. Diosc. with the "tōusilagō" or "pōustōulagō" or "pharpharium" of the Romans; and the "tussilago" or "farfarum" or "farfugium" is mentioned by Pliny xxiv. 85 to xxvi. 16; the name derived perhaps from the river Farfaro in the Sabine territory, mentioned by Ovid met. xiv. 330 (Spreng.): T. farfara is termed "t. vulgaris" by Tournefort inst. 487; is known

to grow from Italy throughout middle Europe as far as Denmark (fl. Dan. pl. 565, Lam. fl. fr., and Pers), becoming often a troublesome weed. By European colonists, was carried to Northeast America, where it seems naturalized, extending along roadsides in Western New England and the neighbouring portion of New York; also to the "East Indies" (Lindl.). As in the days of Dioscorides, the smoke of the leaves continues to be inhaled "against dyspnœa" (Lindl.).

Andropogon angustifolius of Europe and the adjoining portion of Asia. A grass called in France "barbon pied de poule" (Fée); and the "ishaimōn" growing in Thrace, and said to stop the bleeding even of an opened vein — (Theophr. ix. 15. 3), stuffed in the nose according to Pliny xxv. 45, its leaves "asperis et lanuginosis," is referred here by writers: A. angustifolius was observed by Forskal, Sibthorp, and Chaubard, from the Peloponnesus to Constantinople. Westward, the "ischaemomem" according to Pliny grows also in Italy, and is tied on to arrest bleeding: A. angustifolius is termed "gramen dactylon angustifolium spicis villosis" by Tournefort inst. 520; and is known to grow in Switzerland and as far as Leipsic in middle Europe (Hall. hist. ii. 203, Jacq. austr. pl. 384, Roth germ. ii. p. 2. 546, and Schreb. lips. 46). *A. ischæmum* observed by Gerardi gallopr. pl. 4 in Southern France, described by Linnæus, and termed "a. villosus" by Lamarck fl. fr. (Pers., and Steud.), is regarded by J. E. Smith as distinct.

Tuber cibarium of Europe and the adjoining portion of Asia. Called in Britain *truffle*, by Parkinson "trubbes," in Italy "tartuffola" (Prior), in Germany "trüffel" (Grieb), in France "truffe" (Nugent), in Greece "iknōs" or "uthnōs" (Sibth.); in which we recognize the "tuber" identified by Pliny with the "iton" of the Thracians: — the "itōn" or "itnōn" is mentioned also by Galen, and Aetius; the "uthnōs," by Theophrastus i. 1. 11 to 6. 9, by Dioscorides as a roundish edible root dug in the Spring, and by Apollonius mirab. viii. 46, Galen, and Athenaeus ii. 60: T. cibarium was observed by Sibthorp, and Fraas, from the Peloponnesus to Cyprus, sought for according to Walpole mem. 284 with a divining-rod; and was met with by Burckhardt on his journey through the region around Sinai (Kitt. p. 281). Westward, the "tuber" according to Pliny xix. 11 to 13 was met with by Lartius Licinius in Spain, is produced also in Italy, and of the best quality in Barbary; is also mentioned by Martial xiii. 47: T. cibarium is termed "tubera" by Tournefort inst. 565; and is known to grow throughout middle Europe as far as Britain (Bulliard h. fr. i. pl. 356, and Sibth. oxon. 398).

484 B. C. (= 502 — "18 years of two reigns" in the Mahavamsi iv.), Mudda or Munda succeeded by his son Nagadaseka, now Hindu king. He is called Kakavarnin in the Avadana asok. (Burn. i. 358).

"In this year = 2d year after the death of Darius" (Herodot., and Clint.), Egypt recovered by the Persians.

"In this year" (Gaubil pref.), the Chou-king compiled from ancient historians by Khoung-tseu or Confucius.

Zingiber officinale of Equatorial Africa. Its imported root is called in Britain *ginger*, in France "gingembre" (Nugent), in Italy "zenzere" or "zenzevero" (Lenz); and the plant in Yemen "zenjebil" (Forsk.), in Sanscrit "ardrukum" or "shringuverum" (Lindl.), in Bengalee "adrak" or "ada" (D'roz.), in Hindustanee "sonth," in Telinga "ullum," in Tamil "ingie" (Drur.), in Burmah "khyenseing" (Mason), in Tagalo "luya," in Camarines "laya" (Blanco); and "gingembre" was not avoided by Khoung-tseu lun-yu x. 8 in his food: * — ginger continues to be preserved and exported in large quantities from China; was observed by Blanco under cultivation on the Philippines; by Loureiro i. 2, in Anam; by Mason v. 495 "exotic" and "cultivated to a small extent" in Burmah; is known to be extensively cultivated throughout Hindustan from the elevation of five thousand feet on the Himalaya to Cape Comorin (Drur.); was observed by Rheede xi. pl. 12 in Malabar; by Graham, as far as Surat. Westward from Hindustan, was observed by Forskal under cultivation in Yemen; by myself, the root brought in quantities from the Comoro Islands to Zanzibar, and recognized by Wanyamuesi from Interior Africa as a production of their own country; "ginger of Zanguebar" is mentioned by Abd-allatif; ginger brought principally from Abyssinia and called by Negroes "zymbane," was found by Cailliaud rare at Quamamil on the Nile; and the plant is regarded by Joebel as indigenous in Guinea (Drur.). Farther North, the "inthikōn" of Menestheus, Andreas, Xenocrates, and Dioscorides of Alexandria, is identified by Galen with the "ziggiveri" or "zingiber;" mentioned by Celsus v. 23; by Dioscorides, as a peculiar plant growing mostly in "trōglōthutikē aravia," but by Pliny xii. 14 as growing within towns in "arabia atque troglodytica;" the Greek and Latin name is clearly geographical, derived from the source of supply, the island of Zanzibar. By European colonists, the plant was carried to the West Indies, where it is now extensively cultivated (Wright lond. med. journ.): and to the Mauritius Islands (Boj.). The root according to Lindley is "one of the most valuable of aromatics, carminative, stimulant, sialogogue."

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* *Cucumis conomon* of Japan. The "melon" too bitter to be eaten and fit only to be suspended, mentioned by Khoung-tseu lun-yu xvii. 7, — may be compared: C. conomon was observed by Kaempfer v. 811 in Japan, according to Thunberg "everywhere cultivated," and a preparation of the fruit eaten by the natives, carried besides by the Dutch occasionally to Batavia and even to Europe.

"483 B. C." (Herodot., and Clint.), ostracism or banishment from Athens of the statesman Aristides. A transaction much celebrated.

"In this or the preceding year (= 245 yrs" after its foundation, Thucyd. vi. 4, and Sm. b. d.), Megara in Sicily destroyed by Gelon; who removed the principal citizens to Syracuse, including Epicharmus a pupil of Pythagoras. — Of the comedies of Epicharmus, the only one whose date is certainly known is the Nasoi "in 477."

The following form of the letter Θ is said to have been first used by Epicharmus (Aristot., and Plin. vii. 57).

Foeniculum vulgare of the Mediterranean countries. Called in Britain *fennel* or *fenkel*, in France "fenouil," in Germany "fenchel" (Prior), in Italy "finocchio" or at Verona "fenocio" (Lenz), in Greece "agriōmalathrōn" (Sibth.) or "marathrōn" (Fraas), in Yemen "sekamar" (Forsk.), in Egyptian "savin" (Kirch.) or "tshamar hōōut" (ms. Par.), in which we recognize the ΜΑΡΑΘΑ of Epicharmus, — Anaxandrides, Archestratus, Athenaeus ii. 47 to 83, or "marathrōn" of the Hippocratic treatises, Demosthenes, Theophrastus, Dioscorides, and Galen: F. vulgare was observed by Forskal, Sibthorp, Chaubard, and Fraas, frequent in fallow ground from the Peloponnesus to the Dardanelles. Seeds called "schamer" are enumerated by Forskal mat. med. as brought for medicinal use "from Upper Egypt," and the living plant was seen by him under cultivation on the mountains of Yemen. Westward, the "marathrus" is mentioned, by Ovid, and Columella; is identified by Pliny with the "foeniculum," mentioned by Celsus, and others; and a gum-like exudation procured from it in Iberia or Spain is mentioned by Dioscorides and Pliny xx. 95; F. vulgare is described by Lobel pl. 775, and Dodoens pl. 295; is termed "f. vulgare minus acriori et nigriori semine" by Tournefort inst. 311; is known to occur in cultivated and waste ground throughout middle Europe (Pers.), and has become naturalized in Britain (A. Dec.). Eastward from Arabia, was observed by Wight, and Graham, under cultivation in Hindustan and called "owa;" by Thunberg, cultivated in Japan from seeds brought from China, and called "sen rio" or "kure no womo." By European colonists, was carried to Northeast America, where it continues under cultivation in our Middle and Southern States; to Austral America, observed by A. Saint-Hilaire naturalized at Montevideo, by myself in other localities; and to the Hawaiian Islands, where also I found it naturalized. According to Lindley, "oil of *wild fennel* is obtained from the fruit."

Foeniculum dulce of the Mediterranean countries. Possibly the "maratha" of Epicharmus, — and others, mentioned as esculent by Dioscorides: F. dulce is described by C. Bauhin pin. 147; is usually considered by Italian writers "a cultivated variety of" the preceding, but is regarded by Decandolle, and Lindley, as a distinct species: is known to occur also in Portugal, and "oil of *sweet fennel* is obtained from the fruit" (Lindl.).

Sium sisarum of Eastern Asia. Called in Britain *skirret*, in old English "skyrwyt" or "skyrwort," in Holland "suiker-wortel" (Prior), in Germany "zuckerwurzel," in Italy "sisaro" (Lenz); in which we recognize the ΣΙΣΑΡΟΝ of Epicharmus, — Opion, Diocles, Heraclides Tarentinus, Dioscorides, Soranus Ephesius, Galen, Athenaeus iii. 91, Paulus Aegineta, three roots of which according to Hicesius no one can continuously eat: S. sisarum seems no longer cultivated in Greece (Fraas). Westward, the "siser" is mentioned by Horace sat. ii. 8. 9, Celsus, Columella, roots from the cool climate of the Rhine were annually imported by Tiberius, and its cultivation in Italy is further mentioned by Pliny xix. 28 and xx. 17: S. sisarum is described by Tragus 912; and is known to be cultivated in Italy and middle Europe as far as Britain (Blackw. pl. 514, and Spreng.). Eastward from Greece, was observed by Burmann pl. 29 in Hindustan and called "ninsi;" is known to grow in China (Pers.); and was observed by Kaempfer amoen. pl. 818, and Thunberg in Japan, and called "mukago nisin" or "sjakuna." By European colonists, was carried prior to 1656 to Northeast America, being enumerated in Bradford's poem as successfully cultivated in New England, but has since disappeared.

Cynara cardunculus of the West Mediterranean countries. Called in Britain *cardoon* (Prior), in France "cardon" (A. Dec.), in Germany "kardon" (Fraas), in Italy "cardo" (Lenz): the ΚΑΚΤΟΣ of Epicharmus, — growing according to Theophrastus vi. 4 only in Sicily, the flowers changing into pappus and the stem called "kaktōs" and eaten, mentioned also in Delet. pharm. 33, and by Pliny xxi. 57, is referred here by writers: C. cardunculus is described by Anguillara, and Dalechamp (Spreng.); is known to grow wild in Barbary and Southern France, is besides cultivated throughout middle Europe for the edible stalk and midrib of the leaves (Pers.). Eastward, is known to occur on Crete (Pers.); and the "kaktōs" was known to Athenaeus ii. 70 in Egypt. By European colonists, C. cardunculus was carried to Northeast America, observed by myself under cultivation in our Middle States; to Austral America, where it has become naturalized and abundant on the pampas or plains from the Uruguay and La Plata (A. Saint-Hil., and A. Dec.) to Patagonia, observed there by myself along the Rio Negro.

Origanum vulgare of Europe and the adjoining portion of Asia. Called in Britain *organy* (Prior)

or *wild marjoram* (Lindl.), in France "origan" (Nugent), in Germany, "dosten," in Italy "regamo" or "origano" (Lenz), in Greece "rigani" or "riganōn" (Sibth.), in which we recognize the ΟΡΙΓΑΝΟΝ of Epicharmus, — Ion, the comic poet Plato, Aristophanes eccles. 1022, Timotheus, Archestratus, Sotades, and the Arcadian kind of Athenaeus ii. 77: O. vulgare was observed by Sibthorp, Chaubard, and Fraas, from the Peloponnesus to mount Athos; and is known to grow as far as Central Asia (Lindl.). Westward, the "origanum" is mentioned by Columella ix. 4. 2 as good for bees and their honey, by Pliny xxi. 29 as coronary, by Palladius as cultivated: O. vulgare is described by Brunfels, and Valerius Cordus (Spreng.); is termed "o. sylvestre" by Tournefort inst. 198; was observed by Lenz wild in Italy, and is known to grow throughout middle Europe as far as Denmark (fl. Dan. pl. 638, and Pers.). By European colonists, was carried to Northeast America, where it has become naturalized, observed by myself in wild situations in our Middle States. The plant according to Lindley yields *oil of thyme*, "a common remedy for" toothache; mixed also "with olive oil, as a stimulating liniment."

Origanum Smyrnæum of the Mediterranean countries. Called in Greece "rigani," or by the Turks "sater" (Sibth.), and possibly included in the "ōriganōn" of Epicharmus: — the "ōriganōn" of Tenedos, celebrated by the ancients (Athen. i. 50), is identified by Forskal with a species observed on that and a neighbouring island, resembling O. vulgare but its flowers congested in a strobile: O. Smyrnæum is described by Tournefort inst. 199; was observed by Sibthorp around Smyrna, and among heath around Constantinople; and "O. Syriacum" of Syria is regarded by Fraas as not distinct. Westward, "O. glandulosum" having the aspect of O. vulgare and observed by Desfontaines ii. p. 27 on the Atlas mountains, is also regarded as not distinct.

Lavandula spica of the Mediterranean countries. Called in Britain *French lavender* (Sibth.), in Italy, "spico gentile" (Spreng.), in Greece "kalōgĕrikōhortōn" (Sibth.); and probably the ΙΦΥΟΝ of Epicharmus, — Theophrastus vi. 8. 3, Athenaeus ii. 83, identified with the "lavantis" by Hesychius; and copied "tiphyon" by Pliny: L. spica is described by Dodoens pl. 273; is termed "l. latifolia" by Tournefort inst. 198; was observed by Sibthorp, and Chaubard, in the Peloponnesus and on the Greek islands; by Forskal, near Marseilles; and is known to grow in other parts of Southern Europe and in Barbary (Pers., and Lindl.). Probably by European colonists was carried to Hindustan, observed by Law "in gardens Belgaum" near Bombay (Graham). The plant according to Lindley "is not employed medicinally, but yields" *oil of spike*, "used by painters on porcelain and" in "varnishes for artists." (See L. stoechas).

Rumex patientia of Europe A species of *dock* called in Britain *patience* or *passions* (Prior), in France "patience" (Fée), in Italy "pazienza" or "lapazio" or "romice domestica" (Lenz), in Germany "gemüs-ampfer," in Greece "xunēthra" (Fraas); in which we recognize the ΛΑΠΑΘΟΝ of Epicharmus, — Diocles, Athenaeus ii. 57 to 83, esculent and single-rooted according to Theophrastus i. 6. 6, and the "lapathōn kēpĕutōn" of Dioscorides: R. patientia was observed by Sibthorp, and Fraas, springing up spontaneously in gardens and fallow ground in the Peloponnesus. Westward, the time for sowing "lapathum" is indicated by Pliny xix. 54 to xx. 86: R. patientia is described by Dodoens pl. 648; is termed "l. hortense folio oblongo, sive secundum Dioscoridis" by Tournefort inst. 504; continues occasionally cultivated, and is known to grow wild in Italy and as far as Germany (Pers., and A. Dec.). By European colonists, was carried before 1669 (Jossel.) to Northeast America, but has disappeared.

Rumex crispus of Europe and the adjoining portion of Asia. The *curled dock* is called in France "patience crêpue" (Fée), in Germany "hasen-ampfer" (Fraas), in Greece "lapathō" (Sibth.); possibly therefore the "lapathōn" of Epicharmus: — the "lapathōn ōxulapathōn" growing in marshes according to Dioscorides, hardened and somewhat pointed at the summit, is referred here by writers; the "lapathōn" is enumerated by Manetho among the ingredients of the Egyptian "kuphi" incense (Plut. is. and osir.); and according to Pliny xx. 85, leaves and roots of "oxylapathon" are used in making "pastillos," the leaves redder and more acute than in the "sativo" kind, and the seeds employed medicinally: R. crispus is termed "l. folio acuto crispo" by Tournefort inst. 504; was observed by Sibthorp, Chaubard, and Fraas, frequent in moist places from the Peloponnesus throughout Greece, and eaten as a potherb; is known as a weed in moist ground from Italy to Britain (Pers., Lenz, and Lindl.). Eastward from Greece, was observed by Thunberg frequent in Japan, along roadsides and on the margin of cultivated ground and called "gisigisi." By European colonists, was carried to Northeast America, where in our Northern and Middle States it has become "naturalized" and "a very common weed in cultivated and waste grounds" (A. Gray). The root according to Lindley is "astringent" and is employed "in decoction or ointment" as "a cure for the itch."

Chamærops humilis of the West Mediterranean countries. The *palmetto* or dwarf palm is called by the Arabs "wakl" and its fruit "mokl" (Spreng.); the esculent ΕΛΑΤΑΝ of Epicharmus — (Athen. ii. 71) may be compared; the "phōinix" by some called "ĕlatēn" or "spathēn" being according to Dioscorides the involucre of the fructification: the "hamairriphĕis" is described by

Theophrastus ii. 6. 11 as a singular kind of palm growing on Crete and more abundantly on Sicily, continuing to flourish after the brain is removed, and when cut to the roots giving out new shoots; the fruit of "hamaizēlŏn phōinikŏn" is mentioned by Dioscorides i. 149; the "palma agrestis," by Cicero verr. v. 33; "palma campestris" by Columella iii. 1. 2; and the "palma elate" of Pliny xxiii. 53 has "germina folia corticem" buds leaves and bark: fruit of a "Chamæriphis" was found by Delile in the drug-shops of Egypt: C. humilis is described by Anguillara p. 71, Matthioli, and Cæsalpinus; was observed by Desfontaines ii. p. 436 in Barbary; by Hogg in Sicily, covering hills like furze; is known to grow also in Southern Italy, Sardinia, the Balearic Islands, and Southern Spain, the roots and base of the young stem eaten (Pers., and A. Dec.); is besides sometimes cultivated, and was seen by Forskal in the Montpellier garden. By European colonists, was carried to Madeira, where it has become naturalized (Lemann); perhaps also to the Greek islands of Corfu and Zante (Martius).

"482 B. C." (Sm. b. d.), C. Julius Julus and Q. Fabius Vibulanus, consuls at Rome, marching unopposed against the Veientes and laying waste their territory.

Artemisia queen of Halicarnassus and the neighbouring islands, a vassal but voluntarily preparing to join the Persian fleet with "five beautiful ships" (Herod., and Paus. iii. 11. 3). Her brother or son Pigres is regarded as the author of the Batrachomyomachia (Plut. malign. her. 43, Suid., and Sm. b. d.).

Mentha sylvestris of Europe and Northern Asia, as far as the Altaian mountains. Called in Britain *horse mint* or *brook mint* or *water mint* (Prior), in Italy "sosembro matto" (Pollin.), in Greece "kalamithra" or "agriōēthuōsmōs" (Sibth.), in Egypt "habaqbaq" (Del.), in Egyptian "sōumanas" (Edw.); in which we recognized the ΚΑΛΑΜΙΝΘΗ of Pigres batrach., — and "kalaminthē tritē" of Dioscorides resembling "ēthuōsmŏ agriŏ" but larger and its leaves longer: M. sylvestris was observed by Sibthorp, and Link (Chaub.), frequent in moist situations in Greece; by Forskal, and Delile, in Egypt; by Forskal, in Yemen; is known to grow also about Taurus and Caucasus (Royle). Westward, the "sisymbrium silvestre" not more than a foot high and by some called "thymbraeum," is mentioned by Pliny xx. 91: M. sylvestris is described by Tragus f. 8, and Anguillara (Sprenq.); was observed by Pollini in Italy; and is known to grow throughout middle Europe as far as Denmark (fl. Dan. pl. 484, and Pers.). Eastward from Caucasus, is known to grow among the Altaian mountains, and the Himalayan as far as Cashmere (Royle in Kitt. bibl. cycl.).

Calamintha officinalis of Europe and the adjoining portion of Asia. Called in Britain *calamint* (Prior), and according to Fraas frequent in the ditches of Attica; possibly therefore the "kalaminthē" of Pigres batrach., — and Aristophanes: C. officinalis was observed by Sibthorp, and Fraas, from Attica to mount Athos and Constantinople. Westward, the "calamintha" employed in cookery by Apicius, is referred here by Dierbach, and others: C. officinalis is described by Rivinus monop.; is termed "c. vulgaris vel officinarum Germaniæ" by Tournefort inst. 194; and is known to grow in stony places from Austria Italy and Spain as far as Britain (Scop., Lam. fl. fr., Pers., and Engl. bot. pl. 1676). Is according to Lindley "aromatic and slightly bitter," used "by country people in the form of tea as a grateful fever drink." (See Mentha tomentella).

"481, April 19th" = "first day of the Fifth month in the 39th year of Khing-wang" (Chinese annals, Gaubil, and . . .), *eclipse of the sun*.

"In the autumn" (Sm. b. d.), arrival of Xerxes at Sardis. Osthanes, earliest commentator on the Magian doctrines, accompanying Xerxes — (Plin. xxx. 2).

Anchusa paniculata of the Mediterranean countries. Called in Italy "buglossa" (Lenz), in Greece "vouthōglŏssōn" (Sibth.) or "vōithōglŏssa" (Fraas); in which we recognize the "vouglŏssōn" identified in Syn. Diosc. with the Egyptian "antōn ĕrinvĕsŏr," the "gōnōs ailōurou" of the prophets, and ΣΑΝΝΟΥΧΙ of Osthanes: — the "vouglŏssōn" is described by Dioscorides as resembling the "phlōmŏ," its leaves spreading over the ground, rough with prickles and like an ox's tongue: A. paniculata was observed by Sibthorp, Chaubard, and Fraas, from the Peloponnesus frequent throughout Greece. Westward, the "vouglŏssōn" is further identified in Syn. Diosc. with the "vouthalla" of the Dacians, "ansanaph" of the Numidians, and "lōggaivoum" or "liggoua vovoum" or "livanin" of the Romans: A. paniculata is described by Brunfels i. p. 111 (Spreng.); is termed "b. angustifolium majus flore cæruleo" by Tournefort inst. 134; was observed by Retz obs. i. p. 12, and Lenz, in Italy; and is known to grow as far as Madeira (Pers.).

Borago officinalis of Persia. Called in Britain *borage*, in France "bourache" (Prior), in Germany "borretsch" (Grieb), in Greece "vouraza" (Forsk.) or "armpĕta" (Sibth.) or "arnōpĕtra" (Lowndes), in Egypt "lissan et tôr" ox's tongue (Forsk.), and therefore possibly the "sannōuhi" in question: — the belief in "vouglŏssōn" causing "ĕuphrōsunōn" hilarity if placed in wine, mentioned by Dioscorides, Pliny xxv. 40, and Plutarch sympos. i, seems at least the origin of the medieval proverb "ego borago gaudia semper ago:" the "lisan el-tour" is described by Avicenna as an herb with broad leaves rough to the touch as well as its branches, the best having calloso-hirsute leaves

and procured in Khorasan; is mentioned also by Ebn Baïtar: B. officinalis was observed by Forskal, and Delile, in the gardens of Egypt, and according to Alpinus, and Forskal mat. med., is employed medicinally; is known to occur springing up spontaneously at Aleppo (Pers.); was observed by Sibthorp, and Chaubard, in waste places from Cyprus to the Peloponnesus; by Forskal, in gardens at Constantinople. Westward, the "borago" is mentioned by Nicolaus Praepositus, and Matthaeus Sylvaticus pand. 42; B. officinalis is described by Gerarde p. 653; is termed "b. floribus cæruleis" by Tournefort inst. 133; was observed by Bertoloni seemingly wild in Italy (A. Dec.); and is known to occur in waste and cultivated ground as far as Britain (Engl. bot. pl. 36). By European colonists, was carried to Northeast America, where it continues "sometimes spontaneous in gardens" (A. Gray) in our Northern States. (See B. Africana).

Asarum Europæum of Europe and the adjoining portion of Asia. Called in Britain *folefoot* or *hazel-wort* (Prior) or from blended synonyms *asarabacca* (Parkins. th. 115), in Germany "haselwurz," in Italy "asaro" (Lenz) or at Verona "baccara" or "bacchara" (Pollin.), in Greece "asarōn" (Sibth.); in which we recognize the "asarōn" identified in Syn. Diosc. with the Egyptian "kĕrĕĕran," the "aima arĕŏs" of the prophets, and ΘΕΣΑΝ of Osthanes: — the "asarōn" is mentioned in 1 Mul. morb.; by Dioscorides as growing mostly in Pontus, Phrygia, and Illyria, in shaded mountainous situations and among its leaves having a flower close to the roots; is also mentioned by Paulus of Ægina: A. Europæum was observed by Sibthorp in the Peloponnesus, also in the environs of Constantinople; and "asarum" root imported from Greece was found by Forskal mat. med. used medicinally in Egypt. Westward, the "asarōn" was further known to Dioscorides as growing among the Ouĕstinōis in Italy; is identified with the "narthōn agrian" in the added Synonyms, and with the "narthōn rōustikōum" or "sōukkinōum" of the Tuscans, and "vakhar" or "pĕripresam" of the Romans; and the account of the "asarum" or "silvestre nardum" by Pliny xii. 27 is only in part taken from Dioscorides; A. Europæum is termed "asarum" by Tournefort inst. 501; is known to grow in wooded situations from Italy throughout middle Europe as far as Denmark (fl. Dan., Pers., and A. Dec.). Eastward from the Mediterranean, the dried root and leaves of "asaroon" according to Moomina are brought from Syria to Hindustan; are enumerated by Ainslie mat. ind. as sparingly used there medicinally; and are called in Sanscrit "oopana," in Hindustanee "tuçkir," in Telinga "cheppoo tatakoo." The plant according to Lindley is called in France "cabaret," because used it is said by drunkards "to produce vomiting," the roots being "purgative, emetic, and diuretic." (See Inula conyza).

"480, in the Spring" (Clint., and others), departure of Xerxes from Sardis, on his memorable Invasion of Greece.

The Indian auxiliaries in the army of Xerxes wore garments of *cotton* "apō xulŏn;" were armed with bows of *bamboo*. "kalamina," the arrows of the same material pointed with iron; and were led by Pharnazathres son of Artabatis — (Herod. vii. 65).

The Ethiopians in the army of Xerxes had spears pointed with the sharp horn of the "thōrkathōs" antelope — (Herod. vii. 68). The fashion continues unchanged, and an African spear pointed with the straight horn of an antelope, is now in the museum at Washington.

Chrysophyllum ?. sp. of Eastern Equatorial Africa. A lofty tree called "chenjha" (Grant); possibly furnishing the wooden portion of the spears in question: — observed by Grant from "5° S. to 3° 15′ N." on the Nile, its wood made into spear-handles, and a sweet drink obtained from its fruit.

Phoenix sp. of Eastern Equatorial Africa. A *wild date*, perhaps furnishing the bows four cubits long of ΦΟΙΝΙΚΟΣ: ΣΠΑΘΗΣ carried by the Ethiopians in the army of Xerxes — (Herodot. vii. 69): observed by Grant growing on the hill-sides, having no known uses, its fruit not edible.

On his way, the *camels* of Xerxes were attacked by *lions* — (Herodot.).

Alchemilla alpina of mountains in Europe and the adjoining portion of Asia. Called in Greece "lĕontōpōthiōn" (Sibth.), a name that seems to have arisen when lion-tracks were familiarly known: — the "lĕontikēn" or "kakalia" described by Dioscorides as growing on mountains, having a straight white stem, ample white leaves, the flower "vruŏ"-like or resembling that of the olive, may be compared: A. alpina was observed by Sibthorp on the Bithynian Olympus and in the Peloponnesus. Westward, the "leontice" or "çacalia" is described by Pliny xxv. 85 as growing almost exclusively on mountains, the seed like diminutive pearls pendent amid large leaves; A. alpina is termed "a. alpina quinquefolii folio subtus argenteo" by Tournefort inst. 508; is known to grow on the Appenines and mountains of middle and Northern Europe as far as Lapland (fl. Lapp. 61, Engl. bot. pl. 244, and A. Dec.) Iceland and Greenland (Hook.).

Achemilla vulgaris of Europe and the adjoining portion of Asia. Called in Britain *lady's-mantle* or *lion's-paw* or *lion's-foot* or *padelion* (Prior); in which we recognize the "leōntōpōthiōn" — or "lĕukēōrōn" or "thŏris" or "thŏriktĕris" or "thōruvĕthrōn" of Syn. Diosc. iii. 100: A. vulgaris was observed by Sibthorp on the Bithynian Olympus and in the Peloponnesus; is known to grow also along the Taurian mountains and as far as the Altaian (Gmel, Bieb., and Ledeb.). Westward,

the "leontopodion" or "leuceoron" or "doripetron" or "thorybetron" is described by Pliny xxvi. 34 as growing in open situations and thin soil, the root "alvum sistit:" the "leonfot" is mentioned in the Anglo-Saxon translation of Apuleius 8: A. vulgaris is described by Tournefort inst. 508; is known to grow "in dry subalpine pastures" from Switzerland as far as the North cape of Lapland. (fl. Dan. pl. 693, Sab., Wats., and Lindl.), Iceland, Greenland, and Labrador in Lat. 57° (Martins, Hook., and A. Dec.). According to Lindley, "the decoction slightly tonic."

Evax pygmaeus of the Mediterranean countries. The Egyptian "thaphnōinēs," or "aima krōkōthĕilōu" or "krōkōmĕriōn" of the prophets, is identified in Syn. Diosc. with the "lĕōntōpōthiōn," — described by Dioscorides as a little herb two fingers-breadth high having leaves four fingers (-breadth) long, whitish and more woolly next the root, blackish flowers in incised terminal heads, seeds not easily seen on account of the enveloping wool, a small root worn as a love-charm and to disperse swellings, and referred here by Fraas: E. pygmaeus was observed by Sibthorp, Chaubard, and Fraas, frequent in the Peloponnesus and on the Greek islands. Westward, the "lĕōntōpōthiōn" or "zōōnuhōn" or "aĕtŏnuhōn" or "kēmōs" or "thamnaměnē" or "ithiōphutōn" or "phutōvasila" or "krōssiōn" or "krōssōphthōōn" is identified in Syn. Diosc. with the "minĕrkiōum" or "nĕōumatōus" or "pallathiōum" or "phlammōula" of the Romans; the "cemos" according to Pliny xxvii. 35, from being used only as a charm will be passed in silence: E. pygmaeus is described by Barrelier pl. 127, is termed "filago maritima capite folioso" by Tournefort inst. 454; and is known to grow in the more Southern parts of Europe (Cav. pl. 36, Desf., and Pers.).

Glaucium phœniceum of the Mediterranean countries. The "lĕōntōpĕtalōn" — described by Dioscorides as growing in cultivated ground, a span or more high with numerous axils, terminal "ĕrĕvinthōis"-like pods containing two or three small seeds, flowers "phōinika" and "aněmŏnē"-like, "kramvē"-like leaves incised as in "mēkōnōs," identified in the added Synonyms with the "lĕōntiōn" or "luhnis agria" or "parthalē" or "rapēiōn" or "mēkōn kĕratitis" or "aněmŏnē," may be compared: G. phoeniceum was observed by Sibthorp, and Chaubard, in vineyards from the Peloponnesus throughout the Greek islands to Cyprus; and by Russel, at Aleppo (Spreng.). Westward, the "lĕōntōpĕtalōn" is further identified in Syn. Diosc. with the "sēmĕn lĕōninōum" or "kōuvilia marina" or "papavĕrkōulōum" of the Romans; the account of the "leontopetalon" or "rhapeion" by Pliny xxv. 72 seems taken from Dioscorides: G. phœnicium is termed "g. hirsutum flore phœniceo" by Tournefort inst. 254, "chelidonium corniculatum" by Linnaeus 724: is known to occur as a weed in Southern Europe, and even as far as London (Curt. lond. vi. pl. 32, and Pers.).

Leontice leontopetalon of the East Mediterranean countries. Called in Greece "tzakrŏ" or "pōurthala" (Sibth.); and possibly the "parthalē" identified in Syn. Diosc. with the "lĕōntōpĕtalōn" — described by Dioscorides, and referred here by Matthioli: L. leontopetalon is termed "leontopetalon foliis costæ ramosæ innascentibus" by Tournefort cor. 49; was observed by Sibthorp, Chaubard, and Fraas, frequent in waste and cultivated ground from the Peloponnesus to the Greek islands; is known to occur also in Asia Minor (Spreng.). Westward, is described by Camerarius 565, and Barrelier pl. 1029; and is known to occur in Italy (Pers.).

Forcing a passage at Thermopylae against the few Spartans under Leonidas, Xerxes entered Athens. His fleet however after successive *naval combats* was totally defeated at Salamis by Themistocles, leaving the "empire of the sea" to the Athenians (Diodor, and Clint.). And before the close of the year, Xerxes with a portion of his army withdrew into Asia.

"On the day of the battle of Salamis" or at least not later (Herodot. vii. 165, Diodor., and Justin xix 2), at Himera in Sicily, the Carthaginians totally defeated, and their leader Hamilcar slain; leaving three sons, Hanno, Himilco, and Gisco.

"In this year" (Diodor., and Clint. ii. p. 340), accession of the Archaenactidae dynasty at Panticapaeum or Bosporus, on the Crimean shore of the Strait leading into the Azof Sea. The city, founded by Milesians, continued under the rule of Greco-Crimean princes; and with the district around, became "the granary of Greece and especially of Athens."

"479 B. C." (Herodot., and Clint.), "ten months" after the occupation by Xerxes, the city of Athens destroyed by Mardonius. In "September," the Persian army under Mardonius defeated at Plataea by the Greeks under Pausanias. — Soon after this victory (Lubke and Lutrow), building of the temple to Minerva on Aegina.

Scandix Australis of the East Mediterranean countries. An Umbelliferous plant called in Germany "östlicher körbel," in Greece "tzilimōnithia" or "kaukatithra" (Fraas) or "skanthiki" (Hon. Bell.): in which we recognize the "skanthix" sold according to scandal by the mother of Euripides — "thiaskanthikisēs" (Aristoph. ach. 454 to ran. 839, Theopomp., Gell. xv. 20, and Plin. xxii. 38): the "skanthix" is mentioned also as a potherb by Opion, Theophrastus vii. 7. 1 to 8. 1, Erasistratus, and the "skanthux" by Dioscorides as spontaneously-growing and eaten either crude or cooked: the "scandix" is further enumerated by Pliny xxi. 52 among the esculent plants of Egypt:

S. Australis was observed by Honorius Bellus eaten on Crete (Clus. hist. 199 to 300); is termed "s. cretica minor" by Tournefort inst. 326; was observed by Sibthorp, Gittard, and Fraas, in cultivated and fallow ground from the Peloponnesus to Caria and Cyprus. Westward, the account of the "scandix" by Pliny seems chiefly taken from the Greeks; but S. Australis is described by Columna ecp. 90, and C. Bauhin prod. 78 (Spreng.); and is known to occur in Austria and Southern France (Crantz, All., Lam. fl. fr., and Pers.).

Scandix pecten of Sicily. Called in Britain *shepherd's needle* or *Venus' comb* (Prior), in Italy "pettine di Venere" or "spilettone" (Lenz), in Greece "agria kaukalithra" (Fraas) or "santhuki" (Sibth.); and possibly connected with the above scandal: the "santhukŏs" herb whose juice dyes garments "sarkŏĕithēs," was discovered by the Lydians — (J. Lydus mag. iii. 64), is mentioned by Democritus (geopon. vi. 19); and the "sandyx" dyeing the fleeces of lambs feeding on it, by Virgil (Plin. xxxv. 23); the cosmetic "paithĕrŏt" of Alexis, Demetrius Poliorcetes, Aelian ix. 9, Athenaeus xiii. 23, and Hesychius, identified with the "caerefolium" by Pliny xix. 54, may also be compared: S. pecten was observed by Sibthorp, Chaubard, and Fraas, in cultivated ground from the Peloponnesus to Cyprus and Constantinople; is known to occur also as far as the country South of Caucasus (C. A. Mey., and Hohen.). Westward, the "akikōulam" or "skanaria" of the Romans is mentioned in Syn. Diosc. ii. 167; the "veneris pectinem" named from resembling a comb, its root according to Pliny xxiv. 114 bruised with "malva" extracting substances imbedded in the flesh: S. pecten is described by Gerarde 884; is termed "s. semine rostrato vulgaris" by Tournefort inst. 326; is known to occur from Algeria Sardinia and Italy as far as Denmark (fl. Dan. pl. 844, Pers., Moris, and Munby), confined to cultivated ground except only in Sicily, where it was observed by Gussone i. 341 in wild situations (A. Dec.).

"The same year" (Pauth. p. 180), death of Khoung-tseu or Confucius, in his "seventy-third year." A "kiai" tree, planted near his tomb by his disciple Tseu-koung — is said to be still standing: and his descendants, much honoured in China, now number many thousands.

"478 B. C." (Diodor., and Clint.), in Sicily, Gelon succeeded by Hiero as king at Syracuse.

"In the Spring" (Herodot., and Clint.), Sestus on the Hellespont surrendered to the Athenians: giving them control of the commerce on the Black Sea. (Herodotus' history here closes; — though an event twenty-four years later, is incidentally mentioned).

Hardly later than this date (Herodot. iv. 43), Sataspes sent by Xerxes to circumnavigate Africa. Sailing from Egypt through the Straits into the Atlantic, he turned Southward and followed the African coast, passing Cape Soloe, and several months beyond reached a district inhabited by dwarfish people clad in "phoinikēiē" palm-leaves and keeping "prōvata" sheep or cattle, and who on a landing being effected abandoned their towns and fled to the mountains (*Hottentot* tribes). More than half the distance remaining unaccomplished and finding his ship could proceed no farther (doubtless on account of the opposing winds and current) Sataspes turned back.

Phoenix reclinata of Subtropical Austral Africa. Possibly affording the "phoinikēiē" in question: — known to grow in the interior region of Austral Africa (Pers.). From transported specimens, described by Jacquin frag. pl. 24.

"477 B. C. = 43d year of Keng-wang" (Chinese chron. table), beginning of the Thirty-seventh cycle.

"The same year" (Diodor. xi. 41, and Clint.), naval dominion having been acquired, beginning of the *ascendancy of Athens* among the States of Greece.

As early perhaps as this year, coins issued by the Macedonian king Alexander. He had accompanied the army of Xerxes but secretly favoured the Greeks; and sent by Mardonius after their naval advantage at Salamis, urged them to make peace. He subsequently warned them of the impending attack at Plataea; — and having proved his Greek descent, was the first of the royal family of Macedonia admitted as competitor at the Olympic games (Sm. b. d.).

His are the earliest *inscribed Greek coins*, and they present the following form of the letter Σ.

"475 B. C." = 1st year of Youan-wang, of the Tcheou or Fifth dynasty (Chinese chron. table).

"In his reign" (Pauth. p. 186), the estates of the prince of Ou seized by Keou-tsien prince of Youe: several members of the dispossessed family retiring to Japan, being descendants of Tai-pe already mentioned. Wishing to punish an officer without disgracing him, Keou-tsien sent a sword with orders to *put himself to death*: the earliest instance of this custom on record.

Saccharum officinarum of the Moluccas? The *sugar-cane* is called in Burmah "kyan" (Mason); and has been known in China from a very ancient period — (A. Dec.): was observed by Mason "exotic" in Burmah; by Kaempfer, and Thunberg, under cultivation in Japan; by Rumphius v. pl. 74, and myself, under cultivation throughout the Malayan archipelago; by myself, on the Feejean Islands, cultivated and a juiceless form overrunning territory in regular cane-brakes, the absence of seeds being the only indication of foreign origin; on Tongatabu, and Taheiti, also inclined to become naturalized without the aid of seeds, but here as well as on the Samoan and Hawaiian

Islands clearly introduced by Polynesians. Westward from Burmah, is called in Sanscrit "ikshoo" or "rusala" or "poondra" or "kanguruka," in Telinga "cherukoo" (Roxb.), in Tamil "karoomboo" (Drur.); and its product *sugar* in Sanscrit "sarkura," in Tamil "sakkara" (Royle), in Bengalee "sharkara" or "bhura" or "chini," in Hindustanee "shakar" or "bura" or "chini" or "khand" (D'roz.): sugar is mentioned in the Institutes of Menu, and the Sama Veda (transl.); "honey made by the hands of confectioners" was known to Herodotus iv.; a kind of reed "yielding honey without the aid of bees" was seen by Nearchus in Hindustan (Strab. xv. i. 20), is mentioned also by Theophrastus fr. 190; "sakharōn" is described by Dioscorides as a kind of concreted honey obtained from reeds in India and Arabia Felix (the living plant already in Yemen), is mentioned also by Pliny, and Galen: S. officinarum was observed by Roxburgh, Graham, and myself, under cultivation in Hindustan, and "the 'bhooroo' reed of which the native pens are made" is according to Graham "common in the Concans:" S. officinarum was observed by Forskal seemingly wild among the mountains of Yemen, and called "muddarjend;" was ascertained by myself at Zanzibar to be cultivated by Negro tribes as far inland as the Monomoizi country; was observed by Baumgarten i. 16, Forskal, and Delile, under cultivation in Egypt; and by Harib in the "Tenth" century, in Spain (A. Dec.). By European colonists, was carried "in 1420" from Sicily to Madeira, thence "in 1503" to the Canaries (Buch), and somewhat later to the Mauritius Islands (A. Dec.); by Columbus, was carried to America (F. Columb. 53), where it continues abundantly cultivated within as well as near the Tropics.

474 B. C. = "12th year of Hesirsa" or Xerxes; the latest date in his reign found on the Egyptian monuments — (C. Mull. fr. Man. p. 596).

"The same year" (Diodor., and Clint.), the Tuscans defeated in *naval combat* by Hiero Greek king of Syracuse.

The wheat-fly, *Cecidomyia destructor*, figured on coins of Metapontum in Southern Italy — (Lee's edit. Keller p. 351). From Europe, the wheat-fly was unintentionally carried by colonists to Northeast America; where in our Middle States, it continues to commit great ravages.

"470, not earlier" (Niebuhr, and Sm. b. d.), Coriolanus banished from Rome finding refuge among the Volscians. — Some ten years later, arriving before Rome at the head of a Volscian army, he was persuaded by his mother and family to withdraw. The account however is regarded as legendary rather than historical.

In this year (= 452 + "18 years reign" of the Mahavamsi iv), Nagadaseka succeeded by Susanaga, now Hindu king. Sahalin is in this place in the Avadana asoka (Burnouf i. 358).

"In or about this year" (C. Mull. geogr. min. i. p. xxii, see Plin. ii. 67), sailing from Carthage of "sixty" ships, containing "thirty thousand" persons, under Hanno, to found and re-establish colonies on the West coast of Africa. "Two days" South of the entrance to the Mediterranean, the new city of "Thumiatēriōn" was built. Passing the "sōlōenta" promontory (Cape Çantin), additional colonists were left in the maritime cities of "Karikōn-tĕihōs, Çuttēn, Akran, Mĕlittan," and "Aramvun." At the river "Lixōn" having procured interpreters, Hanno proceeded South along the "Desert;" and entered a gulf containing a small island which he occupied and named "Kĕrnē" (Herne at the mouth of the Rio do ouro). — Herodotus iv. 195 had heard of gold procured by the Carthaginians at the island of "Kuraunin," and of their trading with African tribes without seeing them; "Kĕrnē" is mentioned by Ephorus, Lycophron, Eratosthenes, Polybius, Cornelius, Diodorus, Strabo, Plinius, C. Ptolemaeus, Nonnus; and at the end of a little over nineteen centuries, gold was procured from the natives and the spot named "Rio do ouro" by the Portuguese navigator A. Gonzalez.

From "Kĕrnē," Hanno proceeded South to a "great river full of *hippopotami* and *crocodiles*" (Senegal); and after re-visiting "Kĕrnē," continued his voyage; the natives everywhere fleeing and shouting unintelligibly to the Lixite interpreters. He next reached large and wooded mountains (Cape Verd), producing trees whose wood was scented and variegated. After "two days" sailing, crossing a wide opening (mouth of the Gambia), the country became level; and fires were seen at night. "Five days" later, he entered a gulf, known to the interpreters as "Espĕrŏu kĕras;" and containing a large island, and within the island a sea-water lake, and within the lake another island (Harang, one of the Bissagos Islands). Woods only were in sight; but at night, there were fires in different directions (kindled by the negroes mainly to keep off wild beasts), and sounds were heard of pipes and drums, mingled with outcries. Continuing beyond, the country was found to be on fire (tall reedy grass becoming dry in autumn and fired by the negroes); and at the end of "four days," a very lofty mountain came into view, called "Thĕŏn ŏhēma" (Mount Sagres, about fifty miles from Sierra Leone). After the next "three days," Hanno entered a gulf called "Nōtōu kĕras" (Sherbro Sound); want of provisions precluding the farther prosecution of the voyage.

On an island in this gulf, hairy or furry "wild men" called by the interpreters ΓΟΡΙΛΛΑΣ were captured, but continuing to resist, were killed and their skins preserved: "toorallas," the Mandingo

name of the *chimpanzee* or small African orang, Troglodytes niger, — is referred here by Hugius (C. Mull. geogr. min. i. p. 13). The skins brought back to Carthage, were kept in the "temple of Juno" until the capture and destruction of the city (Plin. vi. 36).

The name "gorillas" may therefore afford evidence of the *Mandingo language* being already in existence.

"469 B. C." (Clint.), at Athens, Pericles first taking part in public affairs.

"468 B. C. = 1st year of Tching-ting-wang, of the Tcheou" or Fifth dynasty (Chinese chron. table).

About this time, "548–432 B. C." (Scylacean peripl., Theophrast., Hygin., Plin., C. Mull. geogr. min. i. p. 69 and Sm. b. d.), the constellation Hoedi or kids, defined among the stars by Cleostratus of Tenedos.

One hundred and fifteenth generation. May 1st, 467, mostly beyond youth: the Greek poets, Bacchylides, Panyasis, and Epilycus; the comic poets, Ecphantides, Peisander; the tragic poets, Aristarchus, Ion of Chios, Achaeus, Neophron, Cleomachus, and Aristeas; the philosophers, Diagoras of Melos, Archelaus, Melissus, and Hermotinus; the historians, Pherecydes of Athens, Damastes of Sigeum, and Xenomedes of Chios.

Ranunculus flammula of Europe and Northern Asia. Called in Britain *spearwort* (Ainsw.), in Sweden sometimes "æltegræs" (Linn.), and the ΣΑΡΙΣΣΑ herb growing according to Archelaus along a river of Aetolia, its root like a spear, good for short-sightedness — (Stob. 98), or according to Aristotle mirab. 171 along the river Lycorna, resembling a "lōghē" lance-head and good for short-sightedness, may be compared: fragments of R. flammula occur in debris of the ancient lake-villages of Switzerland; the plant is termed "r. longifolius palustris minor" by C. Bauhin pin. 180, and Tournefort inst. 292; was observed by Linnæus in the wooded country as far as Lapland; by Curtis vi. pl. 37, in Britain; by Brotero, in Portugal; by Sibthorp, and Chaubard, in the Peloponnesus; and is known to grow throughout Siberia (A. Dec.). Its leaves according to Lindley are "vesicant," and the distilled water is "said by Withering to be an emetic."

"465 B. C." (Clint.), Xerxes succeeded by Artabanus, fifth Persian emperor. Who reigned "seven months" (according to Manetho); his name has not been found on the Egyptian monuments.

"The same year" (Euseb., and Clint. ii. p. 43), fall of a *meteoric stone* at Aegospotamos on the Hellespont. Recorded by Diogenes of Apollonia: and the opinion maintained by Anaxagoras and others, That the stone "came from the sun" — (Plin. ii. 58, D. Laert., and Theodoret. therap. 4. iv. p. 797).

That *all animals respire*, including fishes and mollusks, maintained by Diogenes, and Anaxagoras; both of whom attempted to explain the respiration of fishes by a portion of air in the mouth (Aristot. respir. 2). — Modern discoveries have shown, the necessity of the water being aerated.

"464 B. C." (Astronom. can., and Clint. ii. p. 380), Artabanus succeeded by Artaxerxes, sixth Persian emperor. The hieroglyphic ovals of Artahesses occur on rocks on the Kosser road; at this time therefore, a route of commercial intercourse with the Red Sea — (Glid. analect.).

"The same year" (Thucyd., and Clint.), revolt of the Helots against the Spartans; and beginning of the Third Messenian war. — The war continued "ten" years.

"460 B. C." (Thucyd., and Clint.), revolt against the Persians of the Egyptians led by Inarus; and aid extended to the insurgents by the Athenians. — The war continued "six" years.

A Greek inscription of this date (= "Ol. 80. 1," Franz) containing the following form of the letter Μ.

458 B. C. = "7th year of Artaxerxes" (Ezr. vii. 6 to 9), a body of Israelites under Ezra, permitted by the Persian emperor to leave Babylon for Jerusalem.

Myrica sapida of the Himalayan mountains. A tree long celebrated by Sanscrit writers, and its exported bark called in Hindustanee "kaephul" (Drur.), in Arabic "dar-shisan" (Royle); in which we recognize the "dar-shisan" identified through Avicenna, and Serapion, with the ΑΣΠΑΛΑΘΟΣ enumerated among spices and perfumes in the Apocryphal book of Sirach xxiv. 15, — referred here conjecturally by Royle (Kitt. bibl. cycl.): "aspalathōs" according to Manetho formed one of the ingredients of the "kuphi" incense (Plut. is. and osir. 80).; seems mentioned by Theophrastus ix. 7. 3 to od. 33 only as a perfume; a tree "aspalathum" growing in the East, is mentioned by Pliny xii. 52 to xxiv. 68; the "dar-shisan," by Maserjawia, Ebn Wahshaneh, Edrisi, Ebn Baitar; and two kinds are distinguished by Persian medical writers (Ulfaz-i-Udwieh 157 to 884 transl. Gladw.). Bark of M. sapida was found by Royle exported in quantities from Nepal into the lower country, and esteemed a "valuable stimulant medecine." (See Spartium villosum, and Genista horrida).

"The same year" (Sm. b. d.), L. Minucius Esquilinus Augurinus and C. Nautius Rutilus consuls, the Roman army hemmed in by the Aequians and Sabines said to have been liberated by the dictator Cincinnatus.

"457 B. C." (Thucyd., and Clint.), the "Long walls," extending from the harbour to the city of Athens, commenced. — In the following year, they were completed.

About this time (. . .), a *geological observation* by Xanthus of Lydia. Who, finding *salt-lakes* in Armenia, Mattiena, and Phrygia, and "stones having the form of shells," concluded that the whole territory "had once been sea."

"456 B. C." (Jahn biblic. archæol.), Anaxagoras, a disciple of Hermotinus, visiting Athens. Contrary to the opinion then prevalent, that matter has always existed, Anaxagoras maintained, That matter and the universe had been created by a god: or (according to Plato phæd. 104), "That it is intelligence that sets in order and is the cause of all things." He also thought that the moon is inhabited, and contains hills and valleys (D. Laert. ii. 8), and were its revolving force to cease, would fall to the Earth like a stone from a sling (Humb. cosm. ii.).

"In this year" (Sm. b. d.), the revolted Egyptians under Inarus defeated by the Persian general Megabyzus. — Herodotus iii. 12 in visiting Egypt, found the battle-field covered with bones and skulls of the slain.

As early probably as this date (Herodot. ii. 32), Etearchus king of the Oasis of Ammon visited by Nasamonians, who stated that some of their young men had crossed the Great Desert, and were carried by dwarfish people whose language they did not understand (Hottentot Race) to a city on the banks of a great river, containing *crocodiles* and flowing from West to East; supposed by Etearchus to be the Nile; — Herodotus ii. 29 further speaks of a great navigable lake "40 + 12" days sail with the current beyond Meroe.

Soymida sp. of Eastern Equatorial Africa. A large Meliaceous tree called "m'bawa" (Grant); and probably furnishing some of the canoes on the Lake and rivers: — observed by Grant in "3° N." on the Nile, and immense canoes made by the Wahiyow from its trunk.

Nov. gen. near Copaifera of Eastern Equatorial Africa. A tree fifty feet high called "miombo" (Grant); and possibly furnishing some of the canoes in question: — observed by Grant from "5° 30′ to 2° 30′ S., alt. 4148 feet," its bark made into boats roofing grain-bins and cloth, and its wood into rafters.

Sterculia tomentosa of Equatorial Africa. A tree called "m'looloma" (Grant); and probably in some instances furnishing the required cordage: — observed by Guillemin and Perrotett in Senegambia; by Grant, in 3° N. on the Nile, the seeds eaten in dearths, and cordage made from the bark of young trees.

Hibiscus (*Abelmoschus*) *heterotrichus* of Eastern Equatorial Africa. Probably in some instances furnishing the required cordage: — received from Africa by E. Meyer; observed by Grant "among vegetation 2° N." on the Nile, and cordage made from its bark; by Bojer, on Zanzibar and the mainland opposite, and on the Comoro Islands. By Bojer, carried to the Mauritius Islands.

Chrysophyllum sp. of Eastern Equatorial Africa. A tree, probably in some instances furnishing the required cordage: — observed by Grant frequent at "3° 15′ N." on the Nile, growing like a huge bush on the face of rocky hills, and ropes made from its inner bark.

Ficus sp. of Eastern Equatorial Africa. A tree called "m'chæræ" (Grant); and possibly in some instances furnishing the required cordage: — observed by Grant from "6° S. to 3° 15′ N." on the Nile, its bark used for bark-cloth and ropes, and birdlime gathered from its trunk.

Sanseviera sp. of Eastern Equatorial Africa. Possibly furnishing a portion of the required cordage: — observed by Grant in Uganda on the Upper Nile, its long leaves yielding beautiful white ropery.

Asphodelus fistulosus of the more Southern Mediterranean countries. Called in Egypt "burak" (Forsk.); and the "anthĕrikŏn" interwoven with "shŏinōus" by the Nasamonians to make portable huts — (Herodot. iv. 190), may be compared ("anthĕrikŏn" according to Dioscorides and Pliny being the stem of "asphŏthĕlŏs"): the "barwak" is mentioned by Ebn Baitar: A. fistulosus was observed by Forskal as far as Cairo growing in the Desert; by Sibthorp, and Bory, on the Greek islands and the Peloponnesus. Westward, is termed "a. foliis fistulosis" by Tournefort inst. 344; and is known to grow in Southern France and Spain (Moris. iv. pl. 1, Cav. iii pl. 202, and Pers.).

"455 B. C." (Thucyd., and Clint.), Ithomē the acropolis of Messene surrendered to the Spartans; terminating the Third Messenian war.

"The same year" (Thucyd., and Clint.), in Egypt, capitulation of the Athenian army, deserted by their insurgent allies; and possession of the country, "the marshes under Amyrtæus" excepted, recovered by the Persians.

"The same year" (Aristot., and Clint.), *logic* invented by Zeno of Elea; and *rhetoric*, by Empedocles. That fire can be kindled by rays of the sun passing through a glass goblet filled with water, also mentioned by Empedocles — (Clem. strom. vi. 17).

The ΚΛΕΨΥΔΡΑ or *water-clock* mentioned by Empedocles (Aristot. respir.), — Aristophanes achar. 693, Eubulus, and Aristotle poet. 7. (See Scipio Nasica).

"454 B. C." (Blair, and Sm. b. d.), mission of the Romans to Athens, to procure the laws of Solon.

452 B. C. (= 443 + his "10th year," in the Mahavamsi iv), Susanaga succeeded by his son Calasoka, now Hindu king. He is called Tulakutchi in the Avadana asoka (Burn. i. 358).

"451 B. C." (Sm. b. d.), at Rome, Appius Claudius Crassinus and T. Genucius Augurinus consuls; and in conformity with a plan adopted on the return of the mission to Greece, decemviri appointed, including the two consuls, and the Laws of the ten tables promulgated.

"450 B. C." (Sm. b. d.), at Rome, decemviri continued, and two additional tables appended, making the Laws of the Twelve tables.

In this year (431 + "about 65 years" of Pamphila = 496, Sm. b. d.), Hellanicus the historian about 46 years old.

Acacia seyal of Nubia. A thorny tree called in Egypt "seyal" (Del.); and the ΑΚΑΝΘΑΙ: ΛΕΥΚΑΙ worn there in garlands according to Hellanicus, as well as the ΜΕΛΑΝΑΙ. kind — (Athen. xv. 24), may be compared: the "akantha lĕukē" is described by Theophrastus iv. 2. 8 as a tree covered with thorns, but its wood is weak and not durable, while on the other hand the "mĕlaina" kind (A. Nilotica) is used for ship-building, and the flowers are coronary: the "sijal" is enumerated by Forskal p lvi as affording charcoal of the best quality; and A. seyal was observed by Granger, Bruce, and Delile, in the Desert between the Nile and the Red Sea from Syene and Thebes to the Valley of the Wandering towards Suez, the thorns white. The "m'salla," to all appearance the same species, was found by Grant along the Nile from 9° N. to 18°, forming forests much broken by elephants feeding on it. The "akanthēs thipsathōs" according to Theophrastus iv. 7. 1 the only tree growing along the Red Sea beyond Coptum, or the "spina sitiens" of Pliny xiii. 50, may also be compared.

"449 B. C." (Sm. b. d. . . .), at Rome, the decemviri illegally continuing in power until the death of Virginia by the hand of her father; when they were deposed and the old form of government restored, Valerius and Horatius being appointed consuls. The power of the plebeians was then increased by the Valeria Horatia laws.

The same year = "16th year of Artaxerxes;" the latest date in his reign on the Egyptian monuments (C. Mull. fragm. Maneth.). The war against the Persians renewed in this year, the Athenians sending assistance to Amyrtaeus. And before its close, death of Cimon commander of the Athenian fleet on the coast of Cyprus (Sm. b. d.).

The ΜΕΛΕΑΓΡΙΔΕΣ of Sophocles — (Plin. xxxvii. 11) is admitted to be *Guinea fowl*, Numida meleagris. Imported (according to the Scylacean Periplus 112, and Mnaseas) only from Pōntiŏn or Crathin, on the African coast outside of the entrance to the Mediterranean; but of course, derived originally from the country South of the Sahara. The "mĕlĕagris" is mentioned also by Aristotle, Clytus Milesius, Menodotus, Pliny, and Athenaeus. Those carried in the festival of Ptolemy Philadelphus at Alexandria (Callixen.) were possibly derived through a new route of supply; for in the time of Browne, Guinea fowl were brought into Egypt by the Darfour caravans.

The ΗΛΕΚΤΡΟΝ associated with "mĕlĕagrithēs," but attributed to India by Sophocles — (Plin. xxxvii. 11), is of course *gum copal*: brought together with the birds from the country South of the Sahara. By Mnaseas, the associated "electrum" is attributed with the birds to the above-named spot in West Africa; and the same source of supply is given by Asarubas (Plin. l. c.). The "succinum indicum containing lizards" seen by Archelaus (Plin. l. c.), is clearly gum copal; carried from the Eastern coast of Equatorial Africa. This gum while flowing often envelopes leaves and insects, which continue visible in its hardened state; and in one instance, a young lizard thus enveloped was shown me.

Psoralea bituminosa of the Mediterranean countries. A leguminous plant called in Greece "agriō triphulli" (Fraas); and the poisonous ΤΡΙΦΥΛΛΟΝ of Sophocles, — prescribed as medicinal by Euryphon 2 morb. 25 to 38, Nicander, Simus, exhaling according to Dioscorides the odour of bitumen, is referred here by writers: P. bituminosa was observed by Sibthorp, Chaubard, and Fraas, frequent in stony places from the Peloponnesus throughout the Greek islands. Westward, the "triphullōn" or "asphaltiōn" or "knikiōn" or "mēnanthēs" or "ōxuphullōn" is identified in Syn. Diosc. with the "triphŏliōum akōutōum ōthōratōum" of the Romans; the "acutum trifolium" is identified by Columella vi. 17. 2 with the "asphaltiōn" of the Greeks; by Scribonius Largus, with the "ōxutriphullōn;" and the "trifolium" called by the Greeks "minyanthes" or "asphaltion" is distinguished as coronary by Pliny xxi. 30 to 88: P. bituminosa is described by Matthioli p. 608, and Dodoens p. 566 (Spreng.); is termed "trifolium bitumen redolens" by Tournefort inst. 404; is known to grow in Italy and other parts of Southern Europe (Pers., and Lenz).

Onopordum Arabicum of the Mediterranean countries. A thistle called by the Arabs of Barbary "suchaha" (Matthioli), in Greece "agkathi" (Sibth.); and the ΓΡΑΙΑΣ: ΑΚΑΝΘΗΣ: ΡΑΡΡΟΣ of Sophocles — (Plut. disp. epicur. 19) may be compared; also the "akantha aravikē" growing

according to Dioscorides in rough uneven places, astringent and resembling in character "lĕukē akanthē," and in the added Synonyms identified with the "akanthin:" O. Arabicum was observed by Sibthorp frequent in Greece. Westward, the "akantha aravikē" is further identified in Syn. Diosc. with the "spina" of the Romans; but the account by Pliny xxiv. 65 of the "spinae arabicae" seems taken from Dioscorides: O. Arabicum is termed "carduus tomentosus acanthi folio altissimus lusitanicus" by Tournefort inst. 441; and is known to grow in Portugal and Southern France (Pers., and Spreng.; see O. Illyricum and Silybum marianum).

Narcissus serotinus of the Mediterranean countries. Possibly the ΚΑΛΛΙΒΟΤΡΥΣ: ΝΑΡΚΙΣΣΟΣ of Sophocles oedip. 682 to 713:—the late-blooming "narkissōs" of Theophrastus vi. 6 is referred here by Fraas; and N. serotinus was observed by him, and Chaubard, frequent in mountainous situations in Greece. Westward, the "sera comans narcissus" of Virgil geor. iv. 122 is referred here by writers; N. serotinus is termed "n. autumnalis minor" by Clusius hist. pl. 252; and is known to grow in Algeria, Morocco, and in various parts of Southern Europe (Desf. i. p. 283, Schousb. i. p. 141, and Pers.).

"448 B. C." (Sm. b. d.), Sacred war between the Delphians and Phocians for the possession of the Oracle and temple: the Lacedaemonians assisting the Delphians, and the Athenians the Phocians.

"In or about this year" (Sm. b. d.), at Athens, a prize for comedy gained by the Archilochi of Cratinus.

Acer creticum of Crete and Greece. A species of *maple* called in Greece "sphĕnthamni" (Fraas) or "sphĕntani" (E. Soph.); in which we recognize the ΣΦΕΝΔΑΜΝΙΝΑΙ of Cratinus,—Aristophanes acharn. 181, Plutarch, and Athenaeus, that of the plains distinguished as "glĕinōs" according to Theophrastus iii. 11: A. Creticum is described by Plukenet phyt. pl. 251; is termed "a. orientalis hederæ folio" by Tournefort cor. 43; was observed by Sibthorp on the mountains of Crete; by Chaubard in the Peloponnesus, and regarded by him as the special maple of Greece; was observed however by Hogg as far West as Sicily. "A. obtusifolium" mentioned also by Tournefort cor. 43, and observed by Sibthorp on the mountains of Crete, is regarded by Chaubard and Fraas as not distinct.

Melilotus Cretica of the East Mediterranean countries. Called in Greece with other species "triphulli" (Fraas): the ΜΕΛΙΑΩΤΟΣ of Cratinus,—and Aristotle, mentioned as coronary by Alexis, and Nicander ther. 897, as remarkable for permanence of odour by Theophrastus caus. vi. 14, the best kind according to Dioscorides growing in Attica and Cyzicum and around Carthage saffron-coloured and fragrant, is referred here by Fraas: M. Cretica is termed "m. cretica fructu maximo" by Tournefort inst. 407; and was observed by Sibthorp, Chaubard, and Fraas, in the Peloponnesus, conspicuous in the spring from the beauty of its fragrant yellow flowers. Westward, is described by Bauhin prodr. pl. 142; and was observed by Desfontaines ii. p. 193 in Barbary.

Ruta graveolens of the Mediterranean countries. Called in Britain *herb of grace* or *rue* (Prior), in France "rue" (Nugent), in Germany "raute," in Italy "ruta" (Lenz), in Greece "pēganŏs," or by the Turks "jaban sedef" (Sibth.); in which we recognize the ΠΗΓΑΝΟΝ of Cratinus,—Aristophanes, Philoxenus of Cythera, Aristophon, Aristotle, Theophrastus, Nicander, Athenaeus ii. 62 to xiv. 50, and "pēganōn kēpĕutōn" of Dioscorides: R. graveolens was observed by Forskal, Sibthorp, Chaubard, and Fraas, from the Peloponnesus throughout the Greek islands to Constantinople, frequent both wild and cultivated; and according to Persoon, and Clot-Bey and Figari, has been long known in the gardens of Egypt. Westward, the "pēganōn kēpĕutōn" is identified in Syn. Diosc. with the "rŏuta ōrtĕnsis" of the Romans; the "ruta" is enumerated by Pliny xix. 45 as long cultivated in Italy, on record under the consulship of Cornelius Cethego and Quintius Flamininus; is mentioned also by Ovid, Petronius, and Martial: R. graveolens is described by Dodoens pl. 119, and Lobel pl. 52; is termed "r. sylvestris major" and "r. hortensis latifolia" by Tournefort inst. 257; was observed by Forskal wild near Marseilles; is known to grow also in Barbary, Italy, and other parts of Southern Europe (Shakesp., Pers., and Lenz), is besides cultivated as far as Britain. Eastward from the Mediterranean, is called "saturee" in the environs of Bombay, where it was observed by Graham "in gardens" but "by no means common;" has however been long cultivated in Hindustan (Ainsl. mat. ind.): was observed by Thunberg in Japan, and called "mats kase so." By European colonists, was carried before 1669 (Josselyn) to Northeast America, where it continues in gardens. The plant according to Lindley was "once in repute as an emmenagogue, antispasmodic and anthelmintic," and "is still used in the form of 'rue tea' in domestic medecine."

Ruta Chalepensis of the East Mediterranean countries. Closely resembling the preceding, but distinguished by its fringed petals, and called in Greece "apēganŏs" (Forsk., and Sibth.) or by the Turks "sendef," in Egypt "sændeb," in Yemen "schedab" (Forsk.), in Egyptian "vatshōutsh"—(transl. Luke, and ms. Borg.), being probably the "pēganōn" cultivated in Palestine of Luke xi. 42: R. Chalepensis was observed by Forskal, and Delile, in the gardens of Egypt, where according to

Delile it has been long known; and by Forskal, under cultivation in Yemen. Farther North, by Forskal in gardens at Constantinople; by Chaubard, in the Peloponnesus; and by Sibthorp, seemingly wild on Zacynthus and other Greek islands. As transported Westward, is distinguished by Tournefort inst. 257, Linnæus mant. 69, and Persoon.

Anthriscus cerefolium of Europe? Called in Britain *chervil*, in Anglo-Saxon "cærfille," in France "cerfeuil" (Prior, and Lindl.), in Germany "kerbel," in Italy "cerfoglio" (Lenz), in Egypt "maqdunis frandji" parsley of Europeans (Forsk.); in which we recognize the "chaerephyllum" identified by Columella xi. 3 with the ΑΝΘΡΙΣΚΟΥ of Cratinus, — or "ĕnthruskōn" of Pherecrates (Athen.), enumerated among potherbs by Theophrastus vii. 7. 1: the "anthriscum" aphrodisiac and restorative, closely resembling "scandix" but the leaves less slender and less fragrant, is enumerated by Pliny xxi. 52 to xxii. 38 among the esculent plants of Egypt: A. cerefolium was observed there in gardens by Forskal, and Delile; and by Forskal, in the environs of Constantinople. Westward, the "caerefolium" is sown according to Pliny xix. 54 at the autumnal equinox, is mentioned also by Palladius iii. 24. 9 to x. 13. 3: A. cerefolium is described by C. Bauhin p. 152 (Spreng.); continues under cultivation in Italy and middle Europe, springing up besides in cultivated and fallow ground as far as Britain (Pers., A. Dec., and Lenz); is according to Lindley "a common potherb with edible roots" (See Scandix Australis, and S. pecten).

Cachrys libanotis of the West Mediterranean countries. The ΚΑΓΧΡΥΣ of Cratinus — (schol. Aristoph. nub. 447), called "livanŏtis" from the frankincense odour of its root, and this root as appears from Dioscorides collected and dried, may be compared: the "kaghruōs" root prescribed in Nat. mul. 29, and 2 Morb. mul. 71, is identified with the "livanŏtis" by Galen: the "livanŏtis karpimōs" of Dioscorides having a large white root, fennel-like leaves spreading on the ground and odorous, and umbels of rounded white seed, is referred here by Matthioli, and Sprengel: the account by Pliny xxiv. 59 of the "rosmarinum" bearing a resinous seed called "cachrys," seems in part taken from Dioscorides: C. libanotis is described by Matthioli p. 375, Dodoens p. 308, and Morison ix. pl. 1; and is known to grow in Sicily and Barbary (Pers., and Spreng.).

Cachrys Cretica of the East Mediterranean countries. Possibly the "kaghrus" of Cratinus: — the "karpimōs livanŏtis" of Theophrastus ix 10 growing in arid stony places and having leaves like "sĕlinŏ ĕlĕiŏ" but much larger, oblong rough white seeds, which with the leaves and root are employed medicinally, is referred here by Sprengel; also the "kaghruōĕssa" and "kaghruphōrōs" of Nicander ther. 40 and 850: C. Cretica is termed "c. cretica angelicæ folio asphodeli radice" by Tournefort cor. 23; is known to grow on Crete (Pers., and Fraas), and was observed by Sibthorp on Cyprus.

Thymus serpyllum of Europe and Northern Asia. Called in Britain *pell-a-mountain* (Prior), in France "serpolet" (Fée), in Germany "quendel," in Italy "sermollino selvatico" or "serpillo" (Lenz), in Yemen "saatar" (Forsk.); in which we recognize the "sĕrpullōum" of the Romans identified in Syn. Dioscor. with the Egyptian "mērōuōpuōs," and the ΕΡΠΥΛΛΟΣ of Cratinus, — Aristophanes pac. 168, Eubulus, Antiphanes, Anaxandrides, Clearchus, Theophrastus vi. 1, Theocritus, Callimachus, Nicander, Dioscorides, and Athenæus xv. 32: T. serpyllum was observed by Sibthorp, and Fraas, frequent on mountains from the Bithynian Olympus to the Peloponnesus and Crete; is known to grow also on the Taurian, Himalayan, and Altaian mountains, and as far as Daouria (Bunge, Ledeb., Bieb., Royle, and Benth.); was observed by Forskal on the mountains of Yemen; and by Schimper, in Abyssinia. Westward, the "serpyllum" is mentioned by Cato 73, Varro, Catullus, Virgil, Columella, and is described by Pliny xx. 90 as growing chiefly in stony places: T. serpyllum is known to grow in Italy and Barbary and throughout middle and Northern Europe as far as Lapland, Iceland, and Greenland (Hook., and Wats.). By European colonists, was carried to Madeira (A. Dec.); to Northeast America prior to 1669 (Joss.), where it has become naturalized in exposed situations; and to other distant countries where I have found it readily acquiring foothold.

Thymus glabratus, regarded as distinct by Hoffmannsegg and Link, and called in Greece "hamōthrōumpi" (Fraas): — the kind of "ĕrpullōs agriōs" having according to Theophrastus vi. 7 a sharp "thumvrŏthē" odour, is referred here by Fraas: T. glabratus was observed by him, and Chaubard, on the mountains of Greece and the Greek islands; and Westward, is known to grow in France (Chaub.).

Phlomis fruticosa of the Mediterranean countries. A shrubby sage-like plant called in Greece "phlōmō" or "sphaka" or "gatharōsphaka" (Sibth.); in which we recognize the ΣΦΑΚΟΝ of Cratinus, — Phrynichus, Eupolis, Alexis, Aristophon, and Athenæus: the "phlōmŏs agria" of Dioscorides iv. 102 having rings around the twigs as in "prasiōn" and the flower yellow, is referred here by writers: P. fruticosa was observed by Sibthorp, Chaubard, and Fraas, throughout Greece and the Greek islands, one of the most frequent shrubby plants in the vicinity of the sea; by Delile, on the Mediterranean border of Egypt. Westward, is described by Matthioli p. 800, and Dodoens p. 146;

is termed "ph. fruticosa salviæ folio latiore et rotundiore" by Tournefort inst. 177; and is known to grow in Italy, Sicily, and Spain (Pers., and Lenz; see Salvia officinalis).

Euphorbia characias of the Mediterranean countries. A kind of *spurge* called in Italy "caracia" or "titimalo caracia" (Lenz), in Greece "phlōmōs" or "galazitha" or "tithumalŏ" (Sibth.); in which we recognize the ΤΙΘΥΜΑΛΛΟΝ of Cratinus, — Phrynichus, the Hippocratic writings, described as red-stemmed by Micion, and Crateyas, and the "tithumalōs arrēn" of Theophrastus ix. 11. 8 identified by Dioscorides with "t. karakias" growing in rough mountainous situations, and red-stemmed with olive-like leaves: E. characias was observed by Sibthorp, Chaubard, and Fraas, frequent in Greece in rough stony places to the height of "two thousand" feet. Westward, the "tithymallus" is mentioned by Columella; and "tithymalus characias" by Pliny xxvi. 39: E. characias is termed "t. characias rubens peregrinus" by Tournefort inst. 85; was observed by Forskal on mountains near Marseilles; and is known to grow in Italy, Sicily, Spain, and as far as middle Europe (Lam. fl. fr., Pers., and A. Dec.).

Muscari comosum of the Mediterranean countries. Called in Germany "schopf-hyaçinthe" (Fraas), in Greece "vōurvōs" or "vōrvōs" or "vōlvō" (Sibth.); in which we recognize the ΒΟΛΒΩ of Cratinus, — Eupolis, Callias, Archestratus, Xenarchus, Theophrastus vii. 13, Heraclides Tarentinus, Athenæus ii. 64, and "vōlvōs ĕthŏthimōs" known to every one according to Dioscorides: of "bulborum" some are eaten crude, as in the Taurian Chersonesus, and the names of six kinds distinguished in Greece are further enumerated by Pliny xix. 30: M. comosum was observed by Sibthorp, Chaubard, and Fraas, from Cyprus and the Peloponnesus to the Bithynian Olympus, flowering at the opening of Spring and the root eaten; by Delile, on the Mediterranean border of Egypt. Westward, next after the "bulborum" of the Taurian Chersonesus those of Numidia in the days of Pliny were most esteemed, the third place being assigned to those of Southern Italy: M. comosum is enumerated by Anguillara p. 119 as eaten in Crete, Corcyra, and Italy; is termed "m. arvense latifolium purpurascens" by Tournefort inst. 347; was observed by Forskal near Marseilles; and is known to grow in waste ground as far as middle Europe (Jacq. austr. pl. 126, and Pers.).

Ophrys ferrum-equinum of the Mediterranean countries. The ΚΟΝΟΠΟΔΑΛΛΟΝ of Cratinus, — worn in garlands by the Spartans according to Clearchus, growing according to Pausanias ii. 35 in the Peloponnesus, its flower large agreeing in colour with the "ŭakinthōs" and in like manner marked with letters, is referred here by Sprengel: O. ferrum-equinum is described by Desfontaines (ann. mus. x. pl. 15).

Lilium Chalcedonicum of the mountains of the East Mediterranean and Tauro-Caspian countries. Called in Greeee "krinōs" (Fraas); in which we recognize the "krinŏn agrĭŏn" or krinanthĕmŏn" or "pōrphuranthĕs" identified in Syn. Diosc. with the Egyptian "iōkrōi," and ΗΜΕΡΟΚΑΛΛΕΙ of Cratinus, — and Athenæus xv, having according to Dioscorides a large bulb-like root, stem and leaves "krinŏ"-like, and on each branch three or four pale flowers resembling those of "krinŏ" beginning to open: the red "krinōn" is mentioned by Theophrastus vi. 6; "lils rouges" were observed by Belon at Constantinople: L. Chalcedonicum is termed "l. Byzantium miniatum" by Tournefort inst. 371; was observed by Sibthorp, and Fraas, in mountain-ravines from Zante to Parnassus; is known to grow also in Persia (Pers.). Westward, the "rubens lilium" called by the Greeks "crinōn" is mentioned by Pliny xxi. 11: the "ēmĕrōkallis" or "ēmĕrōkatallaktōs" or "vōlvōs ō aimatikōs" or "antikantharōn" is identified in Syn. Diosc. with the "avivlavōn" of the Numidians, and "vōulvōum" or "ĕliōum agrĕstĕm" or "ĕliōum marinōum" of the Romans, but is separately mentioned by Pliny xxi. 90: L. Chalcedonicum is known to grow wild in Carniolia, and in a few localities in Italy (Pers., and Lenz).

Lilium bulbiferum of the mountains of Southern Europe. Included perhaps in the "ĕmĕrōkallei" of Cratinus, — and Dioscorides, referred here by Matthioli p. 631: the "krinŏn" producing drops and multiplied by planting them, is mentioned by Theophrastus ii. 2: L. bulbiferum was observed by Fraas on mount Parnassus; and farther East, by Thunberg in Japan (Steud.). Westward, is known to grow in Austria, Italy, and other parts of Southern Europe (Jacq. austr. pl. 226, Pers., and Lenz).

Asphodelus luteus of the Mediterranean countries. The ΑΝΘΕΡΙΚΟΣ of Cratinus, — Phrynichus, Theophrastus vi. 2. 9 to vii. 13. 4, or the "anthĕrix" by boys according to Theocritus i. 52 woven into a trap to catch grasshoppers, is referred here by Stackhouse; "anthĕrikōn" according to Dioscorides ii. 199, and Pliny xxii. 32, being the stem of the "asphōthĕlōs:" A. luteus is described by C. Bauhin pin. 28; is termed "a. luteus et flore et radice" by Tournefort inst. 343; was observed by Sibthorp, and Chaubard, frequent from the Peloponnesus to Parnassus; by Hogg, frequent in the wooded region of Etna; and is known to grow as far as Switzerland (Hall. 1206, and Pers.).

"447 B. C." (Sm. b. d.), at Rome, quaestors, hitherto appointed by the consuls, for the first time elected by the people; M. Geganius Macerinus and C. Julius Julus being consuls.

Probably in "the second half of the fifth century B. C." (Lubke and Lutrow), building of the temple to Neptune at Pæstum in Italy. — The temple there to Ceres, is referred "at the earliest" to "the second century B. C."

"446–5 B. C." (Plut, malign. 26, and Euseb. p. 169), Herodotus reading his historical work at the Panathenaea at Athens.

The Arabs are mentioned by Herodotus iii. 8 as worshipping Dionysus (the god of Sinai) under the name of ΟΥΡΟΤΑΛ (Allahou-Taala" God supreme), and Uranie under the name of ΑΛΙΛΑΤ (Al-alihat" subordinate divinities, Pococke, and Percev. i. 74).

The ΚΕΛΤΟΙ or Celts inhabiting Western Europe, are mentioned by Herodotus ii. 33, — Ephippus, Ephorus, Alexis, Polybius, Strabo, Arrian, and others.

The "ΚΡΟΒΥΖΟΙ on the Ister" mentioned by Herodotus iv. 49 — are regarded by Talvi as probably the Krivitshi; a Slavonian tribe now within the limits of Russia: the "Krōvuzōi" and other Slavi are mentioned by Strabo vii. 6. 5, Pomponius Mela, Pliny, Tacitus, and Claudius Ptolemy iii. 10. The Slavonians are distinctly described and named by Jornandes, Procopius, Menander, and the abbot John of Biclar; and towards the close of the Eleventh century, are found "in possession, partly as masters and partly as servants, of the whole vast extent of territory which they now occupy;" being very nearly half of Europe.

The ΜΑΡΑΓΔΟΣ of Herodotus ii. 44, — or "smaragthōs" of Plato phæd. 110, and Cosmas Indicopleustes xi. p. 339, is admitted to be the *emerald;* derived of course from the emerald mines of Upper Egypt.

The *sturgeon* of the large rivers of Southern Russia is mentioned by Herodotus iv. 53, together with the drying or salting of its flesh. — Isinglass or *fish-glue* "ihthuōcōlla," probably obtained from the sturgeon, is described by Dioscorides, Pliny xxxii. 24, and Aelian.

Nymphæa lotus of Tropical Eastern Asia. A white *water-lily* called in Egypt "naufar" (Forsk.) or "bachenyn el-khanzyr" (Del.): during the inundation of the Nile, according to Herodotus ii. 92, a ΚΡΙΝΟΝ called by the Egyptians ΛΩΤΟΣ makes its appearance in immense quantities and the root and seeds are collected and eaten; nothing is said about the colour of the flowers, — but the white-flowered "lōtōs" of Egypt having a rounded edible root as large as a quince is mentioned by Theophrastus iv. 9 to 11, and Dioscorides: the "bisnin el-hanziri" is distinguished by Ebn Baitar; and its root, though extremely similar, is according to Delile pl. 60 considered inferior to that of the blue-flowered kind (see N. cœrulea): N. lotus was also observed by Alpinus, and Forskal, in Lower Egypt, but to the end of my journey I met with no traces of a living Nymphæa, being as was alleged in the wrong season. N. lotus was observed by Beauvois pl. 78 in Equatorial Africa as far as the Atlantic; was carried also to a lake in Hungary before the days of Waldstein and Kitaibel pl. 15. The leaves are described by Sprengel as downy underneath, agreeing therefore with the "N. pubescens" called "koee" or "kummul" according to Graham in the environs of Bombay, and "very common throughout the Concans during the rains;" observed there by myself, by Rheede xi. pl. 26 in Malabar, by Roxburgh ii. p. 577, and Wight 57, in other parts of Hindustan; by Mason, in Burmah and called "kya-phyoo;" known to grow also on Java and the Moluccas (Rumph. vi. p. 172, and A. Dec.).

Aeschynomene aspera of Eastern Equatorial Africa. Perennial, floating, and called in Malabar "attekudasa," in Tamil "attoonette," in Bengalee "phool-sola," in Hindustanee "shola" or "tola" (Drur.); and the ΦΑΟΙΝΗΝ or ΦΑΟΥΝ of India, harvested according to Herodotus iii. 98 from the river, beaten and woven like basket-work into the form of a corselet, and worn by the fishermen, — may be compared: Ae. aspera was received by Breynius cent. pl. 52 from India (Pers.); is termed "hedysarum lagenarium" by Roxburgh iii. 365, was observed by him abundant in the marshes in Bengal, and the borders of jheels and lakes between Calcutta and Hurdwar; by Wight, and Drury, "in tanks and lakes" in the peninsula, the pith "much used for the manufacture of hats, bottle-cases, and similar articles, it being a bad conductor of heat," is also made up into "fishing-floats," and is gathered "in April and May." Westward, the "solah" of India was observed by Grant in Equatorial Africa, in marshes generally and called "m'pæcee," seven feet high, affording "floats for nets."

Hibiscus (*Abelmoschus*) *esculentus* of Equatorial Africa. The *okro* or *gombo* is called in Burmah "yung-ma-dæ" (Mason), in Bengalee "dhenroos," in Tamil "venday," in Malabar "vendah," in Telinga "benda," in Hindustanee "bhindi" or "ramturi" (Drur.), in the environs of Bombay "bendy" or "ram toorai" (Graham), in Nubia "djyoundou" (Del.), in Congo and Angola "quillobo" (Piso), in Yemen and Egypt "bamia" (Forsk.), in Greece "vamiĕs" (Bory); and the plant growing according to Herodotus iii. 100 spontaneously in India, its capsule with the "keghrōs"-like seeds cooked and eaten, — may be compared: A. esculentus was observed by Loureiro in Anam; by Mason "exotic" in Burmah; by Moon, on Ceylon; by Roxburgh, Wight, Gibson, Graham, and Drury, throughout Hindustan, "a most useful esculent, and much cultivated," used also medicinally as emol-

lient and demulcent; but according to Piddington, has no Sanscrit name. Westward, the "bamiat" is mentioned by Abu'l Abbas Nebati, Abd-allatif, and Ebn Baitar: A. esculentus was observed by Forskal under cultivation in Yemen; by myself, the fruit in market at Mocha; by Schweinfurth iii, to vi, wild on the Upper Nile as well as cultivated by the Bongo; is known to be cultivated in Western Equatorial Africa (fl. Nigr.); was observed by Alpinus, Forskal, and Delile, under cultivation in Egypt; by Forskal, and Bory, cultivated also in Asia Minor and Greece; and was already known to Matthioli pl., and Lobel pl. Through European colonists, was carried from Africa to Brazil before 1658 (Piso ii. 31); reached Surinam before 1686 (Commelyn, and A. Dec.), the West Indies before the days of Sloane, and continues under frequent cultivation in our Southern States.

The ΟΡΓΙΕΜΠΑΙΟΙ living peaceably at the base of high mountains, appealed to in disputes among the neighbouring tribes, wearing the Scythian dress but having a peculiar language, flat-nosed with a large chin and said to be bald from birth both men and women, clearly belong to the *Mongolian* Race.

Cerasus padus of middle Europe and the adjoining portion of Asia. Called in Britain *bird cherry* (Prior), in France "merisier" (A. Dec.), and Erman on the Ural found an edible preparation made of the fruit by the Baschkirs and called "afschui;" in which we recognize the ΆΣΧΥ made by the Orgiempaei of fruit of a tree called ΠΟΝΤΙΚΟΝ, according to Herodotus iv. 23. — Westward, C. padus occurs in remnants of the fruit among debris of the early lake-villages of Switzerland (Troyon); and is known to grow wild in middle Europe (Mill., Engl. bot. pl. 1383, and Lam. fl. fr.). Abounds according to Lindley "in the oil of bitter almonds, and consequently is a dangerous poison." (See Larix Europæa).

Acacia Stephaniana of the shores of the Caspian. The "ashu." — is however referred here by Breyn, and Sprengel gesch. 88: A. Stephaniana is described by Buxbaum, and is known to grow about the Caspian.

Pistacia lentiscus of the wooded portion of the Mediterranean countries. The *mastich* tree is called in France "lentisque" (Fée), in Italy "lentiscio" or "lentischio" (Lenz), in Greece "shinŏs" (Sibth.); in which we recognize the ΣΧΙΝΟΣ of Herodotus iv. 177, — mentioned as a tree by Theophrastus ix. 4. 7, and Dioscorides: gum mastich "mastihē" is mentioned as its product by Theophrastus ix. 1. 2, procured according to Dioscorides of the best quality on Chios; as to the present day, and in especial repute among the Arabs (Tourn. trav., Niebuhr p. 144, and Spreng.): P. lentiscus was observed by Sibthorp, Chaubard, and Fraas, abounding in dry stony soil from the Peloponnesus throughout the Greek islands; is known to grow also in Palestine (Pers.); and may have been once cultivated in Egypt, for Egyptian "mastihē" is mentioned by Galen, and Paulus of Aegina; was seen by Forskal in gardens at Constantinople. Westward, the "lentiscus" is mentioned by Cato vii, Ovid, Columella, Palladius; and by Cicero, and Pliny xviii. 61, as cultivated in Italy: P. lentiscus is termed "l. vulgaris" by Tournefort inst. 580; is known to grow in Istria and Italy (Lenz), abounding on Sicily, and was observed by Fée frequent in Spain. The "sweet fragrant stimulant resin called mastich," as appears from Lindley, continues to be employed "to strengthen and preserve the teeth," much as in the days of Lucian lexiph. p. 191. (See Atractylis gummifera).

Rubia tinctorum of the Mediterranean countries. Called in Britain *madder*, in Old English "madyr," from confusion with the coccus insect (Prior), in France "garance" (A. Dec.), in Italy "robbia" (Lenz), in Greece "rizari" (Sibth.) or by the Turks "alisari" (Fraas), in Yemen "fua" (Forsk.), in Egypt "foūah" (Del.), in Egyptian "sŏphōvi" (Syn. Diosc.); in which we recognize the "rubiam" identified through Pliny with the ΕΡΕΥΘΕΔΑΝΩ used for dyeing a cloak worn by Lybian women in the days of Herodotus iv. 189, — and in the days of Dioscorides cultivated in Caria: the "ĕruthrōthanōn" prescribed in Vict. acut., Steril. p. 20, 1 Mul. morb., and by Nicander, may also be compared, two kinds being enumerated as medicinal by Dioscorides: cloth dyed with madder has been found around Egyptian mummies; and "phōua ĕruthrŏn" is mentioned by Philon Judaeus r. div. her. 491: R. tinctorum was observed by Forskal, Sibthorp, Chaubard, and Fraas, from the Peloponnesus throughout the Greek islands to Constantinople, and under cultivation in and around Attica; by Delile, and Clot-Bey, under cultivation in Egypt; by Forskal, under cultivation on the mountains of Yemen; but the living plant seems unknown in Hindustan, where according to Graham "madder is imported at Bombay from the Red Sea." Westward from Greece, the "ĕruthrōthanōn" is enumerated by Dioscorides as occurring at Ravenna in Italy, and in the added Synonyms is identified with the "lappa minŏr" of the Tuscans, and "rŏuvia passiva" of the Romans; the "rubia" abundantly cultivated in Italy, is mentioned by Pliny xix. 17 to xxiv. 56; the "warentia," in the capitularia of Charlemagne; and the "vermiculum," in "an Anglo-Saxon manuscript of the thirteenth century" (Mayer and Wright 139, and Prior): R. tinctorum is termed "r. tinctorum sativa" by Tournefort inst. 114; was observed by Forskal near Marseilles; is known to grow wild in Southern France as well as in Italy (Pers., Bert. fl. ii. 146, and Lenz): and its cultivation re-

introduced by Althen in the middle of the Eighteenth century, continues successful in France and Germany, and as far as Holland (Gasparin agric. iv. 253, and A. Dec.). The plant according to Lindley is said "to be tonic, diuretic and emmenagogue."

Eleusine coracana of Tropical Africa. A grass called in Tamil "kayvaru" or "kelwaragoo," in Telinga "tamida" or "sodee" or "ponassa," in Bengalee "murooa," in Hindustanee "nacheni" or by the Mohammedans "raggee" (Drur.), in Malwa "mand," in the environs of Bombay sometimes "nagla" (Graham), on Zanzibar "weembi" (heard by myself), in Interior Africa "oolezee" (Grant); and the grain ΣΓΕΡΜΑΤΙ used according to Herodotus iii. 97 both by the Ethiopians and Calantian Indians, — may be compared: E. coracana was observed by myself on Zanzibar, specimens shown as cultivated about the mouths of the Jub under the Equator; by Grant, everywhere on his route, cultivated and yielding flour and coarse beer; was observed by Vesling in 1638 in Egypt, and by Cavallini in 1689 on Malta, but from these two countries has disappeared. Eastward, was observed by Rheede xii. pl. 78 in Malabar; by Graham, "extensively cultivated by the hill people on the slopes of the great range of Ghauts, and forms their principal article of diet;" by Roxburgh, in other parts of Hindustan, but never seen "in a wild state;" and according to Drury, "is the staple grain of the Mysore country" and "perhaps the most productive of Indian cereals." Farther East, was observed by McClelland in Pegu (Mason v. 478); and by Kaempfer, and Thunberg, under cultivation in Japan.

445 B. C. = "20th year of Artaxerxes" (Neh. ii. 1 to vi. 15), Nehemiah "cupbearer" to Artaxerxes, permitted to visit Jerusalem as "governor;" and under his direction, the city-wall rebuilt in "fifty and two days."

"The same year" (Sm. b. d.), at Rome, the Canuleian law; permitting marriage between patricians and plebeians; which had been taken away by the Twelve tables.

"In this year" (Sm. b. d.), the five years' truce having expired, Attica invaded by the Lacedaemonians; and a new truce concluded, to last thirty years.

The ΠΟΝΤΙΑΣ: ΧΕΛΩΝΗ of Crates (Athen. iii. p. 117) is clearly a turtle or *sea tortoise* — possibly Chelonia coriacea known to sometimes enter the Mediterranean.

Brassica campestris of Europe and Northern Asia. Called in Britain *turnip* from the Latin "terrae napus" (Prior), in France "navet" (Nugent), in Germany "rübe," in Italy "turnepi" or "rapa domestica" or "rapa tonda" (Lenz), in Greece "rĕvĕs" (Fraas), in Egypt "lift" (Del.); in which we recognize the "rapa" of the Romans identified through Syn. Diosc. with the ΓΟΓΓΥΛΙΣΙΝ of Crates, — Callias, Aristophanes, Euphron, Polemon, Diocles, having a fleshy root according to Theophrastus i. 6. 6, mentioned also by Dioscorides, Athenaeus ix., Aretaeus, and further identified in Syn. Diosc. with the "goggulē ēmĕrōs" or "goggulitha" or "gōlgōsiōn:" B. campestris was observed by Fraas under cultivation in Greece; by Delile, and Clot-Bey, under cultivation in Egypt; is known to be also cultivated in Syria; and according to Ledebour i. 217 grows wild throughout Siberia. Westward, the "rapum" is mentioned by Cato, Columella, Palladius, and directions for its cultivation are given by Pliny xviii. 35: B. campestris continues abundantly cultivated from Italy and Portugal throughout middle and Northern Europe (Pers., and Lenz), and in Sweden and Russia is found to all appearance indigenous (Fries, and A. Dec.). Southward and Eastward from Egypt, was observed by myself a dry-rooted weed on Zanzibar; is called in Hindustanee "shalgam," in Bengalee "salgram" (D'roz.); was observed by Mason "exotic" in Burmah and called "mung-la-oo-waing;" by Kaempfer, and Thunberg, under cultivation on Japan and called "kabu" or "kabuna" or "busei," or usually "aona;" and through native tribes may have been distributed to the islands of the Pacific, where I found it a dry-rooted weed on the Feejeean, Tongan, and Taheitian groups, and New Zealand. Clearly by European colonists, was carried to Northeast America, where it continues abundantly cultivated; to Peru, and Australia, observed by myself under cultivation in both countries. In Northern climates, the plant is often cultivated solely for the oil from its seeds (A. Dec., and others; see B. napus).

"444 B. C." (Blair, and Sm. b. d.), at Rome, Military tribunes having consular power elected from patricians and plebeians, but through a defect in the auspices compelled to resign; and L. Papirius Mugillanus and L. Sempronius Atratinus appointed consuls.

"The same year" (Clint.), at Athens, Pericles, one of the governors during twenty-five years, now entrusted with the sole direction of affairs. — This continued for the remainder of his life, "fifteen years."

Parietaria officinalis of Europe and the Mediterranean countries. Called in Britain *pellitory* or *paritory of the wall* (Prior), in France "pariétaire" (Nugent), in Germany "glaskraut," in Italy "parietaria" (Lenz), in Egypt "Hasjijet errihh" wind herb (Forsk.) becoming "anemoklĕiti" in Greece, where it is also called "pĕrthikaki," or by the Turks "ya pu can" (Sibth.); in which we recognize the "perdicium" said to have healed Pericles after his fall from the temple he was building, — from which time the herb began to be called "parthenium" (Plin. xxii. 20): the "parthĕniōn" is mentioned by Theophrastus vii. 7. 2 as cooked and eaten; is identified in Syn. Diosc. with the

"ĕlxinē" growing according to Dioscorides on walls and fortifications; and the "perdĭcium" is further enumerated by Pliny xxi. 62 as eaten by other nations besides the Egyptians: P. officinalis was observed by Forskal, Sibthorp, and Chaubard, frequent on rocks and walls from the Peloponnesus throughout the Greek islands to Smyrna; by Hasselquist, in Palestine; and by Forskal, and Delile, in Egypt. Westward, the "pĕrthikiōn" or "parthĕniōn" of the Greeks is identified by Celsus ii. 33 with the "herba muralis;" by Pliny, with the "asteriscum" or "herba urceolaris;" and the "herba urceolaris" is mentioned by Scribonius Largus 39 to 158, Marcellus i. 12 to 36, and P. Vegetius i. 34: P. officinalis is termed "p. officinarum et Dioscoridis" by Tournefort inst. 509; was observed by Forskal near Marseilles; and is known to grow from Italy as far as Denmark (fl. Dan. p. 521, Pers., and Lenz).

"443 B. C." (Clint.), a colony accompanied by Herodotus, and Lysias, sent by the Athenians to Thurium in Italy.

"The same year" (Blair, and Sm. b. d.), at Rome, M. Geganius Macerinus and T. Quinctius Capitolinus Barbatus consuls; the censorship instituted, and L. Papirius Mugillanus and L. Sempronius Atratinus, consuls during the preceding year, appointed censors.

"In this year (= 100 yrs in Budhu-verouse," Mahav., and Mason 39), at Vasali "twenty miles North" from Patna on the Ganges, in the "10th year of Calasoka," meeting of the Second great Budhist council. Calasoka made inquiry "touching the law called Istewirrewade, and Wineya, and committed them to writing."

Of the Budhist cave-temples, some are possibly as early as this date. The painted walls of the series at Adjunta disclose an advanced state of society; respecting which, particulars have already been given in my work on the Races of Man.

Figures of the *Indian cobra* or hooded snake, Naja, occur in the cave-temples at Adjunta, — and in Braminical cave-temples, as witnessed by myself. The worship continues in Hindustan; according to the oral account of a native, for protection against sunstroke and the febrile influence of the sun.

Figures of the *buffalo*, Bos? bubalus, occur in the cave-temples at Adjunta, — and in other cave-temples, Budhist and Braminical, as witnessed by myself: the buffalo is enumerated in the Institutes of Menu among the wild beasts that inhabit the woods (transl. Deslongch.); and in another passage, as sometimes employed instead of the bullock for drawing carts (Mason v. p. 174); is mentioned in the Sama Veda (transl. Stev.); under the name of "Indian taurĕlĕphas," by the pseudo-Callisthenes; as a domestic animal in Hindustan, by Cosmas Indicopleustes xi. p. 334; was seen in Eastern Asia by Marco Polo 118; by myself, from Hindustan throughout the Malayan Archipelago to Luzon, but always in the domesticated state. Westward, is mentioned under the year "388 A. D." by the Armenian chronologer Samuel Aniensis; under its Arabic name "djamus," by Ebn Masawia, Temimi, Abd-allatif, Ebn Baitar, and Allatafet; and was observed by myself in Egypt.

Nymphæa stellata of Tropical Hindustan and Burmah. Distinctly figured in the cave-temples at Adjunta, — and in Braminical cave-temples, as witnessed by myself: the *blue water-lily* is mentioned by Kalidasa kum. i. 47 and raghuv. vi. 65: N. stellata was observed in Hindustan by Rheede xi. pl. 27, Wight, and Graham; and farther East, is enumerated by Mason as indigenous in Burmah and called "kya-nyo." Westward, dried flowers to all appearance of this species were observed by myself in a drug-shop at Mocha: and the living plant has been carried to the Mauritius Islands, where it has become so completely naturalized as to be regarded by Bojer as indigenous.

Musa paradisiaca of the Siamese countries. The *banana* is figured on the walls of the cave-temples at Adjunta, — as observed by myself; has Sanscrit names (Pidd., and A. Dec.); is called in Bengalee "kala" or "kadali," in Hindustanee "kela" or "kadli" (D'roz.); and was seen under cultivation in Hindustan by Rheede i. pl. 12 to 14, Roxburgh cor. iii. pl. 275, and Graham. Eastward, is enumerated by Mason v. p. 449 as "indigenous" in Burmah, "but the wild fruit is too full of seeds to be eatable;" var. "semimifera agrestis" a wild seed-bearing kind, also a cultivated seed-bearing kind, were seen by Loureiro p. 791 in Anam; and M. paradisiaca was found by Finlayson trav. p. 86 wild on the islet of Pulo Ubi at the Southern extreme of Cambodia; the only seed-bearing kind ever met with by myself, was cultivated by the natives of the Samoan Islands: seedless varieties I found especially numerous on the Philippines; and one or more, aboriginally introduced throughout the Tropical islands of the Pacific, the Feejeean, Tongan, Samoan, Taheitian, and Hawaiian Groups. Westward from Hindustan, was observed by myself introduced from an early period on Zanzibar; is mentioned by Mohammed in the Koran (Kasimirsk. vers.), and was seen in Yemen by Forskal; is described under the name of "mauz" by Asmai, Ebn Masawia, Abu Hanifa, Avicenna, Serapion, Abd-allatif, and Ebn Baitar; and was seen at Alexandria in 1520 by a Portuguese pilot, who also met with it on St. Thomas Island in the Gulf of Guinea. From Egypt also, the plant was carried mostly or altogether by Europeans to Malta, the Canaries, Madeira, the Azores, even here (I was informed by Nuttall) in certain situations ripening fruit: from the Canaries, was carried in 1516 by

P. Thomas de Berlangas to the West Indies (Ovied. p. 112, and A. Dec.), and rapidly extending among colonists and natives, was soon cultivated throughout Tropical America.

442 B. C. = "a year after the" Second Budhist council (Mason iii. 39), founding of the city of Prome in Burmah by king Dwattabong.*

"441 B. C." (Blair), the *testudo* and other engines of war, invented by Artemones.

"In this year" (Sm. b. d.), at Athens, the first prize for tragedy gained for the first time by Euripides.

Paliurus aculeatus of the Mediterranean countries. Called in Italy "marruca" or "marruca nera" or "paliuro" (Lenz), in Greece "paliouri" (Sibth.); in which we recognize the ΠΑΛΙΟΥΡΟΣ of Euripides, — Agathocles, Diphilus Siphnius, Theophrastus, Theocritus, Strabo, and Athenaeus xiv. 62, described by Dioscorides as a well-known thorny shrub: P. aculeatus was observed by Forskal, Sibthorp, Chaubard, and Fraas, one of the most frequent shrubs from the Peloponnesus to the Dardanelles; is known to grow also around Caucasus (Pall. fl. Ross. ii. pl. 64); and was observed by Hasselquist near Jaffa in Palestine. Westward, the "paliurus" is mentioned by Virgil, and

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* *Bombax* (*Salmalia*) *insigne* of Burmah. A red-flowered *silk-cotton tree* resembling the first species, from early times furnishing down for stuffing mattresses and pillows: — observed by Wallich, and Mason v. 487 to 520.

Grewia? sp. of Burmah. A tree called "phet-won" (Mason), its wood red-coloured and from early times used for spear-handles, ploughs, and sawn for building: — observed by Berdmore (Mason v. 537).

Dipterocarpus grandiflorus of Burmah. A tree called "en" (Mason), and from early times its timber valued and gum used for torches: — observed by Wallich, and Mason v. 493 to 528.

Murraya may-kay of Burmah. An Aurantiaceous tree called "may-kay" (Mason), and its strong tough wood box-like in grain, known from early times: — observed by Wallich, and Mason v. 534, indigenous in Tavoy.

Sophora robusta of Burmah. A Leguminous tree called "theet-wa-gyee" (Mason), its timber known from early times: — observed by McClelland in Pegu (Mason v. 532).

Syzygium and *Acmena sp.* of Burmah. Woody Myrtaceous plants, more than a dozen species classed under the general name "tha-byæ" (Mason), all affording a small timber used from early times: — observed by Mason v. 533.

Careya sphærica of Burmah. A Gustavioid tree — observed there by Falconer. Regarded by Mason v. 534 to 746 as perhaps the "ban-bwæ" that "furnishes a useful timber for house building."

Lagerstroemia glomerata of Burmah. A tall straight Lythraceous tree called "theet-phyu" (Mason), its compact close-grained wood known from early times: — observed by Mason v. 538.

Lagerstroemia kha-moung-phyu of Burmah. Its name signifying *white jarool*, and its timber used from early times, — though considered inferior to the red kind: observed by Mason v. 538 in Tavoy.

Nauclea? sp. of Burmah. A Cinchonaceous tree called "theet-pa-young" *wax-wood* (Mason), its wood having the colour of bees-wax, and though not durable, straight-grained and from early times used for house-posts: — observed by Berdmore (Mason v. 538).

Millingtonia (*Meliosma*) *simplicifolia* of Burmah. A Bignoniaceous tree, its timber from early times valued from its weight and strength: — observed by McClelland, and Mason v. 535, common at Toungoo: known also to Roxburgh.

Vitex arborea of Tropical Hindustan and Burmah. A small Verbenaceous tree called by the Burmese "htouk-sha" (Mason), and from early times used to make wooden bells: — observed by Mason v. 526 "very common at Maulmain." Westward, is known to grow as far as Hindustan (Drur.), its wood according to Roxburgh becoming when old chocolate-coloured, very hard and durable.

Laurus nitida of Burmah. A tree from early times furnishing the solitary post, to which Termites or white ants will confine themselves in Tavoy houses, in preference to all other kinds of timber: — observed by Mason v. 542.

Laurus kyai-gai of Burmah. A tree, its hard wood from early times used in carpentry: — observed by Mason v. 542 in Tavoy.

Laurus (*Sassafras*) *hman-then* of Burmah. A tree even in odour resembling the sassafras, and from early times its wood used in carpentry: — observed by Mason v. 542.

Myristica amygdalina and *M. Sphærocarpa* of Burmah Two species of *wild nutmeg* — observed there by Wallich. In Southern Burmah, Mason v. 543 met with one or two Myristica trees, their fruit having "none of the aroma of a nutmeg," but the timber "large" and "used by the natives in house carpentry."

Columella, as growing in Italy, and the "zuram" seeds of the Numidians are identified by Pliny xvi. 41 and xxiv. 71: P. aculeatus is termed "paliurus" by Tournefort inst. 616, "p. spina Christi" by Miller; was observed by Forskal near Marseilles; and is known to grow also in Italy and other parts of Southern Europe (Pers., and Lenz).

Satureiâ thymbra of the Mediterranean countries. Called in Greece "thumvrō" or "thrimvē" (Sibth.) in which we recognize the ΘΥΜΒΡΑ of Euripides rhes. 508, — Eupolis, Demochares, Theophrastus, Nicander, Athenaeus, eaten according to Aristophanes nub. 421 and acharn. 254, sometimes cultivated according to Dioscorides, and the "thrumvē" of the Geoponica x. 42; S. thymbra was observed by Honorius Bellus on Crete (Clus. 304); by Sibthorp, abounding on the Greek islands and in Southern Greece, the dried herb bruised and scattered over dishes as seasoning (Walp. p. 244). Westward, the "thymbra" is termed "graviter spirans" by Virgil geor. v. 30, is mentioned also by Columella, and Pliny xix. 50: S. thymbræ is described by Barrelier pl. 898; is termed "thymbra legitima" by Tournefort inst. 197; and is known to grow in Italy, Sardinia, and Tripoli (Pers., Spreng., and Lenz). "Thymus tragoriganum" observed by Alpinus exot. pl. 78 on Crete, by Sibthorp on Cyprus and in Boeotia, is regarded by Bory as not distinct.

Poa pratensis of Europe and Northern Asia. A grass called in Sweden "slater-gröe" (Linn.). The ΠΟΙΑ of Euripides cycl. 333, — or "pua" of Eubulus (Athen.), or "pōa" among later Greeks a term usually employed in a general sense for herb, but the "pōa" properly so called of Theophrastus i. 6. 6 to vii. 8. 3 and caus. iii. 20. 9 is referred here by C. Bauhin pin. 1, under the name of "poa Theophrasti" (Linn.): P. pratensis is described also by Ray syn. 409, is termed "gramen pratense paniculatum majus latiore folio" by Tournefort inst. 521, and is known to grow from Lapland throughout middle Europe (Curt. lond. ii. pl. 5, Pers., Wats., and A. Dec.), also about Caucasus and in Siberia (Georgi, and Kunth); was observed by Linnæus in Sweden; by Sibthorp, and Chaubard, abundant in the meads of the Peloponnesus. Westward, by Hooker on Iceland; by Herzberg, at "57° 20′" near Okak in Labrador (Meyer, and Schlecht. in linn. 1835); grows according to Hooker fl. am. ii. 246 throughout Canada, and according to A. Gray is "indigenous" on the White mountains: farther South along the Atlantic, seeds having been imported with those of other grasses for cultivation, has become abundantly naturalized in our Middle States; was observed by Chapman in our Southern States "mostly around dwellings, introduced;" by Short, in Kentucky; and by Nuttall, on the Arkansas.

Poa trivialis of Europe and Northern Asia. Resembling and probably included with the preceding by the Greeks: — distinguished by the Swedes under the name of "betes-gröe" (Linn.); termed "gramen pratense paniculatum medium" by C. Bauhin pin. ii., theatr. 30, and Tournefort inst. 521, "poa scabra" by Ehrhart; described also by Ray syn. 409, and known to grow from Lapland and Russia to the Mediterranean (Curt. lond. ii. pl. 6, Pers., and Wats.), also in the Tauro-Caucasian countries (Bieb.) and throughout Siberia to Japan (Georgi, and Kunth); was observed by Linnæus in Sweden; by Sibthorp, and Chaubard, in the meads of the Peloponnesus. Westward, by Hooker on Iceland; by Herzberg, at 57° in Labrador (Meyer, Schlecht., and A. Dec.); by myself, in the environs of Salem, brought apparently among imported grass seed; by A. Gray, in "moist meadows" in central New York, "less common and less valuable than the" preceding species, and regarded by him as "naturalized" only.

Boletus luridus of Europe. The "thanasimōs mukēs" on which Euripides wrote an epigram — according to Eparchides (Athen. ii. 56), or the poisonous kind mentioned by Ephippus, Nicander, Dioscorides, and in the Geoponica xiv. 24, may be compared: B. luridus is known to grow in Italy and middle Europe, and is called in Germany "hexenpilz" (Schaeff., Spreng., and Lenz).

The ΜΑΓΝΗΤΙΣ: ΛΙΘΟΣ of Euripides oen. — (Hesych.), prescribed as purgative in Int. affect. 21, and by Rufus Ephesius (Oribas. vii. 26), and described by Theophrastus lap. 41 as a white stone hard enough to be worked, is referred by Daremberg to *carbonate of magnesia*.

"440 B. C. = 1st year of Kao-wang, of the Tcheou" or Fifth dynasty (Chinese chron. table).

"The same year" (Diodor. xiii. 18. 2, and C. Mull. geogr. min. i. p. xxi), war again carried into Sicily by the Carthaginians, now under Hannibal and Himilco son of Hanno. Agrigentum, Gela, and other cities, captured and plundered, and the spoils removed to Carthage.

"The same year" (Sm. b. d.), at Rome famine, and a praefectus annonae first appointed. Sp. Maelius, a wealthy plebeian, employing his fortune in purchasing corn in Etruria, selling at a low price to the poor and distributing gratuitously.

"In this year" (Sm. b. d.), Samos revolting against the Athenians, and defended by the philosopher Melissus; — but in the ninth month subdued by Pericles and his associate generals, including the poet Sophocles.

"439 B. C." (Sm. b. d.), T. Quinctius Capitolinus Barbatus and Agrippa Menenius Lanatus consuls, the pretended conspiracy of Sp. Maelius. L. Quinctius Cincinnatus for the second time appointed dictator, and Sp. Maelius attempting to avoid arrest, illegally slain by the magister equitum.

"438 B. C." (Sm. b. d.), at Rome, military tribunes with consular power holding the place of consuls; revolt of the citizens of Fidena (about "five miles" from Rome), who after murdering the Roman ambassadors ally themselves with the neighbouring Etruscan city of Veii.

"In this year" (Anon de com., Mein., and Sm. b. d.) at Athens now dominant in the affairs of Greece, the prize for comedy gained for the first time by Pherecrates.

Ervum tetraspermum of Europe and Northern Asia. Called in Britain with some similar weeds *tare* (Prior): the ΑΦΑΚΗΝ of Pherecrates, — eaten by sheep according to Aristotle viii. 10, and Phanias of Eresus, enumerated among Leguminous plants by Theophrastus viii. 1. 4 to 11. 1, growing according to Dioscorides in cultivated ground, slender-leaved and taller than "phakōu" lentil, with larger pods and three or four smaller black seeds, mentioned also by Athenaeus ix. 71, and Paulus Aegineta, may be compared: E. tetraspermum was observed by Sibthorp, and Chaubard, in fallow ground from the Peloponnesus to Caria in Asia Minor. Westward, the account of the "aphaca" by Pliny xxvii. 21 seems taken from Dioscorides: E. tetraspermum is termed "vicia segetum singularibus siliquis glabris" by Tournefort inst. 397; is known to occur as a weed throughout middle Europe (Curt. lond. i. pl. 55, and Pers.). Eastward from Greece, was observed by Thunberg in Japan, along roadsides everywhere and called "no iendo." By European colonists, was carried to Northeast America, where it continues in waste ground in our Atlantic States.

Satureja capitata of the East Mediterranean countries. Called in Greece "thumari" or "thumio" (Sibth.), in Egyptian "stĕphanē" (Syn. Diosc.); in which we recognize the ΘΥΜΩ of Pherecrates, — Choerilus of Samos, Eupolis, Aristophanes, Antiphanes, Crates the cynic, Theophrastus, Ariston, Nicander, Athenaeus ii. 60, not growing according to Hegesander so far North as the Hellespont, and according to Dioscorides small and shrubby with heads of purple flowers: S. capitata was observed by Sibthorp, Chaubard, and Fraas, one of the most frequent plants in sunny situations from the Peloponnesus throughout the Greek islands; is known to grow also in Palestine (Pers.), and was observed by Delile on the Mediterranean border of Egypt. Westward, the "thumōs" or "ĕpithumis" or "thursiōn" is identified in Syn. Diosc. with the "mōzōula" of the Dacians, and "thōumōum" of the Romans; the "thymum" is mentioned by Virgil, Celsus, Columella, and from being celebrated for the honey from its flowers was brought from Attica and sown in Italy, the stony plains of Narbon in Southern France being already filled with it in the days of Pliny xxi. 31: S. capitata is described by Matthioli comm. p. 531; is termed "t. capitatus qui Dioscoridis" by Tournefort inst. 196; and has become abundant along the Mediterranean as far as Portugal (Brot., and Spreng.).

Urtica pilulifera of the Mediterranean countries. Called in Britain *Roman nettle*. (Prior), and by a name corresponding to "Roman" or "Italian nettle" in Germany in the days of Gerarde (A. Dec.), in Greece "tziknitha" (Sibth.), in Egypt "kurres" (Forsk.) or "zorbeh" or "fisah klab" (Del.); in which we recognize the "knithē" identified in Syn. Diosc. with the Egyptian "sĕlĕpsiōn," and ΑΚΑΛΗΦΑΙΣ of Pherecrates, — Eupolis, Aristophanes, 3 Morb. 18, cooked and eaten according to Diocles, and Theophrastus vii. 7. 2, and according to Dioscorides having fruit like "līnōspĕrmŏ:" the "knithē" is also mentioned by Euryphon 2 morb. 44 to 68, and Hippocrates vict. p. 688: Pliny xxii. 15 speaks of oil made from the "urtica" in Egypt, and seed imported from Alexandria; and the "korrais" is mentioned by Ebn Baitar: U. pilulifera was found by Forskal, Sibthorp, and Fraas, one of the most frequent plants about dwellings from the Peloponnesus throughout the Greek islands to the Dardanelles; by Forskal, and Delile, as far as Cairo. Westward, the "akaluphē" is identified in Syn. Diosc. with the "thun" of the Dacians, and "ōurtika" of the Romans: the "urtica" is mentioned by Catullus xliv. 15; by Horace, and Apicius, as edible; by Ovid am. i. 417 as "mordax;" by Pliny xxi. 55 as "acetabulis in flore purpuream lanuginem fundentibus:" U. pilulifera is termed "u. urens pilulas ferens prima Dioscoridis semine lini" by Tournefort inst. 535; was observed by Forskal on Malta; and is known to grow in Italy and other parts of Southern Europe (Pers., and Lenz). Farther North, is supposed to have been introduced by the Romans into Britain, occurring near Romney naturalized from time immemorial (Park. th. 441), is termed "a straunge herbe" by Lyte, is considered foreign by Gerarde p. 571, and according to Watson in other localities has appeared and disappeared (Bromf., A. Dec., and Prior).

"437 B. C." (Sm. b. d.), at Rome, M. Geganius Macerinus and L. Sergius (Fidenas) consuls, and M. Aemilius Mamercinus dictator; the citizens of Veii defeated, and Fidena reconquered.

"436 B. C." (Harpocr., and Clint.), at Athens, building of the propylaea on the acropolis.

"435 B. C." (Sm. b. d.), war between the Corcyreans and Corinthians, and the Corinthians defeated in naval combat.

Artemisia arborescens of the East Mediterranean seashore. A large species of *wormwood* called in Egypt "sjæbe" white hair (Forsk.) or "cheybeh" (Del.); and the "artemisia" named after Artemis-Ilithyia, — or according to others after Artemisia wife of Mausolus (Plin. xxv. 36), prescribed in Nat. mul. 29, Superfæt. 19, 1 Morb. mul. 31, growing according to Dioscorides mostly by the sea-

side, a branchy shrub resembling "apsinthiŏ" but with larger and more shining leaves, is referred here by Sibthorp and others: the "shaibah" of gardens is mentioned by Costa, El Gafeki, and Ebn Baitar: A. arborescens was observed by Forskal, and Delile, in the gardens of Egypt; and by Sibthorp, and Chaubard, in beautiful silvery bushes frequent along the seashore of the Peloponnesus and the Greek islands. Westward, the "artemisia" is prescribed by Scribonius Largus 106, and according to Pliny xxv. 81 to xxvi. 89 is both used medicinally and worn as a charm: A. arborescens is described by Dodoens stirp. 21; and Lobel pl. 753; is termed "absinthium arborescens" by Tournefort inst. 457; and is known to grow as far as Italy and Barbary (Pers., and Spreng.). Is enumerated by Lindley among the species that "have been used medicinally." (See A. vulgaris).

One hundred and sixteenth generation. Sept. 1st, 434, mostly beyond youth: the prophet Malachi: the Greek poets, Antimachus of Claros, and Choerilus of Samos; the comic poets, Myrtilus, Lysimachus, Phrynichus, Lycis, Leucon, Lysippus, Aristomenes, Teleclides, Cantharus, Callias, Nicomachus?, Metagenes, Philonides, and Archippus; the tragic poets, Theognis, Nicomachus, Philocles, Agathon, Antiphon, Carcinus, Nothippus, Acestor, Pythangelus, Xenocles, Sthenelus, Morsimus, Melanthius, Morychus, and Iophon; the philosopher, Prodicus of Ceos; the mimographer Sophron; the historians, Antiochus of Syracuse, Stesimbrotus of Thasos, Herodicus, Cratippus, and Herodorus of Heraclea; the orators, Gorgias, and Andocides; the sophist Protagoras; the sculptor, Phidias; the painters, Parrhasius of Ephesus, Panaenus, Polygnotus, Mycon, Pauson, Dionysius of Colophon, Aglaophon, Cephissodorus, Phrylus, and Evenor (Bryan).

433 B. C. = "32d year of Artaxerxes" (Neh. v. 14 to xiii. 6), permission granted by Artaxerxes to Nehemiah governor of Jerusalem, to again visit that city.

"The same year" (Sm. b. d.), at Rome, military tribunes having consular power holding the place of consuls, and M. Aemilius Mamercinus for the second time dictator; the Aemilian law, limiting the duration of the censorship to eighteen months.

"In this year" (Sm. b. d.), arrival at Athens of embassies from the Corinthians and Corcyreans soliciting assistance: and a defensive alliance formed with the Corcyreans.

Brassica eruca of the Mediterranean countries. Called in Britain *rocket*, in France "roquette" (Prior), in Germany "rauke," in Italy "ruchetta" or "ruca" or "eruca" (Lenz), in Greece "aromatōs" or "ĕuzōmatōn" (Sibth.) or "rōka" (Fraas), in Egypt "djærdjīr" (Forsk.), in Egyptian "ĕthrĕkikēn" (Syn. Diosc.); in which we recognize the ΕΥΖΩΜΟΝ of Hippolochus, — the Hippocratic writings, Diocles Carystius, Theophrastus, Dioscorides, Athenaeus iv. p. 130, and Galen fac. alim. ii. p. 639: B. eruca was observed by Sibthorp, Chaubard, and Fraas, from the Peloponnesus throughout Greece and the Greek islands, frequent in vineyards and cultivated ground and eaten as greens; by Alpinus, Forskal, and Delile, in the gardens of Egypt. Westward, the "ĕuzōmōn" is identified in Syn. Diosc. with the "asōurik" of the Numidians, and "ĕrōukam" of the Romans; the "eruca" is mentioned by Ovid, Columella, and Pliny xx. 49: B. eruca is termed "sinapis alterum genus" by Fuchsius 539, "e. latifolia alba." by Tournefort inst. 227; was observed by Lenz in Italy; and is known to occur in waste ground as far as Switzerland and Austria (Bulliard pl. 313, and Pers.), but in Britain perhaps only under cultivation for it is sometimes termed "garden rocket." The seeds according to Lindley "may be substituted for mustard, but are less pungent." (See Sinapis erucoides).

"432, in the Spring" (Sm. b. d.), the Corinthians defeated by the Corcyreans aided by the Athenians. Revolt of Potidaea from Athens, and in the autumn, a general congress of Peloponnesians to decide upon war against that city.

"In this year" (Ptol. math. synt. iii. 2, and Blair), the earliest Greek astronomical observation on record: the summer solstice observed at Athens under the archonship of Apseudes by Meton and Euctemon, on "the twenty-first of the Egyptian month Phamenoth, in the morning, being the 27th of June." Eighteen days later, with "the new moon of the 15th of July," the lunar cycle of nineteen years instituted; called from one of the observers, the *Metonic Cycle*.

"Not before this year" (Lubke and Lutrow), the temple to Jupiter at Olympia in Greece completed by Libon of Elis.

"In this year" (Sm. b. d.), Pericles attacked by the comic poet Hermippus, on the occasion of Aspasia and in connexion with the impending Peloponnesian war.

Chondrilla juncea of Europe and the adjoining portion of Asia. A lettuce-like herb called in Germany "knorpelsalat," in Italy "lattajola" or "lattugaccio" (Lenz), in Greece "agriō mastihia" (Forsk.) or "kōlla" (Sibth.) or "hōnthrōs" (Fraas); and the ΙΤΑΛΙΑΣ ΧΟΝΔΡΟΝ mentioned by Hermippus — (Athen. xiv.), may be compared: "hōnthrŏn" is mentioned also by Aristophanes vesp. 749; the "hōnthrulla," by Theophrastus vii. 11. 4 as not fit for food and its root containing copious acrid juice; by Dorotheus, as good for cooking and for the stomach (Plin. xxii. 45); by Dioscorides, as sometimes called "sĕrithōs agrias," resembling "kihŏriŏ" in stem leaves and flowers but smaller in all its parts, and among its branches exuding a "mastihē"-like gum in grains large as

"kuamiaia;" is further enumerated by Pliny xxi. 52 among the esculent plants of Egypt: C. juncea was observed by Forskal, Sibthorp, and Fraas, frequent in vineyards from the Peloponnesus throughout the Greek islands to Constantinople, and on Lemnos its gum collected. Westward, is termed "ch. juncea viscosa arvensis quæ prima Dioscoridis" by Tournefort inst. 475; was observed by Lenz frequent in Italy; and is known to grow as far as middle Europe (Jacq. austr. pl. 427, and Pers.).

Chondrilla ramosissima of the East Mediterranean countries. Also called in Greece "hōnthrōs" (Fraas), and included perhaps in the "hōnthrōs"—or "hōnthrulla" in question: the "ĕtĕrōn kōnthrillēs" having according to Dioscorides eroded leaves oblong and spreading on the ground, the root slender and full of juice, the stem juicy also and suitable for cooking, is referred here by Fraas: C. ramosissima was observed by Sibthorp, Chaubard, and Fraas, frequent in Attica and Boeotia.

"431 B. C." (Thucyd. ii. 2, and Clint.), commencement of the "Peloponnesian war," against the Athenians.—The war continued nearly "twenty-seven" years.

"August 3d" (Thucyd. ii. 28, and Clint.), an *eclipse*.

"430 B. C." (Thucyd. ii. 47, and Clint.), pestilence at Athens.

"In this year" (Liv., and Sm. b. d.), to avert pestilence, a temple to Apollo first built at Rome. It was dedicated by the consul C. Julius (Mento).

"429, autumn" (Clint.), death of Pericles: after governing Athens "forty" years, the last "fifteen" without colleagues.

Amaranthus blitum of Tropical Arabia. Called in Germany "gemüsamaranth" (Fraas), in France "amarante blette" (Fée), in Italy "biedone" or "blito" (Lenz), in Greece "vlitōn" (Sibth.) or "vlita" (Fraas), in Egypt "fisa klab," in Yemen "schedach" (Forsk.). in Egyptian "riplam" or "ĕhlŏtōrīpan" (Syn. Diosc.); in which we recognize the nickname "vlitomammas" applied to the sons of Pericles—(Muell. note to Festus), also the "vlitōn" or "vlētōn" mentioned by Aristophanes nub. 1001, Theopompus, Antiphanes, Menander, Athenaeus ii. 73, and prescribed by Hippocrates. A. blitum was observed by Sibthorp, Chaubard, and Fraas, frequent in waste and cultivated ground from the Peloponnesus throughout the Greek islands; by Forskal, and Delile, as far as Cairo; and by Forskal, wild in Yemen. Westward, the "vlētōn" is identified in Syn. Diosc. with the "vlēs" of the Dacians, and "vlitōum" of the Romans; the "blitum" is mentioned by Plautus, and Palladius iv. 9. 17, by Pliny xx. 93 as "stomacho inutile" unwholesome food but used medicinally: A. blitum is described by Lobel pl. 250; is termed "blitum sylvestre spicatum" by Tournefort inst. 507; was observed by Lenz in Italy; and is known to occur as a weed as far as middle Europe (Pers., and A. Dec.). Eastward from Arabia, is known to occur in Hindustan (Moquih), and the "A. viridis" observed there by Roxburgh iii. 60, by Graham "a common weed in gardens and cultivated grounds" in the environs of Bombay, no native name being given, is regarded as probably identical. By European colonists, was carried to Northeast America, observed in Virginia (Pers); and by Nuttall in the outskirts of Philadelphia ("A. græcizans" of Willd.); to Cuba, Buenos Ayres, Chili, and Peru (C. Gay, and Moq.); and to Austral Africa (Drège).

Euxolus oleraceus of Hindustan. An allied plant distinguished in Yemen as "schedach hindi" (Forsk.); and possibly included in the "vlitōn" in question:—the "vlitōn" is enumerated among potherbs by Polemon dæt. ii, Theophrastus, and according to Dioscorides is a wholesome esculent of no medicinal use: the "blitum" is enumerated by Alpinus among the esculent plants of Egypt; and an "amaranthus" called "vlitŏn," with leaves not retuse, was found by Forskal cooked and eaten at Smyrna: E. oleraceus is termed "blitum album majus" by Tournefort inst. 507; was observed by Sibthorp in cultivated ground around Constantinople; by Forskal, under cultivation in Yemen. Eastward, has no Sanscrit name (Roxb., and Pidd.), but in the environs of Bombay is called "tamdoolja" or "maat tambree," and "several varieties are commonly cultivated and used as spinage" (Graham); was observed by Roxburgh in other parts of Hindustan; by Mason, "exotic" in Burmah, cultivated and called "hen-ka-nway," or by residents *Nepaul spinage:* the "amaranthus mangostanus" of Blanco, cooked and eaten on the Philippines and called in Tagalo "halon," may also be compared. By European colonists, E. oleraceus was carried to the Mauritius Islands, where it is cultivated and called "brède de Malabar grande espèce," and has become naturalized (Boj.); to Tropical America, where it is also cultivated (A. Dec.).

"429-8 B. C. (= fourth year of 87th Olymp.," Sync., and Sm. b. d.), at Athens, Eupolis first exhibiting comedy.

Cistus villosus of the Mediterranean countries. A species of *rock-rose* called in Greece "kōunōuklia" (Fraas) or "kistari" (Sibth.); in which we recognize the "kistharōn" or "kissarōn" identified through Syn. Diosc. with the ΚΙΣΘΟΝ of Eupolis—(Plut. symp. iv. 1), Mnesimachus, and 1 Morb. mul. 614, usually written "kistōs" by Dioscorides, Galen, Athenaeus ix. p. 403, Hesychius, Aetius, and Paulus Aegineta: the "kistōs arrēn" is distinguished by Theophrastus vi. 2 as having purplish flowers: C. villosus was observed by Sibthorp, and Fraas, abounding from the

Peloponnesus throughout Greece and the Greek islands; and farther South, the "kisth" is mentioned by Avicenna p. 245 (Spreng.). Westward, the male kind of the "cisthon" of the Greeks is described by Pliny xxiv. 48 as having the flower "rosaceus;" C. villosus is described by Matthioli valgr. i. p. 159; is termed "c. mas major folio rotundiore" by Tournefort inst. 259; and is known to grow in Italy, Spain, and Barbary (Desf., and Pers.).

Cistus salvifolius of the Mediterranean countries. Called in Greece "asprōkōunōuklia" or "agria alēsphakia" (Fraas) or "agriō phaskōmēlia" or "kistari" (Sibth.) and included perhaps in the "kisthōn" of Eupolis, — and others: the "kistōs thēlus" is mentioned by Theophrastus, and is distinguished by Dioscorides as having white flowers: C. salvifolius was observed by Forskal, Sibthorp, and Fraas, from the Peloponnesus throughout the Greek islands to Constantinople. Westward, the "cisthon" of the Greeks is described by Pliny as a shrub larger than "thymo" with leaves of "ocimi," the female kind having the flower white: C. salvifolius is termed "c. fœmina folio salviæ elatior et rectis virgis" by Tournefort inst. 259; was observed by Forskal near Marseilles; and is known to grow also in Carniolia, Italy, Sicily, and as far as Switzerland (Pers., and Spreng.).

Pisum sativum of the Crimea and neighbouring countries. Called in Britain *pea* or by old writers *pease* (Prior), in France "pois" (A. Dec.), in Italy "pisello" (Franz), in Greece "pizēlia" (Fraas) or "aukōs" (Sibth.); in which we recognize the ΠΙΣΟΥ of Eupolis, — Aristophanes, Antiphanes, Phanias of Eresus, Theophrastus viii. 3, Athenæus, and Clemens Alexandrinus strom. i. 7, (the *pea-bug*, Bruchus pisi, distinctly mentioned by Theophrastus caus. iii. 27): P. sativum was observed by Sibthorp, Chaubard, and Fraas, from the Peloponnesus to Cyprus, seldom cultivated but occurring as a weed in cultivated ground; by Bieberstein ii p. 151, wild on hills in the Crimea (A. Dec.); and was seen by Alpinus in Egypt. Westward, the "pisum" according to Pliny xviii. 31 was sown in Greece in November, but in Italy and farther North in the Spring; is mentioned also by Virgil geor. i. 74, and Columella: P. sativum is described by C. Bauhin, and Rivinus; is termed "p. hortense majus flore fructuque albo" by Tournefort inst. 394; and is known to be cultivated from Italy throughout middle Europe. (Pers., and Lenz). Eastward from Greece, has a Sanscrit name (Pidd.), is called in Bengalee "matar," in Hindustanee "matar" or "dana" (D'roz.); was observed by Graham "cultivated in gardens during the cold season" in the environs of Bombay; by Roxburgh, and Wight, in other parts of Hindustan; by Mason, "exotic" in Burmah; by Thunberg, under cultivation in Japan and called "wan," or usually "nora name." By European colonists, was carried to Northeast America, where it continues abundantly cultivated.

Ononis Cherleri of the Mediterranean countries. The ΑΙΓΙΠΥΡΟΣ of Eupolis, — employed when plentiful for the caprification of figs, mentioned also by Theocritus iv, and identified by Cratevas with the "anōnis" (Anguill.), may be compared: the "aigipurōs" is described by Demetrius as red-flowered (schol. Aristoph. ran. 310, and Schneid.), by schol. Theocr. as a spiny plant "akanthōthēs" with the leaf "platu" as in lentil "glaukizōusa," good for inflamed ulcers: O. Cherleri was observed by Sibthorp on Cyprus; by Delile, on the Mediterranean border of Egypt near Alexandria. Westward, is termed "a. arvensis hirsuta pusilla viscosa multis siliquis cernuis" by Cupani pl. 17; as observed by him in Sicily; "a. pusilla villosa et viscosa purpurascente flore" by Tournefort inst. 408; was observed by Desfontaines ii. 148 in Barbary; and is known to grow also in Italy, Spain, and Southern France (Bauh. hist. ii. pl. 394, and Pers.).

Ononis antiquorum of Europe and the adjoining portion of Asia. Called in Britain from its strong matted roots *rest-harrow*, in France "arrête-bœuf" (Prior), in Germany "heuhechel," in Italy "bulimacola" or "anonide" (Lenz), in Greece "palamōnitha" or "anonēitha" (Sibth.); and possibly the "aigipurōs" in question: — the "anōnis" is identified through Syn. Diosc. with the "ōnōnis" of Theophrastus vi. 1. 3 to 5. 3 having leaves separate from the thorns, hated by agriculturists, and on account of its roots difficult to extirpate, mentioned also by Nicander, and according to Dioscorides pickled and eaten before the thorns are developed: O. antiquorum was observed by Sibthorp, Chaubard, and Fraas, frequent in cultivated ground from the Peloponnesus throughout Greece and the Greek islands. Westward, the "anonin" or "ononida" is according to Pliny xxi. 58 to xxvii. 12 "aratro inimica," but his further account seems chiefly taken from the Greeks: O. antiquorum is described by Dodoens p. 743, and Lobel ii. pl. 28 (Spreng.); is termed "a. legitima antiquorum" by Tournefort cor. 28; was observed by Lenz in Italy, and is known to grow in other parts of Southern Europe (Pers.). "O. spinosa," termed "a. spinosa flore purpureo" by Tournefort inst. 408, observed by Sibthorp from Zacynthus to Constantinople, and known to occur throughout middle Europe as far as Denmark (ff. Dan. pl. 783, and Pers.), is regarded as probably not distinct.

Artemisia dracunculus of Tartary. Called in Britain *tarragon* (Prior), in France "estragon" (Pers.), among the Arabs "tharkhun;" and the ΤΑΡΙΧΟΣ: ΦΡΥΓΙΟΝ: Η: ΓΑΔΕΙΡΙΚΟΝ of Eupolis, — or "tarihōs phrugiōn" of Antiphanes, the Hippocratic writings, and Athenæus, may be compared: the "tharkhun" is mentioned by Ebn Masawia, Abu Hanifa, Rhazes, Avicenna, Symeon Sethus,

and Ebn Baitar; and A. dracunculus was observed in Egypt by Hasselquist. Westward, the "dragon-tea" is enumerated in the Capitularia of Charlemagne; A. dracunculus is termed "d. hortensis" by Blackwell pl. 116; is known to be cultivated in Southern Europe, and the "leaves and young shoots" employed "as a pickle, or for giving a pleasant flavour to vinegar" (Pers., and Lindl.). Eastward from Greece, was observed by Gmelin ii. pl. 59 and 60 wild in Siberia. By European colonists, was carried to Northeast America, observed by myself under cultivation in our Middle States.

Verbascum sinuatum of the Mediterranean and Tauro-Caspian countries. A species of *mullein* called in Italy "guaraguasco" (Lenz), in Greece "glŏssa" (Fraas) or "phlōmōs" (Sibth.); in which we recognize the ΦΛΟΜΟΝ of Eupolis, — Aristotle, Macrobius, Plutarch symp. iv. 1, and "phlōmōs mĕlaina" of Theophrastus ix. 12. 3, and Dioscorides: V. sinuatum was observed by Forskal, Sibthorp, Chaubard, and Fraas, the most abundant species from the Peloponnesus throughout Greece and the Greek islands, and to the present day employed for killing and capturing freshwater fishes as described by Aristotle anim. viii. 20 (Walp. p. 276, and Spreng.); is known to grow also in the Crimea and as far as the Caspian (Ledeb.); in Syria and on mount Sinai (A. Dec.); was observed by Delile in Egypt, and is enumerated by Clot-Bey and Figari as long known there. Westward, the "phlōmōn" is identified in Syn. Diosc. with the "vĕrvasklōum" or "phēminalē" of the Romans; the "verbascum nigrum femina" is distinguished by Pliny xxv. 73; V. sinuatum is termed "v. nigrum folio papaveris corniculati" by Tournefort inst. 147; was observed by Hogg on Sicily, by Lenz in Italy, by Forskal near Marseilles; and is known to grow in Spain, Algeria, and on the Canary Islands (Pers., and A. Dec.).

Verbascum undulatum of the East Mediterranean countries. Called in Greece "glŏssa" (Fraas) or "phlōmŏs" (Sibth.), and perhaps included in the "phlōmōn" of Eupolis: — the "glŏssan" is mentioned in 2 Morb. mul. 75; the "phlōmōn thēlu" is distinguished by Theophrastus, and Cratevas (schol. Nicand.); and the "phlōmōs lĕukē thēlĕia" having according to Dioscorides "kramvē"-like but more hairy and white or yellowish flowers, is referred here by Sibthorp, and Fraas: V. undulatum is termed "v. græcum fruticosum folio sinuato candidissimo" by Tournefort cor. 8 and trav. i. pl. 128; was observed by Sibthorp, Link, and Fraas, frequent in Southern Greece, and often becoming woody.

Verbascum thapsus of Europe and Northern Asia. Called in Britain *hig-taper* or *mullein*, in old French "malen," in mediæval Latin "malandrium" (Prior), in Germany "königskerze," in Italy "barbarastio" or "tasso barbasco" or "verbasco" (Lenz), in Greece "phlōmŏs" (Sibth.), and possibly included in the "phlōmōn" of Eupolis: — the "phlōmōn arrēn" is distinguished by Theophrastus, Nicander ther. 856, and Cratevas (schol. Nicand.); and "phlōmŏs lĕukē arrēn" having according to Dioscorides oblong and narrower white leaves, is referred here by Sibthorp, and Fraas: V. thapsus was observed by Forskal, Sibthorp, Chaubard, and Fraas, from the Peloponnesus throughout the Greek islands to Constantinople. Westward, the "phlomon" of the Greeks is identified by Pliny xxv. 73 with the "verbascum" of the Romans; V. thapsus is described by Brunfels p. 197, Fuchsius, and Dalechamp (Spreng.); is termed "v. mas latifolium luteum" by Tournefort inst. 146; and is known to grow from Italy throughout middle and Northern Europe almost as far as Lapland (Pers., and Fries). Eastward from Greece, is known to grow throughout the Caucasian, Himalayan, and Altaian mountains as far as Daouria (Ledeb., and A. Dec.). By European colonists, was carried to the Azores (Wats.); to Northeast America (Walt.), where I have found it one of the first foreign plants to acquire foothold in clearings. The seeds according to Lindley "are said to be used by poachers to poison fish."

"427 B. C. (= fifth year of the Peloponnesian war," Sm. b. d.), assistance sent by the Athenians to the Leontines in Sicily. The comic poet Plato first exhibiting — (Cyril, and Sm.).

Cymbopogon schoenanthus of the Moluccas. The *lemon grass* is called in Yemen "m'hah," its imported root in Egypt "edcher" (Forsk.); and the ΣΧΟΙΝΟΥΣ of the comic poet Plato — (Etym. magn.), "ĕuōsmōu" according to the Hippocratic writings (Spreng.), Theophrastus ix. 7, and Dioscorides i. 16, called "shōinōu alĕxanthrinēs" by Damogeron (geopon. vii. 13), "shōinōu anthŏs" by Galen ant. i. p. 70, and "shōinanthŏs" by Aetius, and Actuarius, is referred here by writers: the fragrant "schoenum" is mentioned also by Plautus, and Columella; the "gramen arabum" by Propertius xxix. 17; "juncum odoratum" by Pliny; "squinanthum" by Palladius, Rutilius, and Plinius Valerianus; and the "idschir" by Ebn Baitar: the living plant in the days of Pliny xii. 48 had been found growing in Italy; was known to Theophrastus as growing in Syria; to Dioscorides as growing in Lybia and Arabia, the best brought from Nabathea, and the Arabian kind sometimes termed Babylonian. The root of C. schoenanthus or "juncus odoratus" is enumerated by Alpinus as imported from Arabia into Egypt; comes "from Limbo in Arabia Petraea," according to Hasselquist; and "edcher" or "schoenanthus" root from Arabia, was seen in Egypt by Forskal mat. med.: the plant itself was received by Garcias from Arabia; and was observed by Forskal p. 173 seemingly wild among the mountains of Yemen. Eastward, is called in Hindustanee "akya-ghas," in Bengalee

"agya-ghans," in Telinga "nimma-gaddi" or "chippa-gaddi," in Tamil "vashanap-pullu" or "karpura-pullu" (Drur.); was observed by Rheede xii. pl. 72 in Malabar; by Graham, "cultivated in gardens" in the environs of Bombay; by Roxburgh, Wallich, and Drury, in other parts of Hindustan, covering "large tracts of waste land in Bengal, and its oil regularly exported from Ceylon; by Mason v. p. 501, "exotic" in Burmah and called "sa-ba-len," cultivated "by the natives," and "a decoction made from the leaves" used medicinally; by Bontius, cultivated and seemingly wild on Java; by Blanco, on the Philippines, and called in Tagalo "salai" or "tanglad" or "paja de meca," in Bisaya "baliyoco;" is described also by Rumphius amboin. v. pl. 72; was observed by myself on the Feejeean Islands, planted around native dwellings and occurring besides in wild situations. Transported to Europe, continues under cultivation for its fragrance (Morison iii. pl. 8, Vent., and Pers.); and by European colonists, was carried to Northeast America, observed by myself in gardens in our Northern and Middle States.

"426 B. C." (Blair), pestilence again breaking out in Athens, permission given to the men to marry "two" wives. Socrates among others taking advantage of the privilege.

"425 B. C. = 1st year of Wei-lie-wang, of the Tcheou" or Fifth dynasty — (Chinese chron. table).

"The same year" (Clint. ii. p. 380), Artaxerxes succeeded by Xerxes II.; and after "two months," by Sogdianus, who reigned "seven months." The names of these two Persian emperors, though given by Manetho, have not been found on the Egyptian monuments.

"The same year" (Thucyd. iii. 116, and Clint.), in Sicily, eruption of mount Etna. And in Italy (Sm. b. d.), war between Rome and the neighbouring Etruscan city of Veii suspended by a truce for "twenty years."

Thapsia Garganica of the Mediterranean countries. An Umbelliferous plant called in Greece "pōlukarpōs" (Sibth.) or "ōglēgōra" or "thapsia" (Fraas); in which we recognize the "thapsia" supposed to have been discovered on the island of Thapso, and named accordingly — (Diosc.), prescribed together with its root in Nat. mul. 29, 3 Morb. 17, Superfoet. 19 to 20, Int. affect. 19, and 7 Popular. 39, having according to Theophrastus ix. 9 "marathŏ"-like leaves and a "narthēkŏthē" stem, according to Dioscorides yellow-flowered "anēthŏ"-like umbels, the acrid root with its juice purgative: T. Garganica was observed by Sibthorp, D'Urville, and Fraas, frequent from the Peloponnesus throughout the Greek islands. Westward, the "thapsia" called also "pagkrahōn" or "skammŏniōn" is identified in Syn. Diosc. with the "vōithēn" of the Numidians, and "phĕrōulagŏ" or "phĕrōula silvĕstris" of the Romans; the "thapsia" is mentioned by Celsus v. 18; was used by Nero, and the mode of collecting the juice is described by Pliny xiii. 4, the most virulent growing in Africa: T. Garganica is described by Magnol pl. 286; is termed "th. sive turbith garganicum semine latissimo" by Tournefort inst. 322; and is known to grow at the Southern extreme of Italy and in Barbary (Pers.).

"424 B. C." (Astronom. can., and Clint. ii. p. 381), Sogdianus succeeded by Darius II. Nothus, ninth Persian emperor. Though reigning "nineteen" years (Astronom. can., Maneth., and Diodor.), *his name has not been found on the Egyptian monuments.*

In this year (= 452 — "28 years reign" in the Mahavamsa iv.), the Hindu king Calasoka succeeded by his ten sons, including Baddesenah and Pantchewekeya. Mahamandala holding this place in the Avadana asoca (Burn. i. 359) may prove king Mandelica who harboured the heretical Budhists (see Mahavans. iv. p. 43).

"In this year" (Sm. b. d.), the Athenians defeated by the Thebans at Delium; in the retreat, Xenophon having fallen from his horse was carried on the shoulders of Socrates (Strab., and D. Laert.). The historian Thucydides, not arriving with his fleet in time to save Amphipolis from the Spartans, incurred the penalty of banishment. The first prize for comedy awarded to the Equites of Aristophanes, his first exhibition under his own name; the second prize, to the Satyri of Cratinus; Aristomenes also exhibiting comedy.

Pyrus (. . . .) *aria* of middle Europe and mountains farther South. Called in Germany "mehlbeerbaum," in Italy "lazzerolo montano" or "lazzerolo di montagna" (Lenz), in Greece "trōkkia" (Sibth.); and the ΑΜΑΜΗΛΙΔΕΣ of Aristomenes, — Aeschylides, and Athenaeus xiv. 63, described as not pears, sweet and devoid of a kernel, may be compared: P. aria was observed by Sibthorp append., and Fraas on the mountains of Greece from Pelion to Athos. Westward, the "upomelis" is described by Palladius xiii. 4 as resembling a sorb, its sweetness mingled with "sapore acuto" a tart flavour: berries of P. aria occur in debris of the early lake-villages of Switzerland (Heer); the tree is termed "c. folio subrotundo serrato" by Tournefort inst. 633; was observed by Lenz on the mountains of Italy; is known to grow also on Etna and the Pyrenees (A. Dec.), and throughout middle Europe as far as Denmark (fl. Dan. pl. 302, Crantz austr. i. pl. 2, and Pers.).

"423 B. C. (= 8th year" of the Peloponnesian war, Thucyd. iv. 116 to 133, and Clint.), the temple to Juno near Mycenae burned. A new temple — was erected on the site by Eupolemus, and a statue of Juno made by Polycleitus (Paus. ii. 17), a work of art much celebrated.

Aster amellus of the Mediterranean countries. A species of *aster* called in Italy "amello" or "astro" or "astere attico" (Lenz), in Greece "valtōkratēs" (Fraas); in which we recognize the "astĕriōna" growing along the river of that name and offered in this temple to Juno, its leaves woven in garlands — (Paus.), identified through Syn. Diosc. with the "astĕriskōs" or "astēr attikōs:" the "astĕriskōs" is mentioned by Theophrastus iv. 13; the "astēr" by Nicander fr. ii. 66 to 67 as coronary and placed on temples or images of gods, by Cratevas as employed medicinally (add. Diosc.); and the "astēr attikōs" by Dioscorides as having oblong hairy leaves and a star-like purple and yellow flower split around as in "anthĕmithōs," the fresh plant applied in inflammation of the groin: A. amellus was observed by Sibthorp, and Fraas, in wet ground sometimes saline in Attica and Southern Greece. Westward, the "astēr attikōs" or "uōphthalmōn" or "vōuvŏniōn" is identified in Syn. Diosc. with the "rathĭvitha" of the Dacians, and. "iggunalis" of the Romans; the account of the "aster" or "bubonion" by Pliny xxvii. 19 seems chiefly taken from the Greeks; but the "amellus" of Virgil geor. iv. 271 has a golden flower surrounded with purple rays, is mentioned also by Columella ix. 4. 4: A. amellus is described by Matthioli p. 817 (Spreng.); is termed "a. atticus cæruleus vulgaris" by Tournefort inst. 481; was observed by Lenz throughout Italy; and is known to grow as far as Austria and middle Europe (Jacq. austr. pl. 435, and Pers.).

"In this year" (Meineke, and Sm. b. d.) at Athens, the First prize for comedy gained by Cratinus, and the Second by Ameipsias, over the Nubes of Aristophanes containing an attack on Socrates.

Lithospermum tinctorium of the Mediterranean countries. Resembling the *alkanet* and called in Egypt "sadjaret el arneb" hare's herb (Forsk.): the ΕΓΚΟΥϚΑ of Ameipsias — or "enchusam" by some called "anchusam" but distinguished by Pliny xxii. 25 and identified with the "rhexiam" or "arcebion" or "onochelim" or "onochiles," may be compared: the "ōnōkihlē" is enumerated by Theophrastus vii. 10. 3 among plants continuing a long time in flower from the flowers opening successively; the ōnōhĕitlōs" is mentioned by Nicander ther. 838; the "ōnōhĕilĕs" or "alkiviathiōn" is identified in Syn. Diosc. with the "aghōusa ětĕra" of Dioscorides having smaller leaves similar in roughness, reddish-purple flowers, and long red roots swelling in harvest-time with blood-coloured juice; and the "adsan el arnab" is mentioned by Elgafaki, and Ebn Baitar: L. tinctorium was observed by Chaubard, and Fraas, in Attica and the Peloponnesus; by Delile, near Alexandria; and by Forskal p. 63 in the Desert not far from Cairo, its root red and staining the skin, stem branching from the base but erect, flower "obscure-violacea." Westward, the account by Pliny of the "enchusam" seems in part taken from Dioscorides, but he states that the bruised leaves exhale the odour of "cucumeris," and gives additional medical uses: L. tinctorium was observed by Forskal near Marseilles, is known to grow in other parts of Southern France (Dec. fl. fr.); is distinctly described by Vahl, and Lamarck ill. p. 398; and according to Bory is often confounded with Anchusa tinctoria, furnishing in like manner "orchanette" (see Anchusa tinctoria).

"422 B. C. (= tenth year of the Peloponnesian war," Sm. b. d.), hostilities continuing in Thrace between the Lacedaemonians and Athenians; the Athenian citizens now computed at "twenty thousand." The second prize for comedy awarded to the Vespae of Aristophanes; who, according to some writers, tendered in vain a second edition of his Nubes.

The ΦΑϚΙΑΝΟϚ bird of Aristophanes, is admitted to be the *pheasant*, Phasianus Colchicus. — The "phasianŏs" is also mentioned by Epaenetus, Mnesimachus, Aristotle anim. v. 31, and Agatharchides; and according to Callixēnus (Athen. ix. 37), these birds were carried in the festival of Ptolemy Philadelphus at Alexandria.

The ΚΟΡΙϚ of Aristophanes nub. 630 is admitted to be the bed bug, *Cimex lectularius*. — The "cimex" is mentioned by Catullus, Horace, Pliny, and Martial; and the "lectuli bestias," by Tertullian adv. Marcio. i. 14. C. lectularius continues to be well known in Egypt and throughout Europe; and by European colonists, has been carried across the Atlantic to America and other countries.

Onobrychis crista-galli of the Mediterranean countries. Called on Cyprus "trivōuli" (Sibth.); and possibly the ΤΡΙΒΟΛΟϚ of Aristophanes lys. 576: — both kinds of "trivōlōs" according to Theophrastus vi. 5. 3 have spines on the pericarp, and the seed of the autumnal kind is rounded and contained in a pod: O. crista-galli was observed by Sibthorp from the Peloponnesus and Cyprus to Constantinople; and by Delile, near Alexandria on the Mediterranean border of Egypt. Westward, is termed "o. seu caput gallinaceum minus fructu maximo insigniter echinato" by Tournefort inst. 390; and is known to grow in various parts of Southern Europe (Pers.).

Anagyris foetida of the Mediterranean countries. Called in Greece "azōgĕra" or "anthravanŏ" or "anaguri" (Sibth.); in which we recognize the ΑΝΑΓΥΡΟΝ of Aristophanes lys. 735, — Aeschines, Demosthenes, a proverb preserved by Zenobius ii. 22, described by Dioscorides as an arborescent strong-scented shrub having "agnŏ"-like twigs with fruit in long horns, reniform, and in the added Synonyms identified with the "agnakōpōn" or "akōpōn;" A. foetida was observed by Fors-

kal, Sibthorp, Chaubard, and Fraas, frequent from the Peloponnesus throughout the Greek islands to Smyrna; and by Forskal, in gardens at Constantinople. Westward, the account by Pliny xxvii. 13 of the "anagyros" or "acopon" seems taken from Dioscorides: A. foetida is described by Tournefort inst. 647; was observed by Gussone i. 477 on Sicily; and is known to grow wild in Italy and other parts of Southern Europe (Pers., Spreng., and Lenz). The seeds according to Lindley "said to be poisonous."

Verbascum Limnense of the East Mediterranean countries. A species of *mullein* called in Greece "manoula" or "phitilĕa" (Fraas); and the ΘΡΥΑΛΙΣ lamp-wick of Aristophanes nub. 60, — "thruallis" plant of Theophrastus vii. 11. 2, and Nicander, identified by Dioscorides with the "phlomis luhnitis" having three or four or more hairy leaves and furnishing lamp-wicks, is referred here by Fraas: V. Limnense is described by him as observed near Limni in Euboea.

Salvia officinalis of the Mediterranean countries. Called in English gardens *sage*, in France "sauge" (Prior), in Germany "salbey" (Fraas), in Italy "salvia" (Lenz); in which we recognize the "salviam" called in Greek "elelisphacon" by herbalists of the time of Pliny xxii. 71, the "elelisphacos" of the Greeks being sometimes called "sphacos:" the garden ΣΦΑΚΟΣ of Aristophanes thesm. 486, — and Theophrastus vi. 1. 4 to 2. 5, seems therefore to correspond: S. officinalis was observed by Sibthorp in rugged places in Greece, bearing edible galls like S. pomifera, but according to Fraas is very rare; by Delile, near Rosetta on the Mediterranean border of Egypt; and according to Clot-Bey has besides been recently introduced. Westward, the "salviatum" potion is mentioned by Columella; the "salviam" is described by Pliny as resembling "mentae" hoary and fragrant; is mentioned also by Macer Floridus: S. officinalis is termed "s. major" by Tournefort inst. 180; is known to grow wild in Italy and other parts of Southern Europe (Etling salv. 1, Pers., and Lenz), is besides cultivated there and throughout middle Europe. By European colonists, was carried to Northeast America, where it continues under cultivation; to Hindustan, observed by Graham "in gardens" at Bombay but no native name is given; to Burmah, observed by Mason "exotic" but no native name is given. The leaves according to Lindley are much employed in cookery, and tea made of them "has the reputation of being a stomachic." (See S. pomifera, and Phlomis fruticosa).

Chenopodium olidum of Europe and the adjoining portion of Asia. A fetid species of *goosefoot* called in Germany "stoltz heinrich" (Trag.), in France "vulvaire" (Nugent); and the ΨΕΥΔΑΤΡΑ ΦΑΣΥΝ of Aristophanes eq. 630 — is referred here by Hase: C. olidum was observed by Sibthorp, and Chaubard, in waste and cultivated ground from the Peloponnesus to Constantinople. Westward, the term "blitea meretrix" used by Plautus truc. is supposed by Tragus to refer to this plant: C. olidum is described by Cornelius Petrus (Spreng.), Dodoens 616, and Bauhin; is termed "atriplex canina" by Tragus ii. 57, "ch. foetidum" by Tournefort inst. 506, "ch. vulvaria" by Linnæus; and is known to occur along roadsides and in cultivated ground throughout middle Europe as far as Denmark (fl. Dan. pl. 1152, Engl. bot. pl. 1034, Woodv. pl. 145, and Pers.). The plant was found by Chevallier exhaling pure ammonia during its whole existence, and according to Lindley "is still employed as an antispasmodic and emmenagogue, and is constantly to be found" in London herb-shops.

Juniperus nana of Europe and the adjoining portion of Asia. The ΚΕΔΡΙΣ berry of Aristophanes thesm. 493, —, or "kĕthris" shrub described by Theophrastus i. 9. 4 to 12. 1 and caus. vi. 14. 4 as small and never becoming a tree, its fruit fragrant and though acrid grateful to the palate, (translated "cedrula" by Gaza), is referred here by Sprengel: a tree in Arcadia resembling the "cedro" and called in Phrygia "frutex," is mentioned by Pliny xiii. 11: J. nana is described by Pallas ross. ii. pl. 54; is known to grow in Sweden (Wahl.), Siberia, and on the Saltzburg and Styrian Alps (Pers.), but has not been observed by modern travellers within the limits of Greece.

Juniperus rufescens of the Mediterranean countries. A little-known species called in Greece "kĕthrŏs" (Lenz), and possibly the "kĕthris" in question: — J. rufescens is described as "very like" J. macrocarpa; is known to grow in Bithynia (Lenz), Thrace and Macedonia (Daub.), and was observed by Link in Portugal.

Imperata cylindrica of Tropical Asia. A reedy grass called in Greece "thĕmatia" or "thĕmatŏhŏrtŏn" (Fraas), in Egypt "halfeh" (Del.); and the ΦΑΕΩΣ of Aristophanes ran. 244, — Aristotle, Theophrastus iv. 10 to 11. 12, Pollux, mentioned by Dioscorides i. 114 as a kind of "kalamŏn," is referred here by Fraas: I. cylindrica is termed "gramen tomentosum creticum spicatum spica purpurea" by Tournefort cor. 39, "lagurus cylindricus" by Linnæus, "saccharum cylindricum" by Lamarck, its spike according to Persoon "nivea lanata;" was observed by Sibthorp, Chaubard, and Fraas, abounding in moist places in the Peloponnesus and Attica; by Forskal p. 23, and Delile, from Alexandria and Rosetta to Cairo; is known to occur also in Barbary, Italy, Southern France, and Spain (Cyrill. rar. ii. 2. pl. 11, and Cav. iii. pl. 2). Eastward from Syria, was observed by Law "common in Guzerat" (Graham); by Roxburgh, and Royle, in other parts of Hindustan; by Mason v. p. 524, indigenous in Burmah and called "thek-kay-nyen," one of the two grasses employed in the

Interior to thatch native dwellings; by Blanco, extending itself over the Philippines and called in Tagalo and Bisaya "cogon," in Camarines "cogon cogon," in Pampango "ilib" or "balili;" is described also by Rumphius amboin. vi. pl. 7; was observed by myself throughout the Malayan archipelago, white-spiked and springing up spontaneously, and in clearings from the Feejeean as far as the Samoan Islands.

"421 B. C." (Sm. b. d.), at Rome, N. Fabius Vibulanus and T. Quinctius Capitolinus Barbatus consuls, the number of quaestors increased from two to four.

"420 B. C." (Sm. b. d.), at Rome, military tribunes having consular power holding the place of consuls. Farther South, the Greek city of Cumae (on the bay of Naples) captured by the Campanians, people of the country around.

"418 B. C." (Sm. b. d.), the Athenians defeated in battle at Mantineia, Argos now joining in alliance with Sparta. Perdiccas II. having also joined in alliance, hostilities were renewed between him and the Athenians.

Campanula versicolor of the East Mediterranean countries. A species of *bell-flower* called in Greece "haritzia" (Sibth.); in which we recognize the ΧΑΡΙΣΙΟΝ growing along the Eurotas in the spring, and suspended by women on the neck to increase the affection of the men, according to Cleanthes mont. i, — Sosthenes of Cnidus, and Hermogenes (Plut. fluv. 17. 4): the "harien" of Mul. morb. 109, may also be compared: C. versicolor was observed by Sibthorp, and Chaubard, from the Peloponnesus to Thessalonica: and from transported specimens, is described by Andrews repos. pl. 396.

"417 B. C. = 9th year of Wei-lie-wang" (Chinese chron. table), beginning of the Thirty-eighth cycle. At this time, the men of the principality of Thsin wearing their swords on the side attached to a girdle; a custom borrowed by the Thsin family from the Tartars: *walls* were also built as a barrier against the Thsin, by the princes of Wei and Tchou on their own frontiers (Pauth. 186).

"416 B. C." (Sm. b. d.), unjust expedition against the Melians: who were barbarously punished by the Athenians through a decree proposed by Alcibiades.

Hardly later than this date (Soran., and Sm. b. d.), the physician Euryphon summoned to the court of Perdiccas II. in Macedonia. Euryphon was aware of the difference between *arteries* and veins, and considered the former as also containing blood — (Aurel. morb. chron. ii. 10). He is mentioned by the comic poet Plato (Gal. comm. in Hippocr. vii. 44).

Sisymbrium irio of Europe and the adjoining portion of Asia. Called in Britain *rock gentle* or *rock-gallant* (Ainsw.), or *London rocket* from springing up abundantly among the ruins left by the great fire of 1667 (Ray 297, and Prior); and the ΕΡΥΣΙΜΟΝ: ΛΕΙΑ of 2 Morb. 52, written by Euryphon — (as appears from an extract in Galen), may be compared: the "ĕrusimōn" is described by Theophrastus viii. 1. 4 to 7. 3 and caus. ii. 12. 1 as fatty, having very small seeds, and sown together with "sēsamōn;" and the "erysimum" of Asia and Greece according to Pliny xviii. 22 differs from the "irionem" only in being "pinguius" and is medicinal rather than esculent: S. irio was observed by Sibthorp in the Peloponnesus; by Delile, growing about Cairo; and by Forskal p. 118, among the mountains of Yemen (Steud.). Westward, the "erysimon" is prescribed by Celsus: S. irio is termed "erysimum latifolium majus glabrum" by Tournefort inst. 228; was observed by Lenz in Italy; is known to occur along walls and in cultivated ground throughout middle Europe (Jacq. austr. pl. 322, Lam. fl. fr., and Pers.), in Britain appearing in profusion after the removal of soil near Berwick in 1847 (A. Dec.), occurring also in other localities, but regarded by Watson as not indigenous. "*S. altissimum* caule non hispido" observed by Forskal near Marseilles, edible and called "roquettes sauvages," may also be compared (See S. polyceratium).

Hypericum crispum of the Mediterranean countries. Called in Greece "agōuthōura" or "skōuthritza" or "upĕrikōn" (Sibth.); in which we recognize the ΥΠΕΡΙΚΟΝ of Euryphon 2 morb. 52 and 62, — of 1 Morb. mul. 610, Niger, growing according to Dioscorides præf. and iii. 161 in rugged places and cultivated ground: H. crispum was observed by Sibthorp, Chaubard, and Fraas, frequent in waste and cultivated ground throughout Greece and the Greek islands. Westward, the "hypericon" is identified in Syn. Diosc. and by Pliny xxvi. 53 and 93 with the "chamaepytin" or "corion:" H. crispum is described by Boccone mus. ii. pl. 12; is termed "h. crispum triquetro et cuspidato folio" by Tournefort inst. 255; and is known to grow in Southern Italy, Sicily, and Barbary (Desf., Pers., and Lenz).

Saponaria officinalis of Europe and the adjoining portion of Asia. Called in Britain *soapwort* or *fuller's herb* (Prior), in France "saponaire" (Nugent), in Germany "seifenkraut," in Italy "saponaria" and its root used as soap (Lenz), in Greece "sapōunōhōrtōn" or "kalōstrōuthi" (Fraas), by the prophets "halirutōn," in Egyptian "ōinŏ" (Syn. Diosc.); in which we recognize the ΣΤΡΟΥΘΙΟΝ of Euryphon — (Soran. Ephes. mul.), growing on the shore of Andros and its root and fruit prescribed in Nat. mul. 29, Superfœt. 19, and 1 Morb. mul. 104, employed according to Dioscorides medicinally as well as for washing wool, mentioned also by Lucian alexand. 12, and

Galen: the "strŏûthŏs" with which linen is whitened, mentioned by Theophrastus ix. 12. 5, is read "struthiŏ" by Dioscorides (but translated "speciem passerum præbentibus" by Pliny xx. 79): S. officinalis is figured in the Vienna manuscript Diosc. (Harl. and Cockayne); was observed on Andros by Fraas; and by him, Forskal, Sibthorp, and Chaubard, frequent in moist places along hedges from the Peloponnesus to Asia Minor; "struthium" root from Greece was found by Forskal mat. med. employed medicinally in Egypt; and the living S. officinalis according to Clot-Bey has recently been introduced. Westward, the "strŏuthiŏn" or "strŏuthiŏkamēlŏs" or "katharsis" or "hamairutŏn" is identified in Syn. Diosc. with the "suris" of the Numidians, and "erva laria" or "rathix anaria" of the Romans; by Pliny xix. 18 and xxiv. 58 with the "radicula" used for washing wool, growing "sativa" everywhere, and having a large root but no seeds (the many-petalled form?); the "radix lanaria" is mentioned by Columella xi. 2. 53; the "struthio" is prescribed by Celsus 18 to 22, and in the time of Macer Floridus 26 was commonly called "ostruthium:" S. officinalis is regarded as introduced into Britain after the departure of the Romans and before the discovery of America (A. Dec.); is described by Brunswygk, Ruel, Fuchsius, Lobel, and Gerarde p. 360; is termed "lychnis sylvestris quæ saponaria vulgo" by Tournefort inst. 336; was observed by Lenz in Italy, and is known to occur along roadsides as far as Denmark (fl. Dan. pl. 543, Pers., and Fries); is besides sometimes regularly cultivated (A. Dec.). By European colonists, was carried to Northeast America, where it continues chiefly near dwellings in our Northern, Middle, and according to Chapman our Southern States. (See Imperatoria ostruthium).

Silene inflata of Europe and the adjoining portion of Asia. Called in Britain *bladder campion* or *ben* or *white ben* or from froth of an insect infesting it *spatling poppy* (Prior), in Germany "klatschnelke" (Fraas), in Greece "phŏuskŏuthia" or "kŏukaki" or "strŏuthŏula" (Sibth.); and possibly the "strŏuthiŏn" in question: — the "struthion" of Pliny xix. 18, wild in stony places in Asia and Syria, the best in quality beyond the Euphrates, its stem slender and eaten and leaves like those of the olive, may also be compared: the "mĕkŏn ērakliĕia" whose root according to Theophrastus ix. 12. 5 is employed medicinally, and leaves resemble "strŏuthŏs" with which linen is whitened, is identified through Syn. Diosc. with the "mĕkŏn aphrŏthēs," referred here by Lobel and others: S. inflata was observed by Forskal, Sibthorp, Chaubard, and Fraas, frequent from the Peloponnesus throughout Greece, the leaves cooked and eaten. Westward, is described by Gesner f. 273, and Dodoens p. 172; is termed "lychnis sylvestris quæ behen album vulgo" by Tournefort inst. 335; was observed by Tenore near Naples, by Forskal near Marseilles; and is known to occur along roadsides and in fallow ground from the Pyrenees as far as Denmark (fl. Dan. pl. 914, Pers., and A. Dec.). By European colonists, was carried to Northeast America, where it has become naturalized, occurring along roadsides and near dwellings from Quebec (Mx.) to Salem and Philadelphia, and observed by myself in wild situations not far from the last-named city. *S. fabaria*, termed "lychnis maritima saxatilis anacampserotis folio" by Tournefort cor. 24 and "cucubalus foliis crassis" by Forskal, observed by him on the rocks of Tenedos, by Sibthorp on mount Athos and the Bithynian Olympus, the seashore of Caria and maritime rocks of Samos, by Boccone mus. pl. 92 on the seashore of Sicily (Pers.), is regarded by Bory as perhaps not distinct.

Potentilla reptans of Europe and the adjoining portion of Asia. Called in Britain *five-leaf* or *five-finger-grass* or *cinquefoil*, by Askham "quynckefolye," in Sweden "finger-ört" (Prior), in France "quinte-feuille" (Nugent), in Germany creeping "gänsefuss" (Fraas), in Italy "cinquefolio" (Lenz), in Greece "pĕntathaktula" or "pĕntaphullŏ" (Sibth.), by the prophets "ptĕrŏn ivĕŏs" or "ivĕŏs ŏnux" or "ĕrmŏthaktulŏn," in Egyptian "ŏrphĕtĕvĕŏkĕ" or "ĕnŏtrŏn" (Syn. Diosc.); in which we recognize the ΠΕΝΤΑΦΥΛΛΟΥ whose root is prescribed by Euryphon 2 morb. 38, — enumerated by Democritus among signs of subterranean water (geopón. ii. 6), identified by Theophrastus ix. 13. 5 with the "pĕntapĕtŏus" having slender stems resting on the ground and all its leaves in fives, growing according to Dioscorides in wet places and along streams, its leaves serrate; clearly also the "pĕntapĕtēlŏn" of Nicander ther. 839: P. reptans was observed by Sibthorp, Chaubard, and Fraas, frequent in the situations described by Dioscorides from the Peloponnesus throughout Greece; and dried "pentaphyllum" root was found by Alpinus, and Forskal mat. med., employed medicinally in Egypt. Westward, the "pĕntaphullŏn" or "pĕntapĕtĕs" or "pĕntathaktulŏn" is identified in Syn. Diosc. with the "prŏpĕthŏula" of the Dacians, "pĕmpĕthŏula" of the Gauls, and "kigkĕphŏliŏum" of the Romans, by Pliny xxv. 62 with the "quinquefolium;" and "quinquefolii radix" is prescribed by Celsus vi. 9: P. reptans is described by Fuchsius 624, Matthioli, and Lobel pl. 960; is termed "q. majus repens" by Tournefort inst. 297; was observed by Munby in Algeria (A. Dec.), by Lenz in Italy; and is known to grow throughout middle Europe as far as Sweden (fl. Dan. pl. 1164, and Pers.).

Rhus coriaria of the wooded portion of the East Mediterranean countries. Called in commerce *sumach*, in France "sumac" (Nugent), in Germany "sumach" (Grieb), in Italy "sommaco" or "ru" (Lenz), in Greece "vursia" or "vursŏklatha" (Fraas) or by the Turks "sumack" (Sibth.),

in Egypt the imported berries "semmaq" (Del.), in Egyptian "rōuthin" (Kirch.); in which we recognize the ΡΟΥΣ prescribed by Euryphon 2 morb. 28, — mentioned also by Antiphanes, Alexis, by Theophrastus iii. 18. 5 as having conjugate elm-like leafets, by Dioscorides, Galen voc. hippoc., the "rōus suriakōs" in Geopon. xvi. 8, and "sōumakin" by Nicolaus Myrepsicus i. 155: R. coriaria was observed by Sibthorp, Chaubard, and Fraas, from the Peloponnesus to Constantinople and Smyrna; by Pococke, and rabbi Schwarz, in Palestine; and the imported berries, used in cookery as well as in medecine, were seen in Egypt by Abd-allatif, Forskal mat. med. p. 150, and Delile. Westward, the "rhus" and "rhus syriacum" are mentioned by Celsus, Columella xii. 41, Pliny, and Macer Floridus: R. coriaria is termed "r. folio ulmi" by Tournefort inst. 611; was observed by Lenz frequent on the Appenines; and is known to grow as far as Southern France (Ludw. pl. 122, Pers., and Spreng.).

Chlora perfoliata of Europe and the adjoining portion of Asia. A gentianaceous plant called in Old English *earth-gall* or *more centory* (Askham, and Prior); and the ΚΕΝΤΑΥΡΙΟΝ or ΚΕΝΤΑΥΡΙΗΣ: ΚΑΡΠΟΝ prescribed by Euryphon 2 morb. 52 to 57 — may be compared: the "kĕntauriōn" is described by Theophrastus iii. 3. 6 to iv. 5. 1. and caus. iii. 1. 3 as barren in the Elean plain but bearing fruit on the neighbouring mountains, growing also in Northern climates, but not in wet ground; the "pĕlĕthrōniōn" according to Nicander ther. 440 to 505 is yellow-flowered; and the "kĕntauriŏn xanthiōn" is prescribed by Alexander Trallianus viii. 12. 11: C. perfoliata was observed by Sibthorp, and Chaubard, frequent from the Peloponnesus throughout the Greek islands. Westward, the "centaurea major" of Macer Floridus 53 is referred here by Lynacre, who further speaks of its "leves lyke to the lesse centory, but more whyter, and yelowe flowers, and flowreth not but in the top;" and "eorth geallan" or "curmelle seo mare" occurs in the Anglo-Saxon translation of Apuleius herb. 35: C. perfoliata is described by Morison; is termed "centaurium luteum perfoliatum" by Tournefort inst. 123; was observed by Desfontaines in Barbary; and is known to grow throughout middle Europe as far as Britain (Hall., Engl. bot. pl. 60, and Pers.). Its qualities according to Smith are similar to those of Gentiana and Erythræa but weaker (Lindl.).

Salvia pomifera of the East Mediterranean countries. A species of wild *sage* bearing edible galls and called in Greece "phaskōs" or "phaskōmēlia" (Sibth.) or "alisphakia" (Fraas), in Egyptian "apōusi" (Syn. Diosc.); and the ΕΛΕΛΙΣΦΑΚΟΝ prescribed by Euryphon 2 morb. 52, — allied to but having rougher leaves than the "sphakōs" according to Theophrastus vi. 1. 4 to 2. 5, growing according to Dioscorides in rugged places, a tallish branchy shrub with whitish leaves, strongly fragrant, may be compared: S. pomifera is termed "s. cretica frutescens, pomifera foliis longioribus incanis et crispis" by Tournefort trav. i. pl. 30; was observed by Sibthorp, Chaubard, and Fraas, frequent in rugged sunny places from Crete and the Peloponnesus throughout Greece and the Greek islands, and tea made of the leaves; is known to grow also in Syria (Pers.). Westward, the "ĕlĕlisphakōn" or "ĕlaphōvōskŏn" or "kiōsmin" or "phagnōn" or "vēhiōn" is identified in Syn. Diosc. with the "kōsalōn" or "salvia" of the Romans; and the "altera bechion" resembling "verbasco" (transl. "phlōmis"?) and by some called "salvia" is enumerated by Pliny xxvi. 17 as medicinal. "S. triloba," termed "s. baccifera" by Tournefort inst. 180 and "s. cretica pomifera Clusii flore albo" cor. 10, is regarded by Fraas as not distinct.

Amaracus dictamnus of Crete. Called in English drug-shops *dittany of Crete* (Lindl.), in Italian gardens "dittamo cretico" or "dittamo di candia" (Lenz), on Crete "stōmatōhōrtōn" (Sibth); in which we recognize the ΔΙΚΤΑΜΝΟΣ of Euryphon — (Soran. Eph. mul. 22), the Hippocratic writings, Aristotle an. ix. 16, peculiar to Crete and rare there according to Theophrastus ix. 16. 1, mentioned also by Antigonus of Carystus, Andromachus, Damocrates, and known to Virgil. aen. xii. 412, Dioscorides, and Pliny xxv. 53, as growing only on Crete: A. dictamnus is described by Dodoens pl. 281 (Spreng.); is termed "o. creticum latifolium tomentosum seu dictamnus creticus" by Tournefort inst. 199; and was observed by Sibthorp only on the rocks of Crete. Imported "dictamnus cretensis" was found by Alpinus, and Forskal mat. med., employed medicinally in Egypt: farther North, according to Lindley, was "once in much repute among the Greeks and Romans but not now used."

Iris Florentina of the Mediterranean countries. The imported root is called in Britain *orris-root* (Lindl.), in Germany "veilchenwurz" (Fraas), and perforated pill-like fragments in Egypt "hab el kei" (Forsk. mat. med.); in which we recognize the ΙΡΙΣ: ΙΛΛΥΡΙΚΗ of Euryphon — (Soran. Eph. mul. 22), 2 Mul. morb. 673, Dromo, the only spice according to Theophrastus iv. 5. 2 and ix. 7. 3 that Europe produces, growing of the best quality in Illyria and about the Adriatic: "iriŏn murŏn" is mentioned by Cephisodorus; the fragrant-rooted "iris" is mentioned also by Didymus, Dioscorides, Athenaeus, is prescribed by Galen, and Paulus Aegineta, and the cultivation of "iris illurikē" is mentioned in geopon. xi. 21: I. Florentina was observed by Sibthorp, and Chaubard, from the Peloponnesus to Rhodes. Westward, the "iris" or "iris illurikē" is identified in Syn. Diosc. with the "rathix marika" or "ōpĕrtritōs" or "kōnsĕkratrix" of the Romans; and the "iris" and

"unguentum irinum" are mentioned by Columella, and Pliny: I. Florentina is described by Lobel pl. 59; is termed "i. alba florentina" by Tournefort inst. 358; was observed by Desfontaines in Barbary, by Savi in Italy (Steud.), and is known to grow in other parts of Southern Europe (Pers.). The root according to Lindley is "subacrid, aromatic, rather bitter," is "employed in the manufacture of tooth-powder," and "to keep up the discharge from issues."

"415 B. C." (Thucyd. vi. 30, Clair, and Clint.), the statues of Mercury mysteriously mutilated or thrown down at Athens, just as the Athenian fleet sailed for Sicily.

The metal *mercury* or *quicksilver* may have been at this time introduced into Greece: — "kinnavar" (an Indian word according to Pliny) is mentioned by Ctesias, and Anaxandrides, and notwithstanding its alleged discovery by Callias ("90 yrs before Praxibulus = 405, Theophr. lap. 8.) is admitted to be Chinese *vermilion:* "tiggavari" is mentioned by Diocles the comic poet, and Eustathius; "argurōn hutōn to move images," by Eubulus, Philippus, Aristotle psych. i. 3, and Themistius; and "uthrargurōs" (a translation of its Chinese name "shwui yin" water-silver), by Plautus, Vitruvius, Dioscorides, Pliny, and Galen. Quicksilver is mentioned also by Arab medical writers; but in the days of Forskal mat. med., "durur ahmar" or "cinnab. nativum" was imported into Egypt from Greece. (See "kinnamŏmōn;" and "minium").

"414 B. C." (Clint. ii. p. 87, = 538 — "124 years" of the Egyptian Chronicle), independence recovered by the Egyptians; their leader Amurtĕōs or Amurtaiōs becoming the head of the Twenty-eighth or Saite dynasty. The hieroglyphic ovals of king Amunrut occur on contemporaneous monuments (Leps. k. pl. 49).

As early probably as this date, the "kŏnĕiōn" poison, composed in part of the juice of "mēkōnōs" and inducing death without pain, invented or made known to the Greeks by Thrasyas of Mantinea. — His pupil Alexias lived shortly before the time of Theophrastus ix. 16.8. The "kŏnĕiōn" poison was employed to put Socrates to death; is mentioned also by Androcydes, Nicander, and Anaxilaus.

Oenanthe prolifera of the East Mediterranean countries. A species of *hemlock-dropwort:* the "kŏnĕiōn" employed by Thrasyas was that of Susa and cool places, — was obtained strongest from the root, and the plant is further alluded to by Theophrastus ix. 8. 3 to 15. 8 and 16. 8; is described by Dioscorides as having a great stem and terminal umbels of whitish flowers with "apŏphusĕis" (sprouts or bracts); is identified in the added Synonyms with the "vavathu" of Osthanes, and Egyptian "apĕmphin:" O. prolifera is termed "œ. prolifera apula" by Tournefort inst. 313; was observed by Sibthorp in the marshes of Lycia in Asia Minor; and is known to grow as far as Sicily and the Southern extreme of Italy (Pers.).

Oenanthe pimpinelloides of the Mediterranean countries. Called in Italy "filipendula aquatica" (Lenz), in Greece "sgarantzi" (Sibth.); and the species of Oenanthe being according to Fée all dangerous poisons, perhaps included in the "kŏnĕiōn" in question, — produced in the days of Dioscorides in Cilicia, Chios, Crete, and Attica: O. pimpinelloides was observed by Sibthorp, and Chaubard, from Lycia and the Peloponnesus to Constantinople. Westward, is termed "œ. apii folio" by Tournefort inst. 312; is known to grow in Carniolia, Italy, and Southern France (Hacq. carn. pl. 3, Jacq. austr. pl. 394, Pers., and Lenz). Its "fleshy tubercles" according to Lindley "have occasionally been eaten."

Oenanthe peucedanifolia of Europe and the adjoining portion of Asia. Also having claims to be included in the "kŏnĕiōn" in question, — though the roots "have occasionally been eaten" (Pers., and Lindl.): observed by Sibthorp in marshes in the Peloponnesus; by Gmelin, in Siberia (Steud.); and Westward; known to grow in Austria and France (Pollich palat. i. pl. 3, Thuil., and Steud.).

Oenanthe incrassata, observed by Chaubard in the Peloponnesus, and *O. virgata* by Guerin among maritime rocks there, are other species that have been found in Greece.

"The same year" (Sm. b. d.), at Rome, military tribunes having consular power holding the place of consuls; war with the Aequians, and Bola a city of Latium captured by the Romans.

"In this or the following year" (Sm. b. d.), Perdiccas II. succeeded by Archelaus, now twelfth king of Macedonia.

"413, August 27th, Monday" (Thucyd., Blair, and Clint.), *eclipse of the moon;* "about thirteen digits," beginning at Syracuse "8 h. 27 m. 27 s. P.M.;" and causing the loss in Sicily of the terrified Athenian army under Nicias.

Some days later at Athens (Aristot., Athen., and Clint.), exhibition of *parody* by its inventor the comic poet Hegemon: news arriving of the disaster in Sicily, the Athenians kept their seats.

"412 B. C." (Thucyd. viii. 12 to 17, and Clint.), Alcibiades sent by the Spartans into Asia, and the first treaty between them and the Persians.

"411 B. C." (Thucyd. viii. 12 to 17, and Clint.), constitution of the "Four hundred," devised by Antiphon, and adopted at Athens. After ruling "four months," the "Four hundred" resigned; and before the close of the year, Antiphon was put to death. The historical writings of his pupil Thucydides, close with the "autumn of this year."

"410 B. C," (Sm. b. d.), at Rome, M. Aemilius Mamercinus and C. Valerius Potitus Volusus consuls, an *agrarian law* proposed by M. Maenius tribune of the people.

"409 B. C." (Sm. b. d.), at Rome, Cn. Cornelius Cossus and L. Furius Medullinus consuls; plebeians for the first time quaestors, three of the four.

"In the same year" (Blair), the Carthaginians after entering Sicily and destroying Selinus and Himera, repulsed by the Syracusan general Hermocrates.

"408 B. C." (Clint. ii. p. 87 = 414 — "6 years" of both Maneth. tables, erased in this place in the Egyptian Chronicle), Amurtĕōs succeeded by Nĕphĕritēs, head of the Twenty-ninth or Mendesian dynasty. Nĕphĕritēs is historically mentioned by Diodorus xiv. 79: and the hieroglyphic ovals of king Naifaurut occur at Medinet-Abu, and on a sphynx now in Paris (Glid. analect., and Leps. k. pl. 50).

"In this year" (Sm. b. d.), at Athens, exhibition of the tragedy of Orestes by Euripides. The pronunciation of the 269th line by the actor Hegelochus, was ridiculed by the comic poets Plato, Aristophanes, Sannyrion, and Strattis.

The ΤΡΩΓΕΣ of Strattis — is referred by Photius to the "thēria ĕn ōspriōis" or *pea-bug*, Bruchus pisi; an insect mentioned also by Theophrastus: and brought by European colonists to Northeast America, where it has multiplied and caused much damage.

Doronicum pardalianches of mountains in Europe and the adjoining portion of Asia. A composite plant called in Germany "gemswurz" (Fraas), in Greece "skorpithi" (Sibth.); in which we recognize the "skŏrpiōn" identified by Theophrastus with the "thēluphōnōn," and through Syn. Diosc. iv. 78 with the ΚΑΜΜΟΡΩ of Strattis, — and "akōnitōn" of Dioscorides: the "thēluphōnōn" is described by Theophrastus ix. 18. 2 as growing in shaded situations, and geniculate in the manner of "agrŏstis;" the "akōnitōn" according to Dioscorides has roughish "sikuŏ"-like leaves, is mixed in soothing applications for the eyes, and in the added Synonyms is further identified with the "parthaliaghĕs:" the "darunaj" is mentioned by Ebn Baitar as growing on the mountains near Bairut; D. pardalianches was observed by Sibthorp, Chaubard, and Fraas, frequent in moist shaded situations on mountains from the Peloponnesus to Asia Minor; and "doronicum" root was found by Forskal mat. med. employed medicinally in Egypt. Westward, the account of the "thelyphonon" called "scorpion," or "aconiton" called "pardalianches" by Pliny xxv. 75 to xxvii. 2, seems chiefly taken from the Greek: D. pardalianches is described by Dodoens pl. 437, and Gerarde 621; is termed "d. maximum foliis caulem amplexantibus" by Tournefort inst. 488; is known to grow wild on the mountains of Italy and middle Europe (Jacq. austr. pl. 350, and Pers.), but in Holland, Britain, and Denmark, seems only naturalized (Wats., Fries, and A. Dec.). Is enumerated by Lindley as "reported to be a poisonous plant." (See Marsdenia erecta.)

Delphinium peregrinum of the Mediterranean countries. A species of *larkspur* called in Greece "linarithra" (Sibth.): the plant in question — is perhaps the "kamarōs" or "paralusis," identified in Syn. Diosc. iii. 77 with the "thĕlphiniōn;" growing according to Dioscorides in rugged sunny places, its leaves divided, flower like that of "lĕukŏiō" (Viola canina) and purplish, pods containing millet-like seeds employed against scorpion stings, and referred here by Sibthorp, and Fraas: D. peregrinum was observed by them in the situations described by Dioscorides frequent throughout Greece and the Greek islands; by Delile, on the Mediterranean border of Egypt; is known to grow also in Palestine (Pers.). Westward, the "thĕlphiniōn" or "thĕlphinias" or "uakinthōs" is identified in Syn. Diosc. with the "vōukinōs minōr" of the Romans: D. peregrinum is described by Morison xii. 4; is termed "d. latifolium parvo flore" by Tournefort inst. 426; and is known to grow from Malta and Sicily as far as France (Allion. pl. 25, and Pers.).

Salvia sclarea of the East Mediterranean countries. Called in Britain *clary* or *seebright*, translated by apothecaries "Godes-eie" or "oculus Christi" (Prior): the ΦΚΙΜΩΝ leaves of Strattis, — "ŏkimōn" or "ŏkumōn" of Eubulus, Polemon diæt. ii. 25, Philistion, Plistonicus, Diodotus, and Athenaeus ii. p. 68, a cultivated potherb according to Theophrastus vii. 1. 2 to caus. v. 7. 2 flowering from below upward and having a long woody root, woody stem, and degenerating into "erpullōs," may be compared: the "ocimum" is regarded by Chrysippus as unfit for food and not clarifying the eyes (Plin. xx. 48); weakens the sight according to Dioscorides if eaten copiously but the juice clarifies the eyes, eaten also in Libya; is mentioned by Galen; is identified by Serapion with the "baderudsch" (Spreng.), and the "badsarudsch" is mentioned by Ebn Baitar: S. sclarea was observed by Sibthorp in cultivated ground in Bithynia; is known to occur also in Syria (Pers.). Westward, the "ocimum" is mentioned as cultivated in Italy by Cato, Varro, Sabinus Tiro, Persius, Columella, Pliny, Palladius, its flowers according to Gargilius Martial purple or rose-coloured or sometimes white: the "sclareia" is mentioned in the capitularia of Charlemagne, and by Walafridus Strabus p. 225 (Spreng.): S. sclarea is described by Lobel pl. 556; is termed "sclarea" by Tournefort inst. 179; is known to occur in Italy (Pers.); is cultivated throughout middle Europe, and eye-salves made of it are mentioned by Gerarde p. 627, and Prior. (For "silvestri ocimo" or "agriōs vasilikōs" or *wild clary* see S. verbenaca.)

"407 B. C." (Sm. b. d.), at Rome, military tribunes holding the place of consuls. Expiration of the "twenty years" truce with Veii (the reckoning therefore in old Roman years of ten months).

About this time (Clint.), improvements in *music* by the Greek poet Timotheus.

"In this year" (Xenoph., and Clint.), Cyrus the younger sent to the coast of Asia Minor, to command on the sea and co-operate with the Spartans.

Ranunculus Asiaticus of the East Mediterranean countries and middle Asia. The *garden ranunculus* is called in Japan "tagaras" or "dobusesi" or "kimpoge" (Thunb.), in Persian "kahikej" (Avicenn., and Ebn Bait.), in Egypt "zaphyl" (Clot-Bey), on Cyprus "agriō sĕlinŏn" (Sibth.), in which we recognise the "sĕlinŏn agriōn" identified through Syn. Diosc. with the ΒΑΤΡΑΧΙΟΝ prescribed in Nat. mul. 29, — and 1 Morb. mul. 108, described by Dioscorides as a cubit high, growing along rills, its leaves coriander-like, and flowers yellow or sometimes "pōrphurŏun:" R. Asiaticus is termed "r. grumosa radice flore phœniceo minimo simplici" by Tournefort inst. 287; was observed by Sibthorp, Chaubard, and Fraas, from the Peloponnesus to Asia Minor and Cyprus, its flowers yellow or sometimes scarlet; by Thunberg, frequent along ditches in Japan; by Clot-Bey, in the gardens of Egypt. Westward, the "batrachium" is described by Scribonius Largus 174 as ulcerating, and is identified by Pliny xxv. 109 with the "ranunculum" of the Romans, his account being chiefly taken from Dioscorides: R. Asiaticus is well known as a garden-flower throughout Europe. And by European colonists was carried to Northeast America, where it continues under cultivation.

Delphinium staphisagria of the Mediterranean countries. A species of *larkspur* called in Greece "agria staphitha" (Sibth.), in Egyptian "ivēsaōithē" (Syn. Diosc.); in which we recognize the ΣΤΑΦΙΣ: ΑΓΡΙΑ of Nat. mul. 584, — Nicander ther. 943, having upright stems according to Dioscorides, incised leaves like those of "ampĕlŏu agrias," green follicles containing blackish trigonal acrid seeds that excite vomiting, the bruised plant applied against "phthĕiriasĕis:" D. staphisagria was observed by Sibthorp, Bory, and Fraas, frequent about villages from Crete to the Peloponnesus and Euboea. Westward, the "staphis agria" or "astaphis" or "phthĕiriŏn" or "phthĕirŏktŏnŏn" or "apanthrŏpŏn" is identified in Syn. Diosc. with the "ĕrva pĕthikŏularia" of the Romans; the "herba pedicularis" is mentioned by Columella vi. 30. 8, the "pedicularia" or "staphis agria" by Scribonius Largus 166, and the "astaphis agria" or "staphis" by Pliny xxiii. 13: D. staphisagria is described by Lobel adv. 306, and Dalechamp p. 1609; is termed "d. platani folia staphisagria dictum" by Tournefort inst. 428; was observed by Tenore in Italy (Steud.); and is known to occur in "waste places" in other parts of Southern Europe, and as far as the Canary Islands (Pers., and Lindl.). By European colonists, was carried to the Mauritius Islands, observed under cultivation there by Bojer. The seeds according to Lindley "are emetic drastic and inflammatory, never used internally," but chiefly for "destroying pediculi in the head."

Iberis semperflorens of the Mediterranean and Tauro-Caspian countries. Called in Egyptian "sōuttĕmpsōn" (Syn. Diosc.) in Italy "thlaspi" (Targ.), in which we recognize the ΘΛΑΣΠΙ of Nat. mul. 29, — growing according to Dioscorides on walls and along pathways, a little herb with whitish flowers, fruit flattened from the summit and containing small discoidal "ĕntĕthlasmĕnŏn" seed; also mentioned by Galen, and Paulus of Aegina: a species of Iberis was observed by Forskal on Imros; I. semperflorens is described by Linnæus, and is known to grow in Persia (Pers.). Westward, the "thlaspi" or "thlaspithiōn" or "muōptĕrŏn" is identified in Syn. Diosc. with the "kapsĕllam" or "skanthōulakiōum" or "pĕthĕm gallinakĕōum" of the Romans; but the account by Pliny xxvii. 113 of the "thlaspi" seems taken from Dioscorides: I. semperflorens is known to occur on Sicily (Pers.).

Iberis sempervirens of the Mediterranean countries. Also called in Italy "thlaspi" (Targ.), and possibly the "thlaspi" in question, — especially as two Cappadocian kinds are mentioned by Galen (Spreng.): I. sempervirens is described by Rivinus tetr. pl. 224; is termed "thlaspi montanum sempervirens" by Tournefort inst. 213, "i. garrexiana var." by Allioni, "i. saxatilis var." by Lamarck fl. fr. (Steud.); is known to grow in Southern France, Italy, and Crete (Pers.); was observed on the mountains of Crete by Sibthorp.

Sempervivum arboreum of the Mediterranean countries. A woody-stemmed *houseleek* called on Corcyra "anastasian," on Chios "amarantŏn" (Anguill.), by the prophets "parŏnuhia" or "hrusitis," in Egyptian "pamphanēs" (Syn. Diosc.): the ΚΡΙΝΑΝΘΕΜΟΝ growing on houses and prescribed in Nat. mul. 29 — may be compared; also the "aizoon" in whose juice all seeds according to Democritus should be soaked (Plin. xviii. 45), growing according to Theophrastus vii. 15. 2 on the ground as well as on walls and places on roofs where sandy soil collects, and having smooth fleshy leaves always green: the "aĕizŏōn tō mĕga" of Dioscorides having stems a cubit or more high, growing in mountainous situations and planted in vases upon roofs, is referred here by writers: S. arboreum was observed by Sibthorp on walls and among rubbish on Cyprus. Westward, the "aĕizŏōntō mĕga" or "aĕithalĕs" or "zŏōphthalmōn" or "aiŏniōn" or "stĕrgēthrōn" is

identified in Syn. Diosc. with the "kēriōkōusia" or "sōuthĕmmōur" or "iōvis kaulis" of the Romans; is called "stergethron" according to Pliny xxv. 102 because "amatoriis conveniat," and "hypogeson" from growing "in subgrundiis fere" almost in the eaves, is further identified with the "sedum magnum" or "oculum" or "digitellum" of the Italians: S. arboreum is described by Anguillara 276 (Spreng.); is termed "sedum majus arborescens" by Tournefort inst. 262; and is known to grow in Barbary and Portugal (Pers.).

Cachrys lævigata of the West Mediterranean countries. A fennel-like plant called in France smooth-fruited "armarinte" (Fée), by the prophets "thumarnōliōn," in Egyptian "sampsŏs" (Syn. Diosc.); not observed by modern travellers in Greece, but the ΙΠΠΟΜΑΡΑΘΡΟΝ prescribed in Nat. mul. 572, — 1 Morb. mul. 73, Steril. 13, Micton, Nicander, Petrichus, ferulaceous and having a furrowed stem according to Theophrastus vi. 1. 4, identified by Dioscorides with "marathrōn agriōn" having a fragrant root and "kahrui"-like seed, and according to Galen fac. simpl. vii. p. 68 taller than the "marathrōn," is referred here by Anguillara, and Honorius Bellus (Spreng.). Westward, the "ippōmarathrōn" or "marathis" is identified in Syn. Diosc. with the "sistramĕōr" of the Gauls, and "mĕōum" or "phainikōulōum ĕrratikōum" or "ph. ĕkōuinōum" of the Romans; is mentioned by Strabo xvii. p. 645 as growing in Mauritania; by Pliny xx. 96 as a "silvestre" kind of "foeniculum" by some called "myrsineum," growing in warm stony places: C. lævigata is described by Anguillara p. 124, and Morison umb. 63. pl. 3; was observed by Allioni in Southern France, by Desfontaines i. p. 250 in Algeria; is known to grow also in Italy and Spain (Pers.).

Peucedanum officinale of Europe and the adjoining portion of Asia. Called in Britain *sulphurwort* or *hog's fennel* (Prior), in Germany "haarstrang," in Italy "finocchio porcino" or "peucedano" (Lenz), by the prophets "agathōs thaimŏn" or "pinasgĕlōum" (Syn. Diosc.); in which we recognize the ΠΕΥΚΕΔΑΝΟΝ of Nat. mul. 29, — Superfœt. 19, 2 Morb. mul. 81, Theophrastus ix. 14. 1 to 20. 2, Nicander ther. 76, having according to Dioscorides a fennel-like stem, flowers yellow, and root full of juice: P. officinale was observed by Sibthorp, and Chaubard, in the Peloponnesus; and is known to grow in Siberia (Gmel. i. pl. 41). Westward, the "pĕukĕthanŏs" is identified in Syn. Diosc. with the "satariam" of the Romans: the "peucedanum" and its medicinal uses are mentioned by Pliny: P. officinale is described by Gerarde p. 1053, and Bauhin hist. iii. p. 376; is termed "p. germanicum" by Tournefort inst. 318; was observed by Lenz in Italy, by Forskal near Marseilles; and is known to grow throughout middle Europe as far as Britain (Engl. bot. pl. 1767, Steud., and Lindl.). The inspissated "juice of the root" according to Lindley "is reputed antispasmodic and diuretic."

Crithmum maritimum of the sea-cliffs along the Mediterranean and Atlantic as far as Britain. Called in Britain *samphire*, in old English "sampire" or "sampier," in France "Saint Pierre," in Italy "herba di San Pietro" or "sampetra" from the fisherman saint (Prior) or "finocchio marino" (Lenz), in Greece "almura" (Fraas) or "krētamōn" (Sibth.); in which we recognize the ΚΡΗΘΜΟΝ of Nat. mul. 20, — Morb. mul., and the "krithmōn" or "kritamōn" growing according to Dioscorides in rocky maritime situations, white-flowered, and eaten either crude or cooked: C. maritimum was observed by Forskal, Sibthorp, Chaubard, and Fraas, along the seashore from the Peloponnesus to Constantinople. Westward, the "crĕthmo" commended by Hippocrates is enumerated as esculent by Pliny xxvi. 50 and 90: C. maritimum is described by Pandulf. Collenuccius, and Brunfels i. p. 187 (Spreng.); is termed "c. sive foeniculum maritimum minus" by Tournefort inst. 317; was observed by Forskal on Malta and near Marseilles, by Lenz in Italy; and is known to grow along the Atlantic seashore as far as Britain (Shakspeare, and Pers.).

Echinophora spinosa of the Mediterranean seashore. A prickly Umbelliferous plant: the ΤΡΙΒΟΛΟΝ: ΠΑΡΑΘΑΛΑΣΣΙΟΝ prescribed in Nat. mul. p. 552, — and 1 Morb. mul. 106, is referred here by Dalechamp 1367 (Spreng.): E. spinosa was observed by Sibthorp, and Chaubard, from the Peloponnesus to Smyrna. Westward, is termed "e. maritima spinosa" by Tournefort inst. 656; has been found in some instances beyond the Straits along the Atlantic seashore (Cav. ii. pl. 127, and Pers.), but is not known to be employed medicinally.

Anthemis rosea of the East Mediterranean countries. A purple-flowered *may-weed* or "maydenwede" called on Cyprus "papōuni" (from the Arabic name of camomile "babunaj"); in which we recognize the "anthĕmis pōrphuranthĕs" identified through Dioscorides with the ΗΡΑΝΘΕΜΟΝ prescribed in Nat. mul. 570: — the account of the "eranthemum" by Pliny xxii. 26 seems taken from Dioscorides, but the "chamaemelum purpureum" is mentioned by Nicolaus Myrepsus i. 44 p. 42 (Spreng.): A. rosea is described by Sibthorp, and was observed by him frequent on the dry hills of Cyprus.

Anthemis chia of the East Mediterranean countries. Also called on Cyprus "papōuni" (Sibth.), but in Attica "armĕgka" (Fraas); in which we recognize the ΑΝΘΕΜΟΝ: ΧΑΩΡΟΝ that may be substituted according to Nat. mul. 570: — the "anthĕmōn" is described by Theophrastus vii. 14. 2 as flowering from above downwards, the flowers white around with the centre "hlōrōn"

greenish-yellow; the "anthĕmis" is celebrated by Asclepiades (Plin.); the "anthĕmis lĕukanthĕmōn" is one of the three kinds enumerated by Dioscorides, collected in the Spring; and the account of the "leucanthemum" or "leucanthemida" by Pliny xxii. 26 seems taken from the Greek: A. Chia is termed "chamæmelum chium vernum follo crassiore flore magno" by Tournefort cor. 37; was observed by Sibthorp, and Fraas, frequent from Attica throughout the Greek islands to Cyprus, flowering at the opening of Spring; by Gussone, frequent also at the Southern extreme of Italy (A. Dec.).

Anthemis discoidea of the East Mediterranean countries. Possibly included in the "anthĕmŏn hlŏrōn" of Nat. mul. 570: — the "anthĕmōn aphullanthĕs" is enumerated by Theophrastus vii. 8. 3 as having radical leaves; and the third or "hrusanthĕmōn" kind with flowers entirely yellow according to Dioscorides is like the preceding more powerfully diuretic than the purple-flowered kind: A. discoidea having the lower leaves pinnate was observed by Forskal 356 in the environs of Constantinople (Steud.), and by Sibthorp on mount Parnassus; is termed "chamaemelum discoideum" by Allioni 681, and is known to grow as far as Italy (Pers.). "A. monantha" or "coarctata," developing short yellow rays, known to grow in Tauria (Pers., and Bieb.), and observed by Sibthorp near Smyrna, is regarded by him as probably not distinct.

Matricaria suaveolens of the Mediterranean countries. A fragrant kind of *may-weed;* and the "hamaimēlōn," named according to Syn. Diosc. iii. 144 from its apple or quince-like odour, and identified by Galen with the EYANΘEMON of Nat. mul. — and i. Morb. mul. 106: M. suaveolens was observed by Bory in the Peloponnesus. Westward, the "hamaimēlōn" or "mĕlanthĕmŏn" is further identified in Syn. Diosc. with the "astertiphē" apple herb of the Numidians, and "maliōum" of the Romans: M. suaveolens is described by Linnæus; is known to grow in Western Europe (Pers.), its calyx-scales pointed, and flowers according to Smith half as large as in M. chamomilla, but is regarded by Chaubard, as perhaps not distinct.

Matricaria chamomilla of Europe and the adjoining portion of Asia. A fetid kind of *may-weed* called in Britain *maghet* (Prior), in Germany "chamille," in Italy "camamilla" or "camomilla" (Lenz), in Greece "hamōmēlĕa" (Fraas) or "hamōmēla" (Sibth.); and possibly the "ĕuanthĕmōn" in question, — clearly the "hamaimēlōn" identified through Syn. Diosc. with the "parthĕniōn mikrōphullōn" of Ulc. 10, or the Hippocratic "parthĕniōn" identified by Galen with the "amarakŏn" or "anthĕmis:" the "parthĕniōn" is described by Dioscorides as having a rankish odour and bitter taste, slender coriander-like leaves, flowers white with the centre yellow, and a decoction employed against inflammations of the matrix: M. chamomilla was observed by Forskal, Sibthorp, and Fraas, abounding from the Peloponnesus to the Dardanelles; by Hasselquist, in Palestine; and by Delile, near Rosetta on the Mediterranean border of Egypt. Westward, the "parthĕniōn" or "amarakŏn" or "anthĕmis" or "lĕukanthĕmōn" or "hrusōkalis" or "mĕlavathrōn" or "anthōs pĕthinōn" is further identified in Syn. Diosc. with the "thamakth" of the Numidians, "kautan" of the Tuscans, and "millĕphōliōum" or "sōlis ŏkōulōum" of the Romans; and the "parthenium" or "amnacum" or "leucanthes" is described by Pliny xxi. 104 as growing in garden hedges: M. chamomilla is described by Lobel obs. 455; is termed "chamæmelum vulgare leucanthemum Dioscoridis" by Tournefort inst. 494; was observed by Lenz frequent in Italy; and is known to occur along roadsides and in waste and cultivated ground as far as Denmark (fl. Dan., Lam. fl. fr.; and Pers.). By European colonists, was carried to Southeast Australia, where it has become naturalized, spreading far inland (Corder, and A. Dec.). "M. suaveolens" of Pallas is enumerated by Steudel as not distinct. (See Pyrethrum parthenium).

Carthamus Creticus of the East Mediterranean countries. A thistle-like plant; and the KNI KON prescribed in Nat. mul. 29, — 3 Morb. 31, Popular. vii. 39, drink from by Hippocrates vict. acut. 30, and enumerated as esculent and laxative by Polemon diæt. ii. 27, may be compared: the "knēkōs" is mentioned by Anaxandrides (Athen.); by Theophrastus i. 13. 3 to vi. 4. 5 and caus. v. 18. 4 as thorny-leaved and single-stemmed, its seeds stony and having pappus "pŏgŏnōspĕrmata," and is termed "ēmĕrōs;" the "knikōs" by Dioscorides as two cubits high with a flower "krōkŏ ōmŏiŏn" which is eaten, and the juice of the seeds laxative and mixed in cakes: C. Creticus is termed "atractylis flore citrino" by Vaillant; and was received by Linnæus sp. pl. (not syst. nat.) from Crete (J. E. Smith in Sibth. fl. gr. ii. 161).

Thymus incanus of the East Mediterranean countries. A hoary species of *thyme* called in Greece "asprōvalsamō" (Fraas); and the EΛENION prescribed in Nat. mul. 572, — coronary according to Theophrastus vi. 1. 1 to 7. 4, fragrant in all its parts, shrubby and small-leaved with a superficial multifid root, mentioned also by Nicander fr., named from Helen according to Pliny xxi. 33 and growing of the best quality on Helena Island (near the shore of Attica), is referred here by Fraas: T. incanus is termed "calamintha orientalis annua ocymi folio flore minimo" by Tournefort cor. 12; and was observed by Sibthorp, Chaubard, and Fraas, frequent from the Peloponnesus and Attica throughout the Greek islands. (See Lithospermum callosum.)

Ulva lactuca of the seacoast along the Mediterranean and adjoining portion of the Atlantic. A marine *laver* called in Germany "meersalat" (Lenz); and the BPYON: ΘΑΛΑΣΣΙΟΝ prescribed in Nat. mul. 570, — growing on stones and shells according to Theophrastus iv. 6. 2 to 6, grassy green, broad and not unlike lettuce, described by Dioscorides as thin and stemless and employed as an astringent medicinally, is referred here by writers: U. lactuca is termed "f. creticus lactucæfolius" by Tournefort (Bory); was observed by Sibthorp, and Bory, in harbours and sea-water pools from the Peloponnesus to the Bosphorus; and by Delile, at Alexandria. Westward, the "vruōn thalassiōn" or "vāllaris" or "iranē" is identified in Syn. Diosc. with the "gnŏmōusillōn" of the Romans; the "bryon marinum" according to Pliny xxvii. 33 is clearly an herb, the leaves arising "ab ima radice," and he mentions additional medical uses: U. lactuca is described by Dillenius 42 pl. 8; and is known to grow around Italy (Lenz), and along the Atlantic as far as Britain, employed there against scrofula, and from its bitter and salt taste sometimes mixed in salads (Engl. bot. pl. 1551, and Spreng.).

"406 B. C." (Sm. b. d.), at Rome, military tribunes holding the place of consuls. Anxur or Tarracina, a city of Latium, captured from the Volscians by the Romans and war declared against Veii. For the first time, pay decreed by the senate to Roman soldiers.

"December" (Plut. and Clint.), death of Euripides. At Syracuse on the "same day," the government seized by Dionysius: who besides opposing the Carthaginian invaders of Sicily, wrote poetry; and during "thirty-eight" years reign, obtained several "second and third prizes of tragedy at Athens."

"In this year" (Sm. b. d.), Callias archon at Athens. He appears to be the Callias who "90 years before the archon Praxibulus" (= 315 + 90) discovered "minium" (Theophr.); a mineral pigment at this time found in Spain — (Plin. xxxiii. 37): the addition to the Second book of the Iliad 637 in which "miltōparēōs" red-prowed ships are spoken of, possibly not older than this date. The face of the image of Jupiter at Rome was covered with "minium" as early at least as the triumph of Camillus, and to the time of Pliny xxxiii. 40 the pigment continued to be brought exclusively from Spain (from the mine afterwards worked for *quicksilver*).

"In the reign of Darius II." (Julian ep. 37 p. 413, and Clint.), Democritus visiting Persia and Egypt.

Helianthemum vulgare of Europe and the adjoining portion of Asia. Called in old British herbals *sunflower* (Prior); in which we recognize the "heliocallidem" or "helianthes" growing according to Democritus in Pontus and on the maritime mountains of Cilicia, myrtle-leaved, and mixed in ointment by the Magians and Persian kings — (Plin. xxiv. 102): H. vulgare was observed by Forskal, Sibthorp, and Chaubard, from the Peloponnesus to the Bithynian Olympus. Westward, is described by Matthioli: comm. 546 (Spreng.); is termed "h. vulgare flore luteo" by Tournefort inst. 248, "h. chamæcistus" by Miller; was observed by Scopoli in Carniolia; and is known to grow throughout middle Europe as far as Denmark (Crantz, fl. Dan. pl. 101, and Pers.).

Caucalis maritima of the Mediterranean seashore. A carrot-like plant called in Greece "cafcalithra" or "kaukalitha" (Belon, and Hon. Bell.), in Egyptian "sĕsĕlis" (Syn. Diosc.); in which we recognize the "kaukalis" identified in Syn. Diosc. with the BPION of Democritus: — the "kaukalis" is enumerated among potherbs by Theophrastus vii. 7. 1, and Chrysippus, is described by Dioscorides as a span or more high, leaves "sĕlinŏ"-like, the upper ones more divided and hairy, white fragrant umbels, the plant eaten either crude or cooked and diuretic; is enumerated by Pliny xxi. 52 among the esculent plants of Egypt; and is termed a "lahanōn almurōn" by the scholiast of Nicander (Spreng.): C. maritimus was observed by Belon, and Honorius Bellus (append. Clus. 301), eaten in salads in Greece; by Sibthorp, growing on the sandy shore of Cimolus Island; and by Delile, near Alexandria. Westward, the "kaukalis" or "kaukōn" or "thaukōn agriōn" or "muitis" is further identified in Syn. Diosc. with the "pĕthĕm gallinakĕōum" or "pĕthĕm pōulli" of the Romans; they who eat "capnon" herb (by some read "caucon") "bilem per urinam reddunt" according to Pliny xxvi. 19: C. maritima is termed "c. pumila maritima" by Tournefort inst. 323; was observed by Gerard gall pl. 10 on the Mediterranean shore of France; is known to grow also as far as Barbary and Spain (Gouan, Cav. ii. pl. 10, and Pers.). An allied species is called *hen's foot* in Britain (Prior).

Ranunculus Orientalis of the East Mediterranean countries. The BATPAXION called XPYΣ ANΘEMON golden-flowered, only two palms high and having leaves like ΣΕΛΙΝΩ and larger, enumerated among signs of subterranean water by Democritus — (geopon. ii. 6), may be compared: R. Orientalis was received from the East by Linnæus (Pers.); and was observed by Chaubard on the Greek islands.

Convolvulus Sibthorpi of the East Mediterranean countries. A species of *bindweed* with leaves "cordato-hastatis pilosis basi angulatis" (Sibth.); and the ΜΑΛΑΚΟΚΙΣΣΟΣ twining around reeds and whatever it gets hold of, enumerated among signs of subterranean water by Democritus —

(geopon. ii. 6), may be compared: C. Sibthorpi is termed "c. græcus sagittæ foliis flore albo" by Tournefort cor. 1; was observed by Sibthorp, and Chaubard, from the Peloponnesus throughout the Greek islands to Samos, but only in hedges, vineyards, and cultivated ground; is identified by Bory with the "C. hirsutus" of Bieberstein, occurring probably as far as Caucasus.

Calystegia sepium of Temperate climates. Called in Britain *hedge-bells* or *larger bindweed* (Prior), in France "liseron des haies" (Fée), in Germany "zaunwinde," in Italy "campanelle" or "vilucchio maggiore" or "smilace liscia" (Lenz), in Greece "pĕrĭplōkathi" (Sibth.), and possibly the "malakōkissŏs" in question; — clearly the "smilax lĕia" of Dioscorides having "kissŏ"-like leaves but "malakŏtĕra" as well as smoother and thinner, its circular white flowers distributed throughout the plant which twines around trees and is formed into arbours: C. sepium was observed by Forskal, Sibthorp, and Fraas, in hedges from Attica to Smyrna; is known to grow from Kasan in Russia to Caucasus, the Altaian mountains and Daouria (Ledeb.). Westward, the "convolvulum" is described by Pliny xxi. 11 as an herb growing in bushy places and bearing a lily-like flower, scentless and devoid of saffron, as though nature was learning to make lilies: C. sepium is described by Fuchsius 719 (Spreng.); is termed "c. major albus" by Tournefort inst. 82; was observed by Munby in Algeria, by Lenz in Italy; and is known to grow as far as Sweden (fl. Dan. pl. 458, Pers., and Fries). Farther West, is known to grow on the Azores Islands (Wats.), on Newfoundland and along the St. Lawrence (herb. Dec., and Lindl.), to the Saskatchawan (Hook.); was in New England before 1669, as appears from Josselyn rar. p. 58 "briony of Peru we call it though its grown hear, or rather scammony;" was observed by myself in New England, as well as within reach of the Pacific tide in San Francisco Bay. In the Southern Hemisphere, is known to grow in Peru (fl. Per. ii. p. 10); was observed by Poeppig in Chili; by J. D. Hooker on the Chonos archipelago; by R. Brown, in Australia and Tasmania; by myself, indigenous in Australia and New Zealand. Clearly by European colonists, was carried to the Mauritius Islands, where it was observed by Bojer under cultivation only; and to Java (Burmann, see A. Dec.). The root according to Lindley is "purgative like scammony but much less active"

Salvia aethiopis of the Mediterranean countries. The "aethiopida" growing according to Democritus at Meroe and hence called "meroida," — believed by the Magians to open by contact everything closed (Plin. xxiv. 102 and xxvi. 9), growing according to Dioscorides in Messenia and on Ida and having shaggy "phlōmŏ"-like leaves around the base of its quadrangular stem, is referred here by Matthioli and others: S. aethiopis was observed by Sibthorp around Athens and by the roadside near Smyrna. Westward, is brought according to Pliny xxvii. 1 to 3 of fine quality from Aethiopia: S. aethiopis is termed "sclarea vulgaris lanuginosa amplissimo folio" by Tournefort inst. 179; is known to grow on the African side of the Mediterranean and as far as France and Austria, the lip of the corolla cohering and forming a sack (Jacq. austr. pl. 211, and Pers.).

Schœnus mucronatus of the Mediterranean seashore. A Cyperoid plant called in Egypt "sææd" (Forsk.); and the ΣΧΟΙΝΟΥΣ by some called ΟΛΟΣΧΟΙΝΟΥΣ enumerated among signs of subterranean water by Democritus — (Geopon. ii. 6), mentioned also by Aeschines, and Aristippus (D. Laert.), may be compared: the "ōlōshōinōs" of Dioscorides iv. 52 has radical leaves and terminal inflorescence: but S. mucronatus appears to be a maritime species, was observed by Sibthorp, and Chaubard, in the sand of the seashore from the Peloponnesus to Crete; by Alpinus, Forskal p. 15, and Delile, along the Mediterranean shore of Egypt; and is termed "cyperus aegyptiacus" by Gloxin pl. 3 (Pers.). Westward, is described by Morison iii. pl. 9; is termed "scirpus maritimus capite glomerato" by Tournefort inst. 528; and is known to grow along the seashore of the West Mediterranean countries as far as Morocco (Schousb. ii. 28).

Equisetum arvense of Northern climates. Called in Britain *horsetail* (Ainsw.), in Germany "schafthalm," in Italy "coda di cavallo" or "coda equina" (Lenz); in which we recognize the ΙΠΠΟΥΡΙΣ enumerated among signs of subterranean water by Democritus, and described as resembling a horse's tail, its stem more slender at the root than above, hollow and divided into joints from which arise hair-like leaves — (geopon. ii. 6): E. arvense was observed by Forskal, and Sibthorp, in moist open situations from the Peloponnesus to Constantinople. Westward, the "hippuris" of the Greeks is identified by Pliny xviii. 67 and xxvi. 83 with the "equisetum in pratis vituperata:" E. arvense is termed "e. a. longioribus setis" by Tournefort inst. 533; was observed by Lenz frequent in Italy; and is known to grow throughout middle and Northern Europe (Curt. lond. iv. pl. 64). Farther West, is known to grow on Madeira (herb. A. N. S.); was observed by Drummond in Lat. 54° at Cumberland House; by myself, along the Atlantic as far South as Lat. 42°, and by Barton to 40° near Philadelphia.

Equisetum ephedrioides of the Mediterranean countries. Possibly the "ippōuris" of Democritus; — at least, agreeing better with the Egyptian "phĕrphra" identified in Syn. Diosc. iv. 44 with the "krōnōu trōphē" of the prophets: E. ephedrioides was observed by Bory pl. 37 in the Peloponnesus; by Bové in the Sinai Desert; and Westward, is known to grow in Algeria and Spain as far as the Garonne (Bory).

"405 B. C." (Astronom. can., and Clint. ii. p. 381), Darius II. succeeded by Artaxerxes II. Mnemon, tenth Persian emperor.

"In the autumn" (Xenoph., Blair, and Clint.), Nineteenth change in naval dominion. The Athenians defeated by Lysander in *naval combat* at Aegospotamos; and the "Empire" over the Eastern waters of the Mediterranean transferred to the Spartans.

"The same year" (Lubke and Lutrow), in Sicily, Agrigentum devastated by the Carthaginians; the temple there to Jupiter being unfinished. — Remains of the "almost destroyed" temple continue extant.

By Clidemus (Aristot. meteor. ii. 9), *lightning* regarded as having no real existence; as an effect only, like striking the sea with a rod.

"404, in the spring" (Xenoph., Blair, and Clint.), Athens captured by the Spartans under Lysander; the Peloponnesian war thus ending in *Spartan ascendancy.* Athens now placed under the "Thirty;" who ruled "eight months."

"On the nones of June" (. . . . Cic. rep. i. 16, and Sm. b. d.), *eclipse of the sun.* Recorded in the Annales Maximi.

"403 B. C." (. . . . Clint.), archonship of Euclides, "a marked epoch in the civil history of Athens." After the deposition of the "Thirty," Thrasybulus and his party carrying on war against the succeeding government of the "Ten."

402 B. C. (= 424 — "22 years" in the Mahavamsa v.), the sons of Calasoka succeeded by Uggasenah-Nandeya, now Hindu king, — afterwards by Panducah-Nandeya, Panducagaty-Nandeya, Bupala-Nandeya, Rattepale-Nandeya, Govisanah-Nandeya, and Dasesittica Nandeya.

In this year (= 408 — "6 years" of both Maneth. tables), in Egypt, Nĕphĕritēs succeeded by Ahŏris, second king of the Twenty-ninth dynasty. Ahŏris is historically mentioned by Theopompus, and Diodorus. The hieroglyphic ovals of king Hakor occur at Shayl, and on stone fragments at Karnak (Glid. analect.); also on repaired portions of the temples at Medinet-abu and El Kab, in the quarries at Tura, and on a sphinx (now in Paris).

"In this year" (Lysias, Suid., Eudox., and Sm. b. d.) at Athens, a prize for comedy gained by Cephisodorus.

"401 B. C. = 1st year of Ngan-wang, of the Tcheou" or Fifth dynasty (Chinese chron. table).

The same year = "2d year of Hakor," inscribed at Tura; the latest date in his reign found on the monuments. "Thirteen" years are however assigned to him in both the Maneth. tables.

Moringa aptera of Nubia and Tropical Arabia. The oil called in commerce *oil-of-ben*, in Egypt "habbet el-ghaly" (Del.) or "hobba gali" (Forsk. mat. med.), being remarkable for not turning rancid (Pers., and Spreng.), may have been the kind used in compounding precious ointment called in Egyptian "sōjĕn" (transl. Sept.): the ΣΑΓΔΑΝ· Egyptian ointment of Epilycus, — and Eubulus (Athen. xvii. 13), may be compared: the "valanōs" is described by Theophrastus iv. 2 to 6 as a contorted tree peculiar to Egypt, its leaves myrtle-like, fruit like that of "kappariōs" and used by "murĕpsōi" ointment-makers; grows according to Dioscorides in Ethiopia, Egypt, Arabia, and at Petra on the border of Judea; and the "myrobalanus" is mentioned by Cato 114, Pliny, and Galen comp. med. ix. p. 239: M. aptera is described by Lamarck enc. i. 733 (Pers.); was observed by myself, a low contorted tree in mountain-ravines at Aden; by Lepsius eg. and sin. p. 227, the "ban" tree having "roundish furrowed pods" in a small valley in Upper Nubia, but regarded by him as perhaps "introduced by the Schaiqieh Arabs." The seeds of this species according to Decaisne, and Lindley, yield the oil-of-ben "much used by perfumers as the basis of various scents, and by watch-makers, because it does not readily freeze."

Moringa pterygosperma of Tropical Hindustan. Called in Tamil "mooringhy," in Telinga "mooraga," in Bengalee "shajina," in Hindustanee "sujna" (Drur.); and confounded with the preceding as early perhaps as this date: — the "balanus myrepsica" seen by Belon 126, and Hasselquist, at mount Sinai, may be compared (a pod from that locality obtained by Gliddon was sharply trigonal, but I did not examine the seeds); also the two foreign trees seen by Forskal p. 67 in the city of Beit el fakih, unknown to the inhabitants but by some one called "seseban." Eastward from Arabia, was observed by Rheede vi. pl. 11 in Malabar; by myself, from Bombay to the end of my journey only around villages; by Graham, "common about villages all over the country, oil is obtained from the seeds;" by Drury, "in gardens in the peninsula," and the oil used medicinally; by Roxburgh, in other portions of Hindustan; is known to occur also on Ceylon (Pers.). Farther East, was observed by Mason v. p. 468 "exotic" in Burmah and called "da-tha-lwon," cultivated "by the Burmese for its pods which are eaten in curries," but by residents chiefly valued for its root hardly to be distinguished from *horse-radish;* is known to occur also on Java (Drur.); was observed by Loureiro in Anam (Steud.); by Blanco, on the Philippines and called in Tagalo "malunggai" or "camalunggai" or "calunggai," in Bisaya and Pampango "malunggai" or "calunggai" or "malungit" or "dool," universally known to the natives and regarded by them as never struck by lightning, the

leaves and fruit cooked and eaten. By European colonists, was carried to the West Indies, where the oil is eaten on salads, and on "Jamaica the wood is employed for dyeing a blue colour" (Drur.).

"The same year" (D. Laert., Blair, and Clint.), expedition of the younger Cyrus with Greek auxiliaries, against his brother Artaxerxes II. The route led through "Lycaonia," the table-land or inland basin of Asia Minor, now first mentioned in history (Xen. anab. i. 2. 19, iii. 2. 23, and cyrop. vi. 2. 20). — The country is described by Strabo xii. 6; and the *Lycaonian language* is mentioned in Acts xiv. 12.

One hundred and seventeenth generation. Jan. 1st, 400; mostly beyond youth: the Greek poets, Philoxenus of Cythera, Telestes, and Polyidus; the comic poets, Diocles, Sannyrion, Philyllius, Hipparchus, Polyzelus, Xenophon, Arcesilaus, Autocrates, Eunicus, Apollophanes, Nicophon, Nicochares, and Theopompus; the tragic poets, Cleophon, Astydamas, Diogenes, Euripides the younger, Astydamas the younger, Sophocles the younger, Dicaeogenes, and Chaeremon; the mimographer Xenarchus; the philosophers, Aeschines, and Metrodorus of Chio; the historians, Anaximander the younger, and Philistus; the orators Archinus, Cephalus, Thrasybulus of Colyttus, and Melanopus; the painters, Zeuxis, Apollodorus, and Eupompus; the sculptor Polyeletus of Argos.

The ΕΛΕΙΟΣ of Xenophon cyn. v. 17, — and Aristotle, enumerated as inferior food by Mnestheus (Oribas. ii. 68), identified by Hesychius with the "skiōurōs," is referred by writers to the *squirrel*, Sciurus Europæus.

Corylus colurna of the countries on the Black Sea. The imported nuts called in Britain *cob-nut*, in Germany "zellernuss" (Grieb), and the living shrub in the environs of Constantinople "phōuntōukia" (Fraas); the ΚΑΡΥΑ without seam of Xenophon anab. v. 4, — "karua pōntika" of Ctesias, Athenaeus, Galen fac. alim. ii. p. 609, and of Dioscorides in part, may therefore be compared: the "erakleōtikē karua" bearing "prōmakrōn karpōn" of Theophrastus iii. 15. 2 and cāuss. ii. 12. 6 is referred here by Fraas: Pliny xv. 24 speaks of the "abellinas" as distinct from the "avellanis" and brought into Greece from Pontus, therefore called "pontieae nuces:". C. colurna is termed "avellana byzantina" by Clusius hist. i. pl. 11, "c. byzantina" by Tournefort inst. 582 and Seba i. pl. 27; and was observed in the environs of Constantinople by Sibthorp (see C. avellana).

Azalea Pontica of the Caucasian countries. After the defeat and death of Cyrus the younger, the "Ten thousand" Greeks retreating towards Trebizond found the honey of the country poisonous, and from the effects some became delirious and some died (Xenoph. anab. iv. 8): — the existence in this quarter of poisonous honey, is mentioned also by Aristotle mirab. 17, Diodorus, Dioscorides, and Aelian; soldiers under Pompey in crossing the mountains near Trebizond, were defeated through partaking of this honey (Strab. xii. p. 88); and the poisonous quality is attributed by Pliny xxi. 45 to flowers of "rhododendri" abounding through the woods. In modern times, this poisonous honey has been traced to the flowers of A. Pontica by Tournefort acad. paris. 1704, and Klaproth trav. i. p. 455, and according to Pallas flor. i. pl. 69 the effects are like those of Lolium temulentum, and the natives are well aware of the deleterious properties. A. Pontica is known to grow in other parts of Asia Minor, in Georgia, and in woods of oak and beech on the subalpine portion of Caucasus (Lindl.).

Rhododendron Ponticum of Taurus and Caucasus. An allied ornamental shrub, growing chiefly on mountains, — and its flowers supposed by Tournefort to equally poison honey; but this is denied by Guldenstædt, and according to Pallas i. pl. 29 the shrub is unknown in the country of poisonous honey and makes its first appearance in the districts of Ocriba and Salordkipaniso on the Southern subalpine limestone ridge of Caucasus: R. Ponticum is known to grow also on the neighbouring mountains of Western Persia (Lindl.); was observed by Labillardiere in Syria, by Grisebach on the Bithynian Olympus at the elevation of only "eight hundred" feet, but according to Tchihatcheff is rarely met with in Asia Minor. Westward, was known to R. Constantinus; and according to Persoon, Webb trav. 29, and A. Decandolle, reappears on the extreme Southern mountains of Portugal and Spain. Is besides planted for ornament, and by European colonists was carried to Northeast America, where it continues in greenhouses.

"Before the close of the year" (Clint.), arrival home by the way of Asia Minor of the retreating "Ten thousand" Greeks.

"In this year" (Chinese writers, Amyot, and Pauth. p. 200), *gunpowder*, and "ho-toung" or fire-tubes in use among the Chinese.

The Feejeean Tongan and Samoan Groups colonized as early possibly as this date. The Tongans and Samoans "refer the origin of their race to a large island, situated to the Northwest, called by the former Bulotu, by the latter Pulotu and Purotu," and by the Feejeeans "Mburotu:" regarded by Hale ethnogr. Expl. Exp. 195 as perhaps Bouro in the Malayan archipelago (see Taumaco).

Calophyllum inophyllum of wooded Tropical shores from Madagascar to the Taheitian Islands. A seaside tree called in Hindustanee "sultan-champa," in Tamil "pinnay," in Telinga "ponna" (Drur.), in the environs of Bombay "poona" (Graham), in Burmah "phung-nyet" (Mason), in Tagalo "tamanian" or "dincalin" or "dancalan," in Camarines "dancalan," in Bisaya "dancalan" or "bitoag," in Pampango and Ylocano "bitoag" (Blanco), on Taheiti "tomanu" (Bertero); and known to the first colonists of the Feejeean and Polynesian islands: * — observed by myself on the Feejeean, Tongan, Samoan, and Taheitian Islands as far as Metia; by Rich on the Tarawan coral-islands; by Blanco, on the Philippines, its resin highly esteemed and called "balsamo de Maria," and oil from its nut occasionally used for illuminating; is described also by Rumphius ii. pl. 71; is termed "balsamaria" by Loureiro, as seen by him in Anam; was observed by Horsfield on Java, regarded as diuretic; by Mason v. 411 to 751 "exotic" in Burmah, planted near Budhist monasteries; by Rheede iv. pl. 38, in Malabar; by Graham, common in "sandy soil near the sea" as far as Bombay; by Roxburgh, Wight, and Drury, as far as Travancore and Ceylon, its oil employed medicinally by the natives and for burning in lamps. Farther West, was observed in 1661 by Flacourt 130 on Madagascar (Spreng.); and according to Lamarck enc., grows also on the Isle of Bourbon. From transported specimens, is described by Plukenet alm. pl. 147. (See C. calaba).

Canavalia obtusifolia of Tropical shores. A kind of sword-bean called in Tagalo "pataning dagat" from growing on the seashore (Blanco); and doubtless known to the first colonists of the Feejeean and Polynesian islands: — observed by myself on the Hawaiian, Samoan, Tongan, and Feejeean Islands, and on the Mangsi coral-islets near Borneo; by Blanco, frequent on the Philippines, but not put to any use by the natives; was received by Decaisne from Timor (A. Dec.); was observed by Mason v. 468, "growing in great profusion" along "the sea shore" of Burmah; by Roxburgh, Wight, and Drury, from the mouth of the Godavery "common on the sea-shore;" by Rheede viii. pl. 43, in Malabar; by Graham, in "the Concans" to and beyond Bombay; and by Bojer 108, on the Mauritius Islands. Farther West, is known to grow along the Atlantic in Equatorial Africa (fl. Nigr. 307) and the West Indies (Pers., and A Dec.). Transported to Europe, is described by Plukenet pl. 51.

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* *Brugueira gymnorhiza* of muddy Tropical shores from Hindustan to the Samoan Islands. A mangrove or salt-water arborescent shrub, known of course to the first colonists of the Feejeean Islands: — observed there by myself, abounding in muddy places within tide-water, in times of scarcity its fruit eaten by the natives, observed also as far as the Samoan Islands; by Rumphius iii. pl. 68, and Blume, in the Malayan archipelago, its fruit leaves and bark eaten by the natives (Pers.); by Mason v. 515 to 541, the most abundant mangrove in Burmah, affording "hard and durable timber" and bark abounding in "tannic acid;" by Rheede vi. pl. 31 and 32, in Malabar; by Roxburgh, and Wight, in other parts of Hindustan; and by Graham, as far as Bombay.

Musscenda frondosa of Tropical Eastern Asia and the neighbouring islands as far as the Samoan. A large shrub called in the environs of Bombay "sarwud" or "lanchout" or "bhootcase" (Graham), in Malabar "belilla" (Rheede, and Drur. p. 500), in the environs of Canton "kaulimang" (Osbeck), in Ylocano "balailamoc," in Tagalo "tingatinga" (Blanco), and clearly known to the first colonists of the Feejeean Islands: — observed there by myself, frequent and to all appearance indigenous, as also on the shores of the Samoan Islands. Westward, is described by Rumphius iv. pl. 51; was observed by Blanco on the Philippines, by myself, a single stock growing by the roadside in Interior Luzon; by Osbeck, "near the shore" in the environs of Canton, by James Read also near Canton and specimens shown me; by Burmann pl. 46, on Ceylon; by Rheede ii. pl. 18, in Malabar; by Roxburgh, and Wight, in other parts of Hindustan; by Graham 86 to 95, as far as Bombay, "in gardens" and "common on the Ghauts," used by the natives "as a charm to drive away dæmons" and its "strange looking white calycine leaves" eaten, seen by myself only in the Botanic garden.

Justicia (Hypoestis) purpurea of Tropical China. Called in the environs of Canton "happ-key-lee" (Osb.), and carried to the Feejeean Islands possibly by the first colonists: — observed by myself naturalized there and also cultivated for ornament by the natives, on the Samoan Islands only around native dwellings. Westward, is described by Rumphius vi. pl. 22; is attributed to China by Persoon; and was observed by Osbeck near Canton, planted on the graves of Europeans. Transported to Europe, is described by Vahl symb. ii. 13 (Pers.), and continues in greenhouses (Brackenridge).

Codiæum variegatum of Tropical Eastern Asia. A shrub with laurel-like variegated leaves called in Malabar "tsjera-maram" (Rheede), in Tagalo "saguilala," in Bisaya "calipayang" (Blanco); carried to the Feejeean Islands, and possibly by the first colonists: — observed there by myself, planted for ornament by the natives, one variety having long narrow leaves incised at intervals to the midrib; the usual broad-leaved variety planted also on Tongatabu and the Samoan Islands. West-

"399 B. C." (Sm. b. d.), pestilence in Rome, military tribunes holding the place of consuls; and a "lectisternium" funeral banquet to the gods, for the first time instituted.

"The same year" (Clint.), at Athens, Socrates accused by the tragic poet Meletus and unjustly put to death.

"398 B. C." (Sm. b. d.), from Rome, military tribunes holding the place of consuls, an embassy sent to consult the oracle at Delphi.

As early probably as this date (Plat. phaed., and D. Laert.), Philolaus maintaining after the Pythagoreans, That the Earth is not stationary, but moves around a central fire.

"396 B. C." (Sm. b. d.), military tribunes holding the place of consuls, Veii captured by the Romans under the dictator M. Furius Camillus. — Three years afterwards, the conquered territory was distributed among the plebeians.

"The same year" (Blair, and Clint.), expedition of the Proclid king of Sparta, Agesilaus II., into Asia against the Persians.

About this time (epist. socrat. 9), the Socratic philosopher Aristippus writing from Syracuse to Antisthenes.

Lupinus albus of the Mediterranean countries. A *field lupine* called in France "lupin" or "pois lupin" (Nugent), in Italy "lupino" (Lenz), and the large and white ΘΕΡΜΩΝ sent from Sicily by Aristippus — may be compared: L. albus was observed by Chaubard in the Peloponnesus, by Grisebach in Thrace, by Durville near Constantinople, and is known to grow as far as Caucasus (Ledeb.); is known to be cultivated in Egypt (Moench, Del. mem. cult. p. 13, and Dec. prodr. i. 407), was observed by Grant in descending the Nile under cultivation in "Lat. 15°." Westward, the cultivated "lupinus" is mentioned by Cato 34 to 54, Varro, Virgil, Columella, Pliny xviii. 36, Palladius, and the "lōupinōum" of the Romans in Syn. Diosc. ii. 132: L. albus is termed "l. sativus" by Gatereau; was observed by Lenz under cultivation in Italy, by Link i. 207 in Portugal and the seeds eaten (Pers.); is besides known to grow to all appearance wild in Italy and Sicily (Bertol., Guss., and A. Dec.).

"395 B. C." (Clint.), after an absence of "three or four" years in Italy, Cyrene, and especially Egypt, where he received instruction from Sechnuphis, Plato returning to Athens.

The superstition of the *evil eye*, ΒΑΣΚΑΝΙΑ already in Greece in the days of Plato phaed.

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ward, "the willow-leaved variety" is described by Rumphius iv. pl. 26 (Graham); C. variegatum was observed by myself on the Philippines, planted by the natives according to Blanco for ornament; by Thunberg, as far as Japan; is termed "phyllaurea codiaeum" by Loureiro ii. 705; was observed by Mason 421 to 762 "exotic" in Burmah, cultivated for ornament; by Roxburgh, in Hindustan; by Rheede vi. pl. 61, in Malabar; by Graham, as far as Bombay, "very common" in "gardens and flower pots." By European colonists, was carried to the Mauritius Islands, observed by Bojer in gardens. Transported to Europe, continues in greenhouses (bot. mag. pl. 3051, and bot. cab. pl. 870).

Dioscorea aculeata of Tropical Eastern Asia. The *Goa potato* or *birch-rind yam* is called in Malabar "kata-kelengu" (Rheede), on the Feejeean Islands according to one account "kawai" (C. P.); carried there, and perhaps by the first colonists: — observed by myself, cultivated rather abundantly, roots also at Tongatabu, possibly imported, and roots again in the market on Sulu; the plant according to Rumphius v. pl. 126 and p. 358 is chiefly spontaneous in Western China (A. Dec.); was observed by Roxburgh in Hindustan; by Rheede vii. pl. 37, in Malabar; and according to Drury, the roots "are dug up in the forests in the cold season, and sold in the bazaars;" are known at Bombay only as "imported from Goa" (Graham, and myself). By European colonists, was carried to the Mauritius Islands, observed by Bojer cultivated around dwellings. (See D. pentaphylla).

Crinum Asiaticum of Tropical Eastern Asia. Called in Cingalese "tolabo," in Bengalee "burd-kanoor" or "sookh-dursun" (Lindl.), in Telinga "vesha mungaloo-pakoo," in Tamil "veshi moonghee" (Drur.): carried to the Feejeean Islands possibly by the first colonists: — observed by myself under cultivation there and on Tongatabu, seemingly indigenous along the seashore of the Samoan Islands, but found by Brackenridge under cultivation also by the Samoans. Westward, was observed by Blanco on the Philippines in Mandaloyon, though unknown to the natives; by myself, under cultivation in the Malayan archipelago; is termed by Rumphius "radix toxicaria;" and in Java, is considered a good emetic, efficient in curing wounds made by poisoned arrows (rumphia i. 55, and Drur.); was observed by Hermann hort. lugd. 683 on Ceylon; by Rheede xi. pl. 38, in Malabar; by Graham, in "both Concans," to and beyond Bombay; by Ainslie, and Roxburgh, in other parts of Hindustan, "on the banks of rivers and in marshy places," the juice of its leaves given "in Upper India" in ear-ache (Drur.). Transported to Europe, is described by Miller pl. 110.

100, — and Aristotle probl. 20. 34: spitting thrice upon persons in danger of being bewitched is mentioned by Theocritus vi. 39, and to the present day, according to E. A. Sophocles gloss., is practised by the Greeks

The ΜΑΓΝΗΤΙΣ: ΛΙΘΟΣ magnetic ore of iron or the natural *magnet*, mentioned by Plato ion. 533, — Eubulus (Athen. iii.), and others.

Astragalus poterium of the Mediterranean countries. The ΝΕΥΡΑ string of vegetable fibre in Plato polit. 279 seems to imply knowledge of the "nĕurātha" of the Ionians; — identified in Syn. Diosc. with the "pōtĕriōn" of Dioscorides, a large spiny bush covered with woolly down and having long soft thong-like branches "tragakanthē"-like, small roundish leaves, "nĕurŏthĕis" roots two or three cubits long yielding when cut a gummy exudation, and referred here by writers: the "pōtĕriōn" is further identified in Syn. Diosc. with the "phruniōn" or "akithŏtōn:" A. poterium was observed by Tournefort trav. i. p. 61 in Greece, its down collected for kindling. Westward, the account by Pliny xxv. 76 and xxvii. 97 of the "poterion" or "phrynion," an antidote to "ranis venena rubetis maxime," seems chiefly taken from Dioscorides; A. poterium is described by Matthioli comm. p. 498, and Clusius hist. i. p. 108 (Spreng.); and is known to grow in Spain and Portugal (Morison ii. pl. 13, Lam., and Pers.).

In this year (= "Ol. 96. 2, Diophantus being Athenian archon," Paus. viii. 45. 4), at Tegea in Arcadia, the temple to Minerva in the Doric style of architecture destroyed by fire. The temple was rebuilt by Scopas, after the Corinthian order invented by Callimachus.

Acanthus mollis of the West Mediterranean countries. The "acanthus" said to have suggested to Callimachus the idea of the Corinthian column — (Vitruv. iv. 1. 10), is referred here by writers: a cup with the "agrōs akanthōs" sculptured around is mentioned by Theocritus i. 55; the "akantha" (read "acanthos" by Pliny) growing according to Dioscorides in gardens and stony and moist places, its leaves smooth and incised like those of "ĕuzŏmōu," and flower white, is identified in the added Synonyms with the "ĕrpakantha" or "mĕlamphullōn" or "paithĕrŏta;" the "paithĕrŏs" was found by Pausanias ii. 10. 5 growing only within the enclosure of the temple to Venus at Sicyon, the leaves having the shape of those of the oak and burned with the offerings: A. mollis has not been observed in Greece by modern travellers; and according to Clot-Bey and Figari has only recently been introduced into Egypt. Westward, the "acanthus" is termed "molli" as well as "flexi" by Virgil ecl. iii. 45 and geor. iv. 122; "tortus" by Columella x. 243; the "laeve" kind according to Pliny xxii. 34 is by some called "paederota" or melamphyllum;" the "acanthus" is mentioned also by the younger Pliny ep. v. 6: A. mollis is termed "a. sativus vel mollis" by Tournefort inst. 176, "a. niger" by Miller; was observed by Sibthorp on Sicily; is known to grow also in Italy, the neighbouring portion of France, and in Spain (Pers., and Colm. recuerd. p. 18). Farther North, is cultivated for ornament, and introduced at some remote period, has become naturalized on the Scilly Islets and in the neighbouring portion of Cornwall (Wats., and A. Dec.). The leaves according to Lindley are "emollient" and "used for poultices."

Acanthus spinosus of the East Mediterranean countries. Called in Greece "mōutrina" or "tzōulathitza" (Sibth.); and possibly the "acanthus" seen by Callimachus: — the "akanthōu" enumerated by Theophrastus vi. 1. 3 as prickly-leaved, and the "akanthōs althĕĕis" of Nicander ther. 645, are referred here by the scholiast; the "agria akantha" of Dioscorides iii. 17 may also belong here; A spinosus was observed by Sibthorp, Chaubard, and Fraas, frequent from Crete and the Peloponnesus throughout the Greek islands. Westward, the "agria akantha" is identified in Syn. Diosc. with the "spina agrĕstis" of the Romans, but the account by Pliny xxii. 34 of the "aculeatum et crispum" kind of "acanthos" seems taken from Dioscorides: A. spinosus is termed "a. aculeatus" by Tournefort inst. 176; was observed by Hogg on Sicily; is known to grow also in Italy (Sabb. hort. iii. pl. 14, and Pers.).

"394 B. C." (Blair, and Clint.), *naval combat* at Cnidus; the Spartans defeated by the Athenians and their allies, the forces of Pharnabazus and of Evagoras of Cyprus, all under the command of Conon. By a Twentieth change, the "Empire" over the Eastern waters of the Mediterranean now leaving the Spartans. A few days later,

"August 14th," *eclipse of the sun*. And after a few days, the Athenian army and allies defeated at Coronea by the Spartans under Agesilaus II.

"The same year" (Gesen. mon. Phœn. p. 10), date of a Cilico-Phœnician coin bearing the earliest *Phœnician inscription* known: — even after including *Punic* inscriptions. The *Hebrew inscriptions* on the Maccabee coins present many of the same forms of letters.

"392 B. C." (Diod. xiv. 90 to 96, and Sm. b. d.), in Sicily, Mago with a Carthaginian army compelled by Dionysius by cutting off supplies to conclude a treaty of peace.

"In this year" (Jap. centen. comm. 45), accession of Koan, sixth dairo of Japan. — He "reigned during not less than one hundred and two years" (must therefore have been proclaimed in infancy).

"391 B. C." (Sm. b. d.), military tribunes holding the place of consuls, Camillus banished from Rome. Etruria invaded by the Gauls, who besiege the city of Clusium.

"390 B. C." (Polyb., Diodor., and Grenfel), Rome captured by the Gauls under Brennus; who remained some months, and on leaving, compelled the citizens to pay a ransom. Camillus was then recalled from exile and appointed dictator. — This capture of Rome is mentioned by Aristotle (Plut. Camill. 22.)

"389 B. C." (Sm. b. d.), military tribunes holding the place of consuls, alliance with Rome renounced by the surrounding people of Latium. Victories over them gained by the dictator Camillus.

The same year (= 402 — "13 years" of both Maneth. tables), in Egypt, Ahŏris succeeded by Psammōuthis, third king of the Twenty-ninth dynasty. "One" year only is assigned to the reign of Psammōuthis in the Maneth. tables. His name has not as yet been found on the monuments.

388 B. C. (= 389 — "1 year" of both Maneth. tables), Psammōuthis succeeded by Nĕphĕritēs II., fourth king of the Twenty-ninth dynasty. Whose name has not as yet been found on the monuments.

At the end of "four months" (both Maneth. tables), he was succeeded by Nĕktanĕvēs, head of the Thirtieth or Sebennyte dynasty. The hieroglyphic ovals of king Nehtharheb were observed by Gliddon at Assouan; occur also in the Oasis El-Kargeh, at Karnak and on the neighbouring temple of Khons, and on moveable articles (now in the museums of Europe. Glid. analect.).

"The same year" (Suid., and Sm. b. d.), at Athens, the comedy entitled Pasiphae exhibited by Alcaeus.

"387 B. C." (Xenoph., Blair, and Clint.), treaty of peace of the Spartan general Antalcidas; by which the Greek cities in Asia Minor were rendered tributary to the Persians. Evagoras king of Cyprus was excepted from the provisions of the treaty.

Hardly later than this date, oration of Isocrates pac. 32 containing the following words on the possession of naval power by Sparta: "The *Empire of the sea* has displayed its effects there in even a shorter period than at Athens: it has shaken and nearly overthrown the institutions which had stood the assault of seven centuries: it has taught individuals injustice, idleness, and the love of money; and has inspired the public with disdain for their allies, with ambition of conquest, and contempt of oaths and treaties" (pac. 32).

Apollodorus of Cumae, the earliest grammarian, a follower "assectator" of Democritus — (Plin. vii. 37 and xxiv. 102, and Clem. Alex. strom. i. p. 309).

Mimosa ettaa of the mountains of Tropical Arabia. A tree called there "schadjaret ettaa" (Forsk.); and the "herbam aeschynomenen" of Apollodorus, contracting its leaves on the approach of the hand — (Plin. xxiv. 102), may be compared: a spiny shrub at Memphis with feather-like leaves that fall together on being touched, and after a while revive, is mentioned by Theophrastus iv. 2. 11, and the account is repeated by Pliny xiii. 19: M. ettaa was observed by Forskal p. xcv frequent on the mountains around Abu arisch, lowering its branches to a person coming underneath as though saluting, and therefore venerated and held sacred. Eastward, appears to have been carried to Hindustan, for a tree three cubits high bearing no fruit and called "modesty" from shrinking when approached, was seen there in the province of "Pudifetania" by Nicolo Conti; and a yellow-flowered sensitive plant was seen in Malabar by Garcias.

Sedum telephium of Europe and the adjoining portion of Asia. Called in Britain *livelong* or *liblong* or *midsummer men*, by old herbalists "fat hen" (Prior), in France "grassette" (Nugent), in Germany "fette-henne," in Italy "fava grassa" (Lenz); in which we recognize the "anacampseroten" when touched according to Apollodorus "redirent amores vel cum odio depositi" — (Plin. xxiv. 102), and mentioned by Plutarch fac. orb. lun. 25 as growing and sprouting long after removal from the ground; also the "tēlĕphilŏn" leaf of Theocritus iii. 29, and Pollux ix. 8, regarded by lovers as a good omen if it makes a loud crack, a belief alluded to by Horace satyr. iii. 2. 271: S. telephium was observed by Sibthorp in the environs of Constantinople. Westward, is termed "anacampseros sive faba crassa" by Tournefort inst. 264; was observed by Lenz not rare in Italy; and is known to grow in stony bushy places throughout middle Europe as far as Denmark (fl. Dan. pl. 686, Pers., and Lindl.). By European colonists, was carried to Northeast America, where it is sometimes called *Aaron's rod* and seems naturalized in rocky situations, though as yet chiefly confined to roadsides and the vicinity of dwellings. The plant is sold in the Italian drug-shops (Lenz), and according to Lindley is "refrigerant and slightly astringent."

"385 B. C." (Diodor., and Clint.), great *naval combat* between the Persians and Evagoras of Cyprus.

"The same year" (Diodor. xv. 13, Strab. vi. p. 241, Plin. iii. 18, and C. Mull. geogr. min. i. p. 24), the city of Ancona in Italy founded by Dionysius of Syracuse; now establishing colonies on the shores, and claiming the sovereignty of the Adriatic.

"384 B. C." (Sm. b. d.), at Rome, military tribunes holding the place of consuls, M. Manlius

Capitolinus having left the patricians and endeavouring to incite insurrection, accused of treason, condemned, and put to death.

"The same year" (Diodor. ii. 32, and Clint.), return of Ctesias from the court of Artaxerxes II.

Ctesias brought accounts of a bird in India "that could talk like a man, and even speak Greek if it had learned the language:" clearly the *parrot*, Psittacus; further described, as in part "of the colour of kinnabar" (Chinese vermilion). To this time therefore, the parrot remained unknown in Greece. — The "vittakōus" of Eubulus (Athen.) is admitted to be this bird; "sittakōus having the human voice," were seen in India by Nearchus; the "psittacus eoïs imitatrix ales ab indis," is mentioned by Ovid; the "humanæ solers imitator psittace linguæ," by Statius; and in the days of Arrian ind. 15, parrots were familiarly known in the Mediterranean countries.

Calamus fasciculatus of the valleys of the Himalaya from Cuttack to Bengal. Affording *rattan canes*, and called in Bengalee "buro-bet," in Tamil "paramboo" (Drur.); the ΚΑΛΑΜΟΣ: ΑΡΡΗΝ growing according to Ctesias along the Indus, strong and having no ΕΝΤΕΡΙΩΝΗΝ, — described by Theophrastus iv. 11. 13 as "stĕrĕōs" solid, may be compared: the "nadeya" or "vidula" or "sita" of Susrutas chik. 1, is referred here by Hessler: C. fasciculatus is described by Roxburgh iii. 779; and according to Royle, and Drury, the stems are exported from the valleys of the Himalaya into the plains, are about as thick as the forefinger and are used as walking-sticks. (See C. rotang.)

Terminalia catappa of Tropical Eastern Asia. The *Indian almond* is a lofty tree called in Tamil "nattoo vadamcottay," in Telinga "vadam," in Bengalee "badam" (Drur.), in the environs of Bombay "buddum" (Graham); and the ΚΑΡΥΙΝΩ oil used according to Ctesias 11 by the Indians, — may be compared: the sacred "ingudi" fruit yielding according to Kalidasa sacont. healing oil that makes the hair shine (transl. W. Jones), mentioned also by Susrutas chik. 1 and 18 to kalp. 6, is referred here by Hessler: T. catappa was observed by Rheede iv. pl. 3 in Malabar; by Graham, "common in gardens and about houses, Bombay," clearly planted as observed by myself; by Roxburgh, Wight, and Drury, under cultivation in other parts of Hindustan, the oil expressed from the seeds edible and pleasant-tasted, very like almond-oil both in taste and smell. Farther West, was observed by myself planted at Muscat and on Zanzibar; by Clot-Bey 138, in the gardens of Egypt. Eastward from Hindustan, is enumerated by Mason as indigenous in Burmah; was observed by Blanco on the Philippines, in former times used for dyeing, and to the present day planted and called in Tagalo "talisai," in (Bisaya) "talisai" or "dalasa" or "banilac" or "nato" or "hitam," in Pampango "calisai," in Ylocano "lugo" or "pandan;" by myself, planted by the natives in the Malayan archipelago and as far as the Feejeean and Tongan islands, conspicuous in the distance from its projecting tapering summit of sparse horizontal branches. By European colonists, was carried to the West Indies (Descourt. pl. ...). *T. Moluccana*, called in Sanscrit "kala-drooma," observed by Roxburgh ii. 433 in the mountainous countries Northeast of Bengal, and substituted in Hindustan for T. belerica (Lindl.), is given as a distinct species.

Cycas circinalis of Tropical Eastern Asia and the Malayan archipelago. The *sago-plant* is called in Telinga "wara-gudu," in Malabar "todda-pana" (Drur.); and the Indian ΦΟΙΝΙΚΕΣ of Ctesias bearing dates three times larger than the Babylonian, — may be compared: C. circinalis was observed by Graham "in gardens Bombay, introduced from the Eastern Islands," by Lush, "the common tree from Tellicherry to the foot of the Ghauts;" by Rheede iii. pl. 13 to 21, in Malabar, its vitality such that on being planted again after one or two years removal it will revive and grow; is very abundant according to Drury in the forests of Malabar and Cochin, and a kind of *sago* prepared from the nuts is much used by the poorer classes and forest tribes. Farther West, was observed by myself by the seaside on Zanzibar, natives on the spot asserting that it abounds and is a common esculent on the Comoro Islands. Eastward from Hindustan, was observed by Mason 424 to 506 indigenous in Burmah and called "mu-daing," frequent on the mountains in various districts and producing "a gum like gum tragacanth;" by Loureiro ii. 632, in Anam; by Blanco, on the Philippines, growing spontaneously on the mountains as well as planted by the natives, called in Tagalo "patubo" or "pitogo" or "bitogo," and its fruit sometimes eaten; by Rumphius i. pl. 22 to 23, abounding on the Moluccas and the fruit eaten (Lindl.); by myself, seemingly wild in the Malayan archipelago, in wild situations on the mountains of Ovolau, one of the Feejee Islands, but carried by the natives to Tongatabu and cultivated there. By European colonists, was carried to Northeast America, where it has become frequent in greenhouses. (Compare also Diospyros kaki.)

Rosa Damascena of Central Asia. Called in English gardens *Damask rose* (Drur.), in French "rosier des quatre saisons" (Pers.); and the ΚΑΡΠΙΟΝ, in Greek ΜΥΡΟΡΟΔΑ, described by Ctesias as a tree exuding drops of oil collected and kept in ΑΛΑΒΑΣΤΡΟΥΣ its fragrance so powerful that it can be perceived at the distance of five stadia, — may be compared; the account by Mark xiv. 3, and John xii. 3, of the costly "narthōs" filling the house with its odour, is eminently descriptive of *attar of rose*: R. Damascena according to Royle him. 203 is the most esteemed and is culti-

vated in Northern Hindustan for rose-water and attar of rose, but the latter is extensively distilled only at Ghazipore within the limits of Persia; was observed by Graham "commonly cultivated in Indian gardens" around Bombay; and the var. with variegated flowers, by Loureiro in Anam (Steud.). Westward from Persia, the "bifera rosaria Paesti" of Virgil geor. iv. 119, mentioned also by Propertius iv. 5. 59, Ovid met. xv. 708, Martial iv. 41. 10, and Ausonius xiv. 11, are referred here by Sprengel: R. Damascena is described by Symphorius Campegius, and Miller; is termed "r. bifera alba et rosea" by Duhamel (Steud.); and has become well known in the gardens of Europe. (See R. centifolia.)

Vateria Malabarica of Southern Hindustan. The *piney varnish* or *Indian copal tree* is called in Canarese "dupa" (Buch.), in Telinga "dupada mara," in Tamil "koondrikum" or "velli-koondricum," in Malabar "peini-marum" (Drur.); and the ΣΙΠΤΑΧΟΡΑ tree on the mountains, yielding according to Ctesias an exudation that falling into the river Uparhos hardens into amber ΗΛΕΚΤΡΟΝ, —may be compared: V. Malabarica is termed "chloroxylon dupada" by Buchanan, as observed by him in Mysore; is wrongly termed "v. indica" by Roxburgh; and according to Drury "forms beautiful avenues in Malabar and Canara," and "was a favourite with the ancient rajas," yields "an excellent varnish resembling copal," but "the best specimens of the gum are employed as ornaments under the name of amber 'kehroba' to which it bears exterior resemblance."

Vateria Roxburghiana of Burmah. Called there "let-touk" (Mason); and the locality in question—is referred by Mason iii. 39 to the *amber mines* of North Burmah: V. Roxburghiana is described by Wight; and according to Mason v. 486 to 515 yields a varnish similar to that of the preceding species.

Ruellia indigofera of the Eastern Himalayas. Called in Assam "room," in Burmah "mai-gyee" (Mason); and the purple flower ΑΝΘΟΣ: ΓΟΦΥΡΟΥΝ growing according to Ctesias at the sources of the Uparhos and brought down in quantities on rafts, the ΓΟΡΦΥΡΑΝ purple dye it affords being brighter than the Greek, —is referred here by Mason: R. indigofera is described by Griffith; was observed by Mason "exotic" in Burmah, cultivated extensively for its blue dye not inferior to indigo, the plant probably derived from Assam.

Diospyros kaki of Japan. *Chinese dates* are called by the Burmese "tay-thee" (Mason); and the fruit attributed to the "siptahōra" tree by Ctesias, and brought down ΞΗΡΑΙΝΟΝΤΕΣ like raisins in baskets on the same rafts, —is referred here by Mason: who further states, that the dried fruit continues to be brought in great quantities overland to Ava, the living tree has also been introduced and is sometimes cultivated, but "bears fruit very sparingly." Farther East, was observed Kaempfer pl. 806, and Thunberg, frequent in Japan, cultivated as well as seemingly wild. By European colonists, was carried to the environs of Bombay, observed by Graham in a garden, "a large erect-growing very handsome tree," its fruit "yellow and about the size of a small orange."

The insects living on the amber-bearing trees, and when bruised yielding ΦΟΙΝΙΚΙΑΑΣ red or purple dye, —are referred by Mason iii. 39 to v. 357 to *lac*, Coccus lacca: to the present day very abundant in the Shan States of Burmah, and exported in large quantities from the mouths of the Irawaddy; met with also by Bontius on Java. Farther West, lac as imported into Hindustan is mentioned in the Institutes of Menu (transl. Deslongch.); and as known among the Arabs, by Ishak ebn Amran, Rhazes, Mesue can. univ., Avicenna, Ebn Elhozar, and Ebn Baitar.

The inhabitants of the mountain-district in question according to Ctesias are called by the Indians "Kalustriōi" meaning in Greek "Kunōkĕphalōi," and their language resembles the barking of dogs; they live by hunting, clothing themselves in the skins of wild beasts and drying the meat in the sun, but also keep sheep, goats, and donkeys, have neither bedsteads nor houses but dwell in caves, are black in complexion, equitable in their dealings like the other Indians, and both men and women all have tails, larger and more hairy than that of dogs. —This belief in tailed men continues in the Malayan archipelago, our native pilot in the Sooloo Sea pointing to Borneo said the "people are very bad, but those on the mountains worse and have tails."

Glycyrrhiza glabra of Tartary. The *liquorice* plant is called in Germany "sussholz," in Italy "liquirizia" or "regolizia" or "glicirriza" (Lenz), in Greece "rĕgōlitza" or "glukōriza" (Sibth.), in Egypt "orksus" (Forsk.); in which we recognize the ΡΙΖΑΝ: ΓΛΥΚΕΙΑΝ eaten according to Ctesias by the pastoral people beyond the sources of the river to prevent milk from coagulating in the stomach; —known to Theophrastus ix. 13. 2 only as a "skuthikē" root, growing about the Maeotis and alleviating thirst if held in the mouth, enabling the Scythians to continue eleven or twelve days on horseback: "radix dulcis" is prescribed by Celsus v. 20 to 23; "glycyrrhizae succi est autem radix dulcis" according to Scribonius Largus 75 to 86; and the "thōulkis rathik" of the Romans is identified in Syn. Diosc. with the "pōntikē" or "skuthiōn" or "athipsōn:" the living plant is mentioned by Rhazes, and Avicenna: G. glabra was observed by Forskal in the gardens of Egypt, according to Clot-Bey long known there; by Sibthorp, Bory, and Fraas, frequent and seemingly wild from Crete to the Peloponnesus, its pods sometimes scabrous; is termed "g. siliquosa vel

germanica" by Tournefort inst. 389, "liquiritia officinalis" by Moench 152 (Pers.); was observed by Lenz under cultivation in Italy, as well as seemingly wild. The decoction according to Lindley "is a common remedy for coughs and hectic or phthisical cases."

Potamogeton gramineum of Europe and the adjoining portion of Asia. A grass-leaved *water spike*; and the ΚΕΓΧΡΙΤΙΣ growing according to Ctesias flum. in the river Alpheus, resembling ΜΕΛΙΚΗΡΩ, and given in potion against insanity — (Plut. flum. xix. 2), may be compared: P. gramineum was observed by Sibthorp in the rills of Arcady. Westward, is known to grow throughout middle Europe (Pers.); and was observed by Ray pl. 4. f. 3 as far as Britain.

"382 B. C." (Isocr., and Clint., see also Diodor.), Amyntas II., successor of Pausanias, reigning in Macedonia.

As early perhaps as this date (prose Avadan. Asok., and Burnouf introd. 358), Mahamandala succeeded by his son Prasenadjit as Hindu king.

"376 B. C." = tenth and last year of the Cyprian war, between Evagoras and the Persians (Isocr., and Clint.). Nectanebus at the time reigning in Egypt (Theopomp. fr. 111).

The earliest *Zodiacal projection* known, is on a sarcophagus of the time of king Nectanebus (Birch).

"The same year" (Sm. b. d.), at Rome, military tribunes holding the place of consuls, "rogationes Liciniae" to increase the political power and improve the condition of the plebeians, proposed by C. Licinius and L. Sextius tribunes of the people.

"The same year" (101st Ol. of Suid., see Clint.), comedy exhibited by Eubulus: regarded by grammarians as the beginning of the "Middle Comedy."

"375 B. C. = 1st year of Lie-wang, of the Tcheou" or Fifth dynasty (Chinese chron. table).

"The same year" (Sm. b. d.), C. Licinius and L. Sextius re-elected tribunes; who, the patricians not permitting the "rogationes" to become a law, prevented the election of any patrician magistrates. — This continued four years.

The ΣΜΙΚΡΟΝ ΤΡΥΠΑΝΟΝ small *trepan* (for sawing a circular piece out of the skull) used by Hippocrates vuln. cap.: *lithotomy*, cutting for the stone, is mentioned in the treatise orc., — and according to Aretaeus chron. ii. 4, men sometimes die on the day of the latter operation, which however is indispensable (Cockayne).

Piper longum of Tropical Hindustan. Called in commerce *long peppèr*, in Sanscrit "krishna" or "chupula" or "pippulee," in Bengalee "pippul," in Telinga "pippul-chitoo" (Lindl.); in which we recognize the ΠΕΠΕΡΙ about which Ctesias is silent and all writers prior to Eubulus, — and Antiphanes, so far as known to Athenaeus ii. 73: the "pĕpĕri" is mentioned in Vict. acut. 53 (regarded as a genuine writing of Hippocrates) also in 3 Morb. 25, and according to 2 Morb. mul. 84 is so called by the Persians; the "pĕpĕri prōmēkĕs" is distinguished by Theophrastus ix. 20. 1, Dioscorides, and Galen fac. simpl. iii. p. 97; the "piper longum," by Pliny xii. 14; and the fruit of "dar folfel" is compared by Avicenna p. 159 to aments of the willow (Spreng.): from transported specimens, P. longum is described by Valerius Cordus iv. 25, and Plukenet alm. pl. 104. Eastward from Persia, the "pĕpĕri" is described by Cosmas Indicopleustes iii. p. 178 to xi. 336 as a woody vine clinging to trees in "Malĕ" (Malabar): P. longum was observed in Malabar by Rheede vii. pl. 14; by Nimmo, in the Southern Concan (Graham); is known to grow "wild among bushes on the banks of water-courses, up towards the Circar mountains" (Lindl.); is besides much cultivated, and according to Roxburgh dried slices of the root and thickest part of the stem are much used medicinally under the name of "pippula moola;" was observed by Mason v. 494 "exotic" in Burmah and called "peik-khyen," its dried berries sold "in the bazars." The effects according to Lindley "are analogous to those of black pepper."

Anthyllis Cretica of Crete. Called there "arhōntixulōn" (Bell.); and the ΕΒΕΝΟΣ prescribed in Vict. acut. 407, — its rasped wood useful against ophthalmia according to Theophrastus ix. 20. 4, and Dioscorides, is referred here by some writers: the "acanthina xula" mentioned by Dioscorides as sometimes sold for ebony, may also be compared: A. Cretica is termed "barba jovis lagopoides cretica frutescens incana flore spicato purpureo amplo" by Tournefort inst. 651, "ebenus cretica" by Linnæus; was observed on the mountains of Crete by Honorius Bellus (Clus. hist. 309), Alpinus exot. ii. 32 p. 278, and Sibthorp.

Euphorbia peplis of the seashore along the Mediterranean and adjoining portion of the Atlantic. Called in Greece "hamōgalatzithaki" (Fraas); and the ΠΕΠΛΙΩ of Hippocrates vict. acut. 11 — is identified in Syn. Diosc. with the "pĕplis" of Dioscorides, growing on the seashore and full of white juice, referred here by writers: the "pĕplis" is mentioned also by Rufus Ephesius, and Galen, and is further identified in Syn. Diosc. with the "anthrahnēn agrian:" E. peplis was observed by Sibthorp, Chaubard, and Fraas, frequent in maritime sand around Greece and the Greek islands; and by Delile on the Mediterranean shore of Egypt. Westward, numerous medicinal properties are attributed by Pliny xx. 81 to the "porcilaca" or "peplin:" E. peplis is described by Lobel pl. 363, and Camerarius

epit. 970; is termed "tithymalus maritimus folio obtuso aurito" by Tournefort inst. 87; was observed by Forskal near Marseilles; and is known to grow on the seashore from Italy as far even as the Southwestern extreme of Britain (Engl. bot. pl. 2002, Lindl., and Lenz).

Ammi majus of the Mediterranean countries. Called in Italy "ammi" or "comino nostrale" (Lenz), in Greece "aspĕrōkĕphalōs" (Forsk., and Sibth.), in Egypt "chælle" (Forsk.); in which we recognize the "ammi" identified by Pliny xx. 58 with the ΚΥΜΙΝΟΝ: ΓΑΡΑΒΑΣΙΑΕΙ of Hippocrates humor. 4, — or "kuminōn vasilikōn" distinguished according to Syn. Diosc. iii 63 by some writers from the "aithiōpikōn kuminōn:" A. majus was observed by Forskal, Sibthorp, and Fraas, frequent in cultivated ground in Greece and on the Greek islands; by Hasselquist in Palestine; and by Forskal p. 54, and Delile, around Alexandria and Rosetta. Westward, is described by Tournefort inst. 304, and Blackwell pl. 447; and is known to grow as a weed in cultivated ground in Italy and other parts of Southern Europe (Pers., and Lenz).

Ptychotis ajowan of Hindustan. Called in Sanscrit "yuvanikà" or "Bruhmadurbha," in Bengalee and Hindustanee "jouan" or "ajouan" or "ajwan" (Lindl.), in Tamil "womum" (Drur.); and the ΚΥΜΙΝΟΝ: ΑΙΘΙΟΠΙΚΟΝ of 3 Morb., — Int. affect. p. 492, and 1 Mul. morb. 603, identified through Syn. Diosc. with the "ammi" whose seeds only are described by Dioscorides, is referred here by Sprengel: "ammii" seeds are enumerated among the ingredients of the theriac of Antiochus Magnus (Plin. xx. 100), the "ammi" is mentioned also by Galen, and Paulus Aegineta, Avicenna (F. Adams); and "ammi seeds from India" are enumerated by Forskal mat. med. as imported into Egypt. Eastward, P. ajowan was observed by Roxburgh, Wight, Lush, and Drury, under cultivation throughout Hindustan, and according to Graham "the seeds have an aromatic smell and warm pungent taste," are "sold in the bazars, and used by the natives for culinary and medicinal purposes." Farther East, P. ajowan is enumerated by Mason as "exotic" in Burmah, and no native name is given. The seeds according to Sprengel continue to be imported into Europe; and the plant is regarded by Roxburgh, and Lindley, as "one of the most useful and grateful of the umbelliferous tribe."

Ptychotis Coptica of Crete and Egypt. Possibly included in the "kuminōn aithiōpikōn" of the Hippocratic writings: — the "ammiōum alĕxanthrinōum" of the Romans, mentioned in Syn. Diosc. iii. 63, may be compared: "ammi seeds produced in Egypt" are enumerated by Forskal mat. med.; P. Copticum received from him is described by Linnæus mant. 56, and Jacquin hort. ii. pl. 196 (Pers. and Spreng.); and according to Lindley, grows also on Crete.

Tordylium officinale of Europe and the adjoining portion of Asia. Called in Greece "kaukalithra" (Fraas) or "kaukalitha" (Sibth.); and the medicinal ΣΕΣΕΛΙ prescribed in Vict. acut. 12, — Fistul. 884, and by Paulus Aegineta, is referred here by Fraas: the "seselios" was found by Alpinus employed medicinally in Egypt; and T. officinale was observed by Sibthorp, Chaubard, and Fraas, frequent from the Peloponnesus throughout the Greek islands to Asia Minor. Westward, T. officinale is termed "t. narbonense minus" by Tournefort inst. 320; was observed by Lenz frequent in Southern Italy; is known to grow also in Sicily and Southern France, occurring according to Persoon even in England. (See Caucalis maritima).

Rubia lucida of the East Mediterranean countries. Called in Greece "rizari" (Sibth.) or "agriŏn rizari" (Fraas); and possibly the ΕΡΥΘΡΟΔΑΝΟΝ prescribed in Vict. acut., — Steril. p. 20, 1 Mul. morb., and by Nicander: the "ĕrĕuthĕthanōn" growing according to Theophrastus ix. 13. 6 in shady places, is referred here by Sprengel, and Fraas; and the "ĕrĕuthrōthanōn agria" is given by Dioscorides as a second medicinal kind: R. lucida was observed by Sibthorp, Chaubard, and Fraas, from the Peloponnesus to Cyprus. Westward, is termed "r. quadrifolia asperrima lucida peregrina" by Tournefort inst. 114; and according to Persoon, grows as far as Majorca. (See R. tinctorum.)

Aristolochia pallida of the East Mediterranean countries. Called in Greece "pikrōunia" (Fraas), in Italy with other species "stallagio" or "stallogio" or "aristolochia" (Lenz); in which we recognize the ΑΡΙΣΤΟΛΟΧΙΑ of 3 Morb. 23, — Int. affect. 25, 2 Morb. mul. 79, Nicander, and Paulus Aegineta: the "aristōlōhia strōggulē" described by Dioscorides as having an orbicular "gōggulithi"-like root and white flowers with their red portion rank-scented, is referred here by writers: A. pallida was observed by Sibthorp, and Fraas, frequent in shaded mountainous situations in Greece. Westward, is termed "a. rotunda altera" by Clusius hist. ii. 70, "a. rotunda flore ex albo purpurascente" by Tournefort inst. 162; and is known to grow in Croatia and Italy (Pers., Kitaib. hung. pl. 240, Spreng., and Lenz).

Aristolochia rotunda of the Mediterranean countries. Called in Italy by the same names with the preceding species (Lenz), and possibly included in the "aristōlōhia" of the Hippocratic writings: — the "aristōlōhia" described by Theophrastus ix. 20. 4 as black in colour and agreeably-scented, may be compared: A. rotunda was observed by Sibthorp, and Chaubard, in the Peloponnesus. Farther South, "aristolochia root" was observed by Forskal mat. med. in the drug-shops of Egypt;

and according to Lindley, A. rotunda with the preceding and other species "are supposed to be the plants with which the Egyptian jugglers stupify the snakes they play with." Westward, the round-rooted "aristolochia" is described by Pliny xxv. 54 as having leaves intermediate between "malvam" and "ederam," blacker and softer: A. rotunda is described by Matthioli, and Camerarius epit. 419; is termed "a. rotunda flore ex purpura nigro" by Tournefort inst. 162; was observed by Forskal near Marseilles; is known to grow also in Italy and other parts of Southern Europe (Pers., and Lenz).

Aristolochia parvifolia of the East Mediterranean countries. Called in Greece "pikrŏrriza" (Fraas), and possibly included in the "aristōlōhia" of the Hippocratic writings: — the "makra aristōlōhia" or "thaktulitis" having according to Dioscorides a purple flower eventually becoming much like a pear "apiŏ," root as thick as the finger and a span or more long, is referred here by Sibthorp, and Fraas: A. parvifolia is termed "a. chia longa folio minori subrotundo flore tenuissimo" by Tournefort cor. 8; and was observed by Wheler trav. pl. 414, Sibthorp, and Fraas, frequent in Greece.

Arum dracunculus of the Mediterranean countries. Called in Greece "phithōhōrtōn" or "thrakontia," in which we recognize the "thrakōntiōu" described by Theophrastus vii. 12. 2 as having an inedible medicinal root, and from its spotted stem called "arōn:" the ΑΡΟΥ: ΜΕΓΑΛΟΥ is mentioned in 3 Morb. 493; — the "thrakōntia mĕgalē," by Dioscorides as growing in the shade of hedges, its stem spotted with purple and "lapathō"-like leaves implicated together: A. dracunculus was observed by Sibthorp, Chaubard, and Fraas, frequent in the above-described situations in Greece. Westward, the "thrakōntia megalē" or "arōn" or "isarōn" or "iarōn" or "viarōn" is identified in Syn. Diosc. with the "lōurōumam" or "mauriariam" or "sigiggialiōs" of the Romans; and the "maiōrĕm" kind of "dracunculus" is mentioned by Pliny xxiv. 93: A. dracunculus is described by Brunfels, Fuchsius, Tragus, and Dodoens; is termed "dracunculus polyphyllus" by Tournefort inst. 160; and is known to grow in Carniolia and throughout Southern Europe (Pers., and Spreng.).

Hypericum coris of the Mediterranean countries. Called in Greece "valsaminō" or "phōuthōura" or "gōuthōura" (Sibth.) or "arkōuthōura" (Fraas); and the ΚΟΡΗΝ of Hippocrates — identified with the "upĕrikōn" by Galen, or the "kōris" according to Dioscorides by some called "upĕrikōn," an odorous shrub a span high with "ĕrĕikēs"-like leaves, is referred here by writers: H. coris was observed (on Crete) by Honorius Bellus (Pona m. bald. pl. 40); by Sibthorp, Chaubard, and Fraas, abounding on the dry hills from the Peloponnesus throughout Greece and the Greek islands. Westward, the account by Pliny xxvi. 54 of the "hypericon" by some called "corin," seems chiefly taken from Dioscorides: H. coris is described by Matthioli pl. 669, and Morison ii. 5. pl. 6; is termed "h. saxatile tenuissimo et glauco folio" by Tournefort inst. 255; and is known to grow in Italy and Southern France (Lam. fl. fr., Pers., Spreng., and Lenz).

Alcea acaulis of the East Mediterranean countries. A low almost stemless species of *hollihock;* and the "althaeae" of Hippocrates, the juice of its root prescribed against thirst from loss of blood — (Plin. xx. 84), may be compared: the "althaian," a medicinal plant having soft stems, leaves like those of "malahē" but larger and more hairy, flowers yellow, and root said to render water gelatinous, is according to Theophrastus ix. 16. 5 to 18. 1 called "malahēn agrian" in Arcadia; and the "malahē agria" is prescribed in Mul. morb. p. 715, and by Nicander ther. 89 and alex. 486: A. acaulis is termed "malva rosea folio subrotundo chalepensis acaulos flore pallide luteo" by Tournefort inst. 95; is described also by Cavanilles ii. pl. 27 (Pers.); and was observed by Sibthorp in Greece, but the locality not recorded (J. E. Smith).

Viola canina of Europe and Northern Asia. Called in Britain *dog violet* (Prior), in Greece "viōlĕta" (Sibth.), and the ΛΕΥΚΟΙΟΥ: ΚΑΡΠΟΝ prescribed by Hippocrates — and identified by Dioscorides (of Alexandria?), and Galen, with seeds of "iŏu lĕukōu," may be compared: the "lĕukōiōu rizēs" is prescribed in 2 Morb. mul. 73; the "lĕukōiōn" or "lĕukŏ iŏ" or "iŏnias tēs lĕukēs" is described by Theophrastus iii. 18. 13 to vi. 8. 5 as the earliest flower of spring, the plant lasting three years, the flower itself entirely resembling that of the "mĕlan iōn;" the "lĕukōiōn" is mentioned also by Dercyllus (Plut. fluv. 8. 4), Nicander, Hicesius, and a white-flowered kind by Dioscorides: V. canina was observed by Sibthorp, and Chaubard, from the Peloponnesus and Cyprus to the Bithynian Olympus; is known to grow also in Iberia and Persia (Bieb.). Westward, the "pallens viola" is mentioned by Virgil ecl. ii. 47; the "viola alba," by Pliny xxi. 38 to 76 as flowering at the opening of spring and employed medicinally, its flower "suppurata aperit, ipsa discutit:" V. canina is termed "v. martia inodora sylvestris" by Tournefort inst. 419; is known to grow from the Canaries throughout middle and Northern Europe to Lapland, Iceland, and "Lat. 61°" in Greenland (Hook., Dec, and Wats.), var. "lactea" having whitish-blue flowers (Smith fl. brit. i. p. 247). Eastward from Persia, is known to grow as far as Northeastern Asia and Japan (Bieb., Dec., and Wats.). The plant according to Lindley is considered a "depurative, and recommended for the removal of cutaneous affections, root emetic."

Glycyrrhiza echinata of the East Mediterranean seashore and as far as Tartary. Called in Greece "glukōriza" (Sibth.), in which we recognize the "glukurrizēs" identified by Galen with the ΓΛΥΚΥΜΗΣ. ΒΟΤΑΝΗ Σ of Hippocrates, — the Cretan kind the best (antid. i. 12): "glycyrrhizae radicis" is prescribed by Asclepiades; and the "glukuphutōn" is mentioned in Syn. Diosc. iii. 5: G. echinata is termed "g. capite echinato" by Tournefort inst. 389; was observed by Sibthorp frequent in the sand of the seashore from Samos and Smyrna to Crete; is known to grow as far as the Southern extreme of Italy, and Eastward to the Tartarian Desert (Pers.). Compared with G. glabra, its root according to Lindley has "similar properties but in a less degree."

Glycyrrhiza glandulifera of the plains of Eastern Europe. Possibly the "glukumēs vōtanēs" in question, — at least agreeing better with the "glukurrizē" of Dioscorides, growing mostly in Cappadocia and Pontus, and having hyacinthine flowers, glutinous leaves, and rough glomerate fruit: G. glandulifera is described by Pallas (Steud.); was observed by Waldstein and Kitaibel i. pl. 21 in Hungary (Pers.); by Fraas in Greece; is known to grow throughout middle Asia (Spreng.), but is not enumerated among medicinal plants.

Bryonia dioica of Europe and the adjoining portion of Asia. Called in Britain *white wild-vine* or *white bryony* (Prior), in Greece "agriōkōlōkuthja" or "agriōklēma" (Sibth.); in which we recognize the "lĕukē vruŏnia" identified by Galen with the ΕΧΕΤΡΩΣΙΣ of Hippocrates. — B. dioica was observed by Sibthorp, and Chaubard, not rare in hedges in the Peloponnesus and surrounding islands. Westward, the "albam bryoniam" is mentioned by Pliny xxiii. 16: B. dioica is termed "b. aspera sive alba baccis rubris" by Tournefort inst. 102; was observed by Lenz in Italy; is known to grow also in Barbary and throughout middle Europe as far as Britain (jacq. austr. pl. 199, Engl. bot. pl. 439, and Pers.). Outside of the profession according to Lindley, the root continues in medicinal use, though producing "violent vomiting and purging, tormina, profuse watery evacuations, and fainting," is besides sold in London market "to remove the bruise of a blackened eye."

Bryonia Cretica of the East Mediterranean countries. Called in Greece by the same names with the preceding (Sibth.): the ΨΙΛΟΘΡΟΝ or ΑΜΠΕΛΟΣ: ΑΓΡΙΑ of Fistul. 6 — is identified through Syn. Diosc. with the "ampĕlōs lĕukē" of Dioscorides, climbing among bushes, its berries red, cooked "asparagōi" young shoots purgative and diuretic, leaves berries and root applied to "hĕirŏnĕiŏn" and other bad ulcers, and referred here by Sibthorp, and Fraas: the "ampĕlōs lĕukē" or "psilŏthrōn" is further identified in Syn. Diosc. with the "ōphiōstaphulōn" or "hĕlithŏniōn" or "mēlŏthrōn" or "arhĕzŏstin" or "kĕthrŏstin" or "vruŏnian:". B. Cretica is described by Linnæus; was observed by Sibthorp, D'Urville, and Fraas, frequent in hedges in the Peloponnesus and surrounding islands. Westward, the account by Pliny xxiii. 16 of the "vitis alba" called by the Greeks "ampeloleucen" or "psilothrum" or "ophiostaphylon" or "melothron" or "archezostin" or "cedrostin" or "madon" seems chiefly taken from Dioscorides. (See B. alba and Tamus Cretica).

Galium saccharatum of Europe and the adjoining portion of Asia. The ΨΙΛΙΣΤΙΟΝ or ΦΙΛΕΤΑΙΡΟΣ of Hippocrates — is identified by Galen with the "aparinē;" described by Theophrastus vii. 14. 2 to viii. 8. 4 as growing among lentils and adhering to garments, its flower on a rough head withdrawing within itself in ripening seed; mentioned also by Nicander ther. 850 to 923; by Dioscorides, as employed to strain hairs from milk and having a hard rounded somewhat concave seed, and in the added Synonyms identified with the "ōmphalōkarpōn" or "ampĕlōkarpōn" or "philanthrŏpōn" or "ixōn:" G. saccharatum was observed by Sibthorp frequent in the cultivated ground of Greece; is known to occur also in Siberia (Gmel.). Westward, is termed "aparine semine coriandri saccharati" by Tournefort inst. 114, "valantia aparine" by Linnæus; was observed by Allioni in cultivated ground in Southern France, by Vaillant pl. 4 near Paris (Pers.), and within the present century has made its appearance in Britain (Engl. bot. pl. 2173, and A. Dec.).

Galium aparine of Northern Climates. Called in Britain *cat-chweed* or *cleavers* or *clivers* or *goose-share* or *goose-grass*, in Anglo-Saxon "clife," in Holland "kleef-kruid." (Pryor), in Germany "klebkraut," in Italy "attacamani" or "appicamani" (Lenz), in Greece "kōllētzitha" (Sibth.); and possibly included in the "philistiōn" or "philĕtairŏs" of Hippocrates: — G. aparine was observed by Sibthorp, Chaubard, and Fraas, frequent along walls hedges and in cultivated ground from the Peloponnesus to Constantinople; is known to grow also along the Taurian mountains (Bieb.), on the Yenisei (Gmel.), and throughout Northern Asia (Ledeb.). Westward from Greece, remnants have been found in debris of the early lake-villages of Switzerland; the "aparinen" or "philanthropon" or "omphacocarpon" was known to Pliny xxvii. 15 as growing both in cultivated ground and meads "pratisve;" the small "clifan" is mentioned in the Anglo-Saxon leechbook, and "gosys gres" by Galfridus pr. pm.; G. aparine is described also by Turner, and W. Coles (Prior); is termed "aparine vulgaris" by Tournefort inst. 114; was observed by Lenz in Italy, by Forskal near Marseilles, by Desfontaines in gardens in Algeria, by Brotero in waste places in Portugal; and is known to occur throughout middle and Northern Europe as far as Lapland (fl. Dan. 495, Pers., and Wats.), also on Madeira (Lemann) and the Azores (Wats.). Farther West, was already in New England

when visited by Josselyn; is known to grow from Canada along the Atlantic as far at least as 39°; was observed by Short in Kentucky, by Pitcher in Arkansas; is known to grow also as far as Vancouver (Hook.), Sitka (Bongard), and Unalaska (Ledeb.). In the Southern Hemisphere, was observed by J. D. Hooker at the Southern extreme of both Africa and America; by C. Gay, in Chili (A. Dec.); has doubtless in some instances been transported by European colonists, but its wide diffusion seems in part due to adherence to the plumage of water-fowl.

Cynara acaulis of the Mediterranean countries. A stemless kind of *artichoke* called in Greece "agriōkinara" (Sibth.); and the ΙΞΙΟΝ of Hippocrates, — identified by Galen with the "lĕukōs hamailĕŏn," may be compared: the leaves of the "hamailĕŏn" according to Theophrastus vi. 4. 3 to ix. 12. 1 are not spiny, those the "lĕukōs" kind being "skōlumŏ"-like but larger and its head of flowers like a great thistle close to the ground, the root used medicinally; the "hamailĕŏn lĕukōs" is alluded to by Nicander ther. 661; is described by Dioscorides as stemless with a "kinara"-like head of purplish flowers: C. acaulis is termed "c. orientalis moschata acaulos foliis jacobææ tenuius incisis squamis calycis sursum spectantibus" by Tournefort cor. 31, "cestrinus carthamoides" by Cassini, and "serratula acaulis" by Decandolle (Steud.); was observed by Sibthorp on Cyprus. Westward, the account of the "chamæleon candidus" by Pliny xxi. 56 to xxii. 21 seems taken from the Greek; but C. acaulis was observed by Desfontaines pl. 223 in Barbary (Til. pis. pl. 20, and Pers.).

Atractylis gummifera of the Mediterranean countries. A stemless thistle called in Greece "kĕphalīa" (Fraas), in Egyptian "ĕphēr" or "ĕphthōsĕphin" (Syn. Diosc.): probably the ΙΞΙΟΝ of Hippocrates, — for the "hamailĕŏn lĕukōs" of Syn. Diosc. iii. 8 is identified with the "ixian," in some situations yielding about the roots "ixōn" used by the women for mastich: the "ixia" of Crete yielding a gum is mentioned by Theophrastus vi. 4. 9 to ix. 1. 3, and the "ixinē" is separately described as giving out leaves from its root around a central head, like a concealed "mēlōn," which exudes a pleasant-tasted gum, the "akanthikĕ mastihē." A. gummifera was observed by Honorius Bellus, Alpinus, Sibthorp, Sieber cret., Chaubard, and Fraas, frequent from Crete and the Peloponnesus throughout the Greek islands. Westward, the "ixian" or "hrusiskēptrōn" is identified in Syn. Diosc. with the "karthŏus ŏuarinōus" of the Romans; the account of the "helxine" by Pliny xxi. 56 and xxii. 21 seems taken from Theophrastus, and that of the "ixian," partly from Syn. Diosc.: A. gummifera was observed in Italy by Anguillara p. 137, its gum well-flavoured, and the flower-head preserved with honey and sugar especially around Urbino; is described also by F. Columna ecph. i. 12; is termed "cnicus carlinæ folio acaulos gummifer aculeatus flore purpureo" by Tournefort cor. 33; was observed by Oliver it. gall. in Southern France, by Cavanilles in Spain, by Brotero in Portugal, and by Desfontaines in Barbary (Pers., and Spreng.).

Chrysanthemum coronarium of Eastern Asia. Called in Greece "tzitzimvōla" or "mantalina" (Sibth.) and the young stems eaten (Fraas), in Egypt "gahvan" (Forsk. emend.); in which we recognize the ΒΟΑΝΘΕΜΩΝ of Hippocrates, — mentioned as coronary by Nicander fr. ii. 59, and identified by Galen with the "vōuphthalmōn" or "hrusanthĕmōn;" the "hrusanthĕmōn" of Dioscorides growing in the outskirts of towns, its stems edible, leaves multifid, brilliant yellow flowers improving the complexion in jaundice, and according to the added Synonyms is sometimes called "vōuphthalmōn;" C. coronarium was observed by Sibthorp, Chaubard, and Fraas, frequent along roadsides and about villages on the Peloponnesus and neighbouring islands; by Hasselquist, in Palestine; and by Forskal, and Delile, at Alexandria in Egypt. Westward, the "hrusanthĕmōn" or "halkas" or "halkitin" or "halkanthĕmōn" is further identified in Syn. Diosc. with the "hōurzēta" of the Numidians, "garōulĕŏum" of the Tuscans, and "kaltham" of the Romans; the "buphthalmos" with edible stems is mentioned by Pliny xxv. 42 to xxvi. 55, and the "chrysanthemum" by him, and Martial: C. coronarium is termed "c. foliis matricariæ" by Tournefort inst. 491; and is known to occur in Switzerland and Sicily (Pers.). Eastward from Syria, was observed by Kaempfer in Japan, on the mountains beyond Nagasaki and elsewhere and called "singiku" or "sungiku." (See C. segetum).

Anthemis Valentina of the Mediterranean countries. Called in Greece "matalina" (Forsk.), by the prophets "aimōrra" or "gōnōs Ermōu" or "gōnōs aphthitōs" or "Mnĕsithĕōs" or "kappakōrania" (Syn. Diosc.): possibly the "vōanthĕmōn" of Hippocrates, — but the "vōuphthalmōn" is separately mentioned as coronary by Nicander fr. ii. 59; is described by Dioscorides as growing in the open country as well as around towns, its leaves "marathrō"-like, flowers yellow and larger than in "anthĕmithōs," improving temporarily the complexion in jaundice; by Galen fac. simpl. vi. p. 852, as having flowers of the same shade of colour as "anthĕmithōs;" prescribed also by Paulus Aegineta, and referred here by Clusius, and Sprengel: the "bihar" of Avicenna, or "bahar" of Ebn Baitar, is also referred here by Sprengel, as well as Sontheimer: A. Valentina was observed by Forskal near Constantinople, and by Chaubard, along the seashore of the Peloponnesus. Westward, the "vōuphthalmōn" or "kahlan" or "valsamĕnē" is further identified in Syn. Diosc. with the "narat" of the Numidians; and the "buphthalmos" or "cachlam" is mentioned by Pliny xxv. 42:

A. Valentina is termed "buphthalmum Narbonense" by Clusius hist. i. pl. 773; is described also by C. Bauhin pin. 134; and is known to grow along roadsides and in fallow ground in Barbary and Spain (Pers.).

Euphorbia paralias of the Mediterranean seashore. Called in Greece "ĕmĕrōs phlŏmōs" (Fraas) or "galatzitha pĕlagitha" (Sibth.); in which we recognize the "lactuca marina" of Celsus, and the "tithumalōu" called "kramviōn paraliōn" identified by Galen with the ΓΑΡΑΛΙΟΝ of Hippocrates: —the "paraliōs" kind of "tithumallŏn" is distinguished by Theophrastus ix. 11. 7, and Dioscorides; is identified in Syn. Diosc. with the "mēkŏna" or "tithumalitha;" and the "tithumallitha" is mentioned by Micion, and Cratevas (schol. Nicand. ther. 617): E. paralias was observed by Sibthorp, Chaubard, and Fraas, in the sand of the seashore around Crete, the Greek islands, and the Peloponnesus; and by Delile, near Alexandria in Egypt. Westward, of the juice of "tithumallos" called "lactuca marina" according to Celsus ii. 12. to v. 7 a drop purges; and the "tithymalon" or "mecona" or "paralion" is mentioned by Pliny xx. 80: E. paralias is termed "tithymalus maritimus" by Tournefort inst. 87, and Lamarck fl. fr.; and is known to grow on the seashore of Italy as far as the adjoining portion of France (Pers., and Lenz).

Orchis papilionacea of the Mediterranean countries. Called in Greece "salĕpi" or "sarkinōvōtani" (Sibth.); and the ΔΙΔΥΜΗ of Hippocrates,—identified by Galen with the "ōrhis," may be compared: the "ōrhis" is described by Theophrastus ix. 18. 3 as having a twin root, the two bulbs producing opposite effects, the leaves "skillŏthĕs" but smoother and smaller; by Dioscorides as growing in stony and sandy situations, its leaves spreading on the ground, stem a span high, flowers purplish, and the double root cooked and eaten: O. papilionacea was observed by Sibthorp, Chaubard, and Fraas, abounding in the situations described by Dioscorides from the Peloponnesus throughout Greece. Westward, the account of the "orchin" by Pliny xxvii. 42 seems taken from Dioscorides: O. papilionacea is termed "o. orientalis et lusitanica flore maximo papilionem referente" by Tournefort cor. 30, "o. montana humilis flore majore" by Buxbaum iii. pl. 3; was observed by Tenore in Italy (Bory); is known to grow also in Carniolia, Barbary, and Spain (Pers.). Eastward from Greece, the nutritious substance called *salep* or *saloop* was according to Lindley originally obtained from "Turkey or Persia," and Lieut. Hutton found tubercles of an Orchis collected on the Himalayas under the name of "salep misri" (see O. undulatifolia, and Eulophia salep).

The inhabitants of Phasis at the foot of Caucasus, described in the Hippocratic treatise aer. aq. et loc. as walking only in the city and the market-place for strangers: thence transporting themselves in canoes made of trunks of trees through the numerous canals to dwellings of wood and reeds surrounded by water; the whole country being marshy (Troyon p. 209).

"374 B. C." (Diodor., and Clint.), death of Evagoras king of Cyprus. He was succeeded by his son Nicocles.

The same year = "15th of Nectanebus," on the sarcophagus of a person who died in this year—(Birch).

"The same year (= Ol. 101, 3" of Diodor., and Blair), an army under Pharnabazus, accompanied by twenty thousand Greeks, sent by Artaxerxes II. against Nectanebus of Egypt.

Citrus Medica of Hindustan and Burmah. Geographical proximity indicates, that the *sweet lemon* would be the first of its tribe in reaching the Mediterranean countries; and the "hrusa mēla" whose seeds were sent by the great king (Artaxerxes II.) to Athens—(according to Eriphus), recently according to Antiphanes, or the "mēlōn mēdikōn" and "pĕrsikōn" of Theophrastus having thorns and bearing at all seasons fruit which is not eaten, oblong in shape according to Dioscorides and placed among clothing to keep out moths, or the "kitriōn" of Phanias of Eresus, Juba, and Athenaeus iii. 26, may be compared: the description by Abu Hanifa of the "atrodj tree" corresponds; and C. Medica has been observed by myself only at Muscat on the Persian Gulf, the fruit placed among clothing as described by Dioscorides. Farther East, "lemons sweet as sugar" were seen by Jordanus mirab. p. in Hindustan (soc. Hakl); a plant "having the characteristics of the citron" and called "bijooree," was observed by Royle "apparently wild" along "the foot of the Himalayas" (Graham); and C. Medica was found by Mason v. p. 453 "apparently indigenous" in the jungles of Burmah, but also cultivated and called "shouk-ta-khwa."

"373 B. C." (Sm. b. d.), unsuccessful attempt by the Spartans to recover the island of Corcyra.

Vicia lutea of Europe, Egypt, and the adjoining portion of Asia. Called in Egypt "bachra" (Forsk.); and possibly the ΩΧΡΟΣ of Antiphanes,—Anaxandrides, Alexis, Polemon, Aristotle anim. ix. 40, Phanias, and Athenaeus, described by Theophrastus iv. 2 and viii. 3 as yellowish internally with the leaves more oblong, by Berosus as growing along the Euphrates: V. lutea was observed by Sibthorp, and Chaubard, from the Peloponnesus to Constantinople and Caria; by Forskal, and Delile, in Egypt (but the latter found the name "el-bakhrah" applied to V. sativa). Westward, is described by Morison ii. pl. 21; is termed "v. sylvestris lutea siliqua hirsuta" by Tournefort inst. 398; and is known to grow in Italy, Spain, and middle Europe as far as Britain (Engl. bot. pl. 481, and Pers.).

"371, July" (Pausan., Blair, and Clint.), the Spartans invading Boeotia defeated at Leuctra by the Thebans under Epaminondas. Spartan ascendancy thus brought to a close; and "a few months later," the city of Megalopolis founded in Arcadia.

Greek inscriptions of about this date (Franz.), presenting the following forms of letters, Z, Π.

Dolichos lubia of Abyssinia? A *bean* called in Egypt "lubia bæledi" (Forsk.); in which we recognize the "lōvōs" identified by Galen, and Aretaeus, with the ΔΟΛΙΧΩΝ of Anaxandrides,—Polemon diæt. ii. 13, Theophrastus viii. 3, growing at Tempe in Thessaly according to Pliny xvi. 92, and identified by Galen with the "phasēōlŏn" of Diocles, and Dioscorides ii. 130; also the "lōvia" pods called "asparagōs" of the "smilax kēpaia" of Dioscorides ii. 175, a twining plant having bicoloured kidney-shaped seeds: the seeds of D. lubia continue well known in Greece (E. A. Soph.) though perhaps imported, and may be included under the term "phasōulia" applied according to Fraas to allied species: D. lubia continues abundantly cultivated in Egypt, the black spot on its seeds mentioned by Ebn Djoldjol, Delile, and Clot-Bey; and according to Delile occurs also in Persia and Hindustan. A species regarded by Forskal p. 133 as probably identical was observed by him under cultivation in Yemen and called "didjre."

"370 B. C." (= 388—"18 years" of the Afr.-Maneth. table, see below), Nĕctanĕvēs succeeded by Tĕŏs, second king of the Thirtieth dynasty. "Two" years are assigned to the reign of Tĕŏs in both the Maneth. tables. His name occurs in the quarries at Mokattam—(Birch).

"The same year" (Sm. b. d.), at Rome, on account of the war with Velitrae, the election of consular tribunes permitted by C. Licinius and L. Sextius the regularly elected tribunes.

369 B. C. (= 408—"39 years" of the Egyptian Chronicle, the Euseb.-Maneth. table giving 332 + "6 + 4 + 6 + 20 years" = 368 = 370—"2 years" of both Maneth. tables), Tĕŏs succeeded by Nĕctanĕvōs II., third king of the Thirtieth dynasty. Who reigned "eighteen" years (Egypt. Chron., and Afr.-Maneth. table), and proved the last native Egyptian king. The hieroglyphic ovals of king Nehtnebf occur at Beghe, on a temple built by him on Philæ, on stone fragments at Karnak and the neighbouring temple of Khons, and on "a little figure (brought from Pompeii." Glid. analect., and Leps. k. pl. 50).

At the First cataract, the earliest building on Philæ (according to Lepsius eg. and sin. 119 to 122) is by Nectanebus: the island is not mentioned by Herodotus,—and appears to have been first regarded as sacred under the Ptolemies. The hieroglyphic inscription on the obelisks there, is said by Lepsius to have nothing to do with the Greek inscription.

Piper sylvestre of Madagascar and the Mauritius Islands. Called in Madagascar "lale vitsit;" and possibly the African pepper mentioned by the comic poet Ophelion—(Athen. ii. p. 66, and Daremb.): P. sylvestre was observed by Flacourt i. 36 25 abounding in the forest throughout Madagascar and Bourbon Island, eaten by wild pigeons, and its stem and leaves having the savour of pepper; by Bojer, indigenous in moist places in the forest on Mauritius, and called by the colonists "poivrier sauvage." From transported specimens, is described by Lamarck ill. pl. 23 (Pers.). Varthema found "a grove of cubebs" near Mozambique (edit. Badg.): *Bourbon cubebs* is mentioned by "most writers on Materia medica," the berries according to Th. Martius "not larger than grains of millett," but the species producing them remains unascertained (Lindl.).

"368 B. C. = 1st year of Hien-wang, of the Tcheou" or Fifth dynasty—(Chinese chron. table).

"The same year" (. . . . Sm. b. d.), C. Licinius and L. Sextius still holding by re-election the power of tribunes, Camillus for the fourth time appointed by the senate dictator: he resigned and P. Manlius Capitolinus was appointed in his place.

"In or about this year" (Apollod., D. Laert., Blair, and Clint.), Eudoxus visiting king Mausolus of Caria; and recommended by Agesilaus II. to Nectanebus, proceeded to Egypt.—He received instruction in Egypt from Chonuphis (. . . . Leps. eg. and sin. p. 386): and brought back into Greece the Celestial Sphere and the science of *Astronomy*. Eudoxus is regarded as the discoverer of the principle of *curved lines*.

One hundred and eighteenth generation. May 1st, 367, mostly beyond youth: the Chinese philosopher Meng-tseu; the Greek poet Erinna the younger; the comic poets, Araros, Calliades, Nicostratus, Philippus, Anaxilas, Callicrates, Heracleides, Amphis, Cratinus the younger, Eriphus, Epicrates, Aristophon, Sotades, Augeas, Heniochus, Epigenes, Timotheus, Sophilus, Antidotus, Nausicrates, Xenarchus, Dromo, Diodorus of Sinope, and Simylus: the tragic poets, Aphareus, and Theodectes; the philosopher Diogenes the cynic; the historians, Cephisodorus, Hermeas of Methymne, and Simonides; the orators, Isaeus, Aeschines, Aristophon of Colyttus, Cydias, Hegesippus, Callistratus, Leodamas, Aristophon of Azenia, and Androtion; the painters, Pamphilus, Euxenidas, Euphranor (Bryan).

"In this year" (Sm. b. d.), at Syracuse, death of Dionysius after a reign of "38 years." He was succeeded by his son Dionysius II., now king of Sicily.

"The same year" (Blair, and Sm. b. d.), at Rome, the dictator P. Manlius elected consular

tribune, and the "rogationes Liciniae" passed into a law: one of the consuls to be a plebeian, and the praetorship instituted, to be confined to the patricians. War against the Gauls, and after a victory by Camillus dictator for the fifth time, a temple dedicated to Concordia, the two orders of citizens being reconciled.

"366 B. C." (Sm. b. d.), at Rome, L. Sextius now the first plebeian consul, associated with L. Aemilius Mamercinus; Sp. Furius Camillus son of the dictator, becoming the first praetor.

"365 B. C." (Sm. b. d.), at Rome, L. Genucius Aventinensis and Q. Servilius Ahala consuls; *pestilence*, and the death of the dictator Camillus.

"364 B. C." (Sm. b. d.), at Rome, C. Licinius now plebeian consul, associated with C. Sulpicius Peticus; the *pestilence* continuing, and "ludi scenici" dramatic exhibitions first established.

"In this year" (Sm. b. d.), second campaign in the war between Arcadia and Elis, and battle at Olympia at the time of the Games.

Isatis Orientalis of the East Mediterranean countries. A wild species of *woad*, included perhaps in the ΙΣΑΤΙΣ leaves externally applied of Affect. 37: — the "isatis agria," resembling according to Dioscorides the "isatis" of dyers and possessing the same medicinal properties, is referred here by Sibthorp: I. Orientalis was observed by him on the maritime rocks of Greece and Asia Minor; and was received by Linnæus from Aleppo (Ait., and Steud.). Westward, the "isatis agria" or "ĕgnē mikra" is identified in Syn. Diosc. with the "rōutam minōrĕm" of the Romans; bruised leaves of "in sylvis nascens isatin" were applied to wounds in the days of Pliny xx. 25: I. Orientalis is termed "i. sylvestris minor lusitanica" by Tournefort cor. 211, is attributed by Linnæus also to Portugal and Spain (Pers., and Steud.), but the change of name by Willdenow seems to imply some mistake. (See I. tinctoria.)

Euphorbia spinosa of the Mediterranean seashore. A *spurge* called in Greece "aphana" or "kōukōulaphana" (Fraas); and the ΙΠΠΟΦΕΩ whose juice is prescribed in Int. affect. 23 and 24 — is identified by Galen with the "knaphōn" or "stuvōn" or "ippōphaĕs:" the "ippōphĕōs" is enumerated by Theophrastus vi. 5. 1 to ix. 15. 6 among plants having thorns separate from the leaves, and the "tithumallōs" yielding "ippōphaĕs" is mentioned as growing in Arcadia: the "ippōphaĕs" of Dioscorides, growing in maritime and sandy situations and yielding a juice, a dense bush with crowded leaves resembling those of the olive, dry whitish spines and flowers like corymbs of the ivy, is referred here by Honorius Bellus (Clus. ii. 308), and Sprengel: E. spinosa was observed by Alpinus exot. 302, Sibthorp, Chaubard, and Fraas, frequent in dense inextricable tufts on seaside bluffs from Crete to the Peloponnesus and Greek islands. Westward, the "ippōphaĕs" or "ippōphuĕs" or "ippōphanĕs" or "ippiōn" or "ĕhiniōn" or "pĕlĕkinōs" is identified in Syn. Diosc. with the "lappagŏ" or "lappōlaměra" of the Romans; and the "hippophaes spinis geniculatum" is mentioned by Pliny xxi. 54: E. spinosa is described by Hermann lugd. pl. 601; is termed "tithymalus maritimus spinosus" by Tournefort inst. 87; was observed by Bivona in Sicily, by Forskal near Marseilles; and is known to grow on the seashore of Carniolia and Italy, the old branches in drying becoming spinescent (Pers., Spreng., and Lenz).

Cuscuta epithymum of Europe and the adjoining portion of Asia. A species of *dodder* called in Italy "cuscuta" or "epitimbra" or "epitimo" (Fraas), in Greece "tēs alōpōu tō mĕtaxi" fox-silk (Fraas); in which we recognize the ΕΠΙΘΥΜΟΝ prescribed in Int. affect. 10, — 2 Morb. mul. 9, and by Paulus Aegineta; abounding according to Dioscorides especially in Cappadocia and Pamphylia: C. epithymum was observed by Sibthorp, and Fraas, upon Thymbra and allied plants from the Peloponnesus and Greek islands to the Bithynian Olympus; and "aftimun" from Syria was found by Forskal employed medicinally in Egypt. Westward, the "ĕpithumōn" or "kĕthŏis" is identified in Syn. Diosc. with the "ĕmvōlōukrōum" of the Romans; the "epithymum" growing without root and by some called "hippopheon" is mentioned by Pliny xxvi. 35: C. epithymum is termed "c. minor" by Tournefort inst. 652; was observed by Lenz frequent in Italy; and is known to grow throughout middle Europe as far as Denmark (fl. Dan. pl. 427, Engl. bot. pl. 53, and Pers).

Physalis alkekengi of Barbary? Called in English gardens *winter cherry* (Prior), in France "coqueret" (Nugent), in Germany "schlutte," in Italy "alcachengi" or "palloncini" or "solatro alicacabo" (Lenz), in Greece "kĕrasōulia" (Sibth.); in which we recognize the "kakavōum" of the Numidians identified in Syn. Diosc. with the "struhnōn alikakavōn" yielding a juice, possibly the ΣΤΡΥΧΝΟΥ juice prescribed in Int. affect. 30: — the "struhnōn alikakavōn" of Dioscorides bears bladder-like follicles containing a sort of reddish grape, worn in garlands, and the juice of the plant is dried like that of the edible kind and possesses the same properties: the "alikakavōn" is mentioned also by Florentinus (geopon. xiii. 8); and as known in Egypt, by Pliny xxi. 105; the "alkekengi" is mentioned by Avicenna, and Mesue simpl.: P. alkekengi was observed by Forskal, and Sibthorp, in shady situations from Parnassus to Constantinople and the Bithynian Olympus; its fruit was found by Forskal mat. med. employed medicinally in Egypt; and the living plant according to Clot-Bey and Figari has been recently introduced. Westward, the "struhnōn alikakavōn" or

"phusalitha" or "kalliatha" is further identified in Syn. Diosc. with the "kukŏlitha" of the Dacians, and "vissikalis" of the Romans; and the "halicacabum" or "callion" or "vesicariam," having a large berry within a large follicle, is further described by Pliny as ripening in November: P. alkekengi is described by Christophorus de Honestis, and Matthioli; is termed "alkekengi officinarum" by Tournefort inst. 151; was observed by Lenz frequent in Italy, and is known to occur on dikes as far as Germany (Scop., Moench, and Pers.). Eastward from the Mediterranean, is attributed by Persoon to Japan. The plant according to Lindley "is diuretic and employed in veterinary practice."

Solanum miniatum of Tropical Africa or Asia. Called in France "morelle" (Nugent), in Italy "solatro" or "solano" (Lenz), in Greece "skilōstaphilō," in Egypt "enab eddib" wolf grape, in Yemen "mesælleha" (Forsk.), in Egyptian "pĕlĕmŏn" (Kirch.) or "allēlŏ" (Syn. Diosc.); in which we recognize the "solanum" identified by Celsus with the "strychnon" of the Greeks (Plin. xxvii. 108); and from the above remark of Dioscorides iv. 72, probably the kind affording the "struhnōu" juice of Int. affect. 30:— the "struhnōs" is enumerated as edible by Polemon diaet. ii. 12; the "struhnōs ĕthŏthimōs," as if "ēmĕrōn" and having berried fruit, is mentioned by Theophrastus vii. 15. 4, and according to Dioscorides the berries become either black or yellowish; "truhna" are mentioned by Theocritus x. 37; the "strychnum" is enumerated by Pliny xxi. 52 among the esculent plants of Egypt; and the "inab el-dubb" is mentioned by Ebn Baitar: S. miniatum was observed by Forskal, and Delile, springing up spontaneously from Cairo to Alexandria, the berries eaten crude; by Forskal, Sibthorp, Chaubard, and Fraas, frequent in waste places from the Peloponnesus to Constantinople. Westward, the "struhnōs kēpaiōs" or "ēmĕrōn" is identified in Syn. Diosc. with the "astrĕsmōunim" of the Numidians, "skōuvōulōum" of the Gauls, and "strōumōum" or "kōukōuvalōum" of the Romans; by Pliny xxvii. 44, with the "strumum" or "cuculi:" the "maurellam" is mentioned by Macer Floridus 60, and the "morella" or "solatrum" or "uva vulpis" in Ortus Sanitatis pl. 455: S. miniatum is termed "s. officinarum acinis nigricantibus et acinis luteis" by Tournefort inst. 148; was observed by Lenz in Italy, by Forskal near Marseilles; and is known to occur in waste places as far as middle Europe (Dill. elth. pl. 274. f. 353, Pers., and Bory). Southward from Egypt, was observed by Forskal p. 46 among the mountains of Yemen, the bruised leaves applied in the "bulæ" ulcerous disease; by Grant, along the Nile from Lat. 28° to the Equator, and beyond to 4° 18′ South, the "leaves made into spinage." Eastward, was observed by Rheede x. pl. 73 in Malabar; by Graham, "in gardens pretty common" around Bombay and called "ghattee," or on the Deccan "camunee;" by Roxburgh, and Royle, in other parts of Hindustan, and called "anab-al-salib" (the "inàb-el-thalab" of Ebn Baitar); by Mason, in Burmah; by Loureiro i. p. 133, in Anam, the leaves applied externally to cure cancers; by Kaempfer, and Thunberg, around Nagasaki in Japan and called "tenka" or "tenkja," or usually "nassubi;" by Blanco, on the Philippines and called in Tagalo "cunti" or "onti" or "gamagamatisan," in Camarines "cuti" or "lubilubi," in Bisaya "lubilubi" or "lagpacum" or "bolagtog." Farther East, was observed by myself aboriginally introduced on the Feejeean Islands, and clearly by Polynesians carried to New Zealand, to the Samoan, Taheitian, and Hawaiian Islands, everywhere naturalized, occurring in wild situations, the berries edible and the plant two feet or more high: may therefore be the species seen by J. D. Hooker on the Galapagos Islands, and the "yerva mora o solatrum like that of Spain" found by Oviedo already in the West Indies. Probably by European colonists, was carried to the Mauritius Islands, where it occurs in clearings (Boj., and A. Dec.), but according to Graham is besides cultivated as a potherb and called "brede." (See S. nigrum, and S. Aethiopicum).

Arum maculatum of Europe and the adjoining portion of Asia. Called in Britain *wake robin* or *cuckoo-pintle*, in a manuscript of the Fourteenth century "kokok-pyntel" (Prior), in Greece "thrakōntia" (Sibth.) or "arōn mikra thrakōuntia" (Fraas); in which we recognize the "thrakōntias mikras" of Cratevas (Anguill.), and Dioscorides: the ΔΡΑΚΟΝΤΙΟΝ prescribed in Int. affect. 1, — and termed "prēu" mild in Steril. 17, may be compared: A. maculatum was observed by Sibthorp, and Fraas, frequent from the Peloponnesus throughout the Greek islands; by Anguillara, its root cooked and eaten in Albania, and in Slavonia made into a kind of bread (Spreng.). Westward, is described by Bauhin (Pers.); is termed "a. vulgare" by Tournefort inst. 158; was observed by Lenz in Italy; is known to grow in Barbary (Lindl.) and throughout middle Europe as far as Denmark (fl. Dan. pl. 505, Lam. fl. fr, and Curt. lond. ii. pl. 63). The crude tubers according to Lindley "are stimulant, diaphoretic and expectorant," and a nutritious substance manufactured from them on the island of Portland is called *Portland sago*.

Arum Italicum of the Mediterranean countries. A larger species called in Italy "lengua de bo" or "aro" (Lenz); and possibly the "thrakōntiōn" of Int. affect. — and Steril.: the "thrakōntia ĕtĕra" is described by Dioscorides as two cubits high with great ivy-like leaves spotted with white, its root eaten either crude or cooked: A. Italicum was observed by Fraas, not rare in the Peloponnesus. Westward, the cooked root of the "thrakōntia ĕtĕra" is further mentioned by Dioscorides

as mixed with honey by the Balearic islanders and made into cakes: A. Italicum is described by Dodoens p. 329 (Spreng.); was observed by Lenz, not rare in Italy; is known to grow also in Spain, Portugal, Southern France, and as far as Germany (Pers.). By European colonists, was carried to Northeast America, where it has become a frequent greenhouse plant.

Trifolium arvense of Europe and the adjoining portion of Asia. Called in Britain *hare's foot*, in Germany "hasenfuss," in France "pied de lievre" (Prior), in Italy "pie di lepre" or "lagopo" (Lenz), in Greece "lagōnōura" (Fraas); and the ΛΑΓΩΠΥΡΟΣ according to Ulc. p. 319 in the dried state resembling bran, its small leaf like that of the olive and longer or more elongate, — identified by Galen voc. with the "lagōnatē vōtanē," is referred here by writers: T. arvense was observed by Sibthorp, Chaubard, and Fraas, frequent from Crete and the Peloponnesus to Constantinople and Cyprus; is known to occur also along the Taurian mountains (Bieb.). Westward, is described by Valerius Cordus, Fuchsius pl. 479, and Lobel hist. 383; is termed "t. arvense humile spicatum sive lagopus" by Tournefort inst. 405; was observed by Lenz frequent in Italy; is known to grow also in Barbary and throughout middle and Northern Europe as far as Sweden and Iceland (fl. Dan. pl. 724, Hook., and Wats.) By European colonists, was carried before 1547 to the West Indies ("trifolium leporinum" of Oviedo hist. gen. xi. 2), and extending thence, or independently introduced, has become naturalized in our Southern (Chapm.) and throughout our Atlantic States, occurring not only in old fields and roadways but in wild sunny situations.

Potentilla hirta of the mountains of middle and Southern Europe. The black ΠΕΝΤΑΦΥΛΛΟΝ prescribed in Ulc. 880 — is referred here by Fraas: P. hirta was observed by Sibthorp, Gittard, and Fraas, on and about the mountains of Southern Greece. Westward, is termed "q. montanum erectum hirsutum luteum" by Magnol monsp. 216; and is known to grow also on the Carpathians and Pyrenees (Allion., and Pers.).

Mesembryanthemum nodiflorum of the Mediterranean shores, and beyond as far as Madeira. Called in Egypt "ghasul" or "schæchacha" (Forsk.); and the ΕΠΙΠΕΤΡΟΝ prescribed in Ulc. 875, — growing according to Aristotle part. an. iv. 5 on Parnassus and continuing alive suspended on a peg, regarded as altogether flowerless by Theophrastus vii. 8. 4, mentioned also by Galen method. iv. 5, may be compared: M. nodiflorum was observed by Sibthorp, and Chaubard, frequent along the seashore of Greece; by Labillardiere, on the seashore of Syria; and by Alpinus pl. 127, Forskal, and Delile, frequent in the Egyptian Desert. Westward, is described by Linnæus; was observed by Forskal on Malta; and is known to grow around the Adriatic to "Lat. 43°," along the West coast of Italy to Genoa, also to Marseilles, Corsica, Sardinia, Spain, Barbary, and beyond the Straits to Portugal, the Canary Islands, and Madeira (A. Dec.; see M. Copticum).

Carthamus corymbosus of the East Mediterranean countries. Called in Greece "ōmvrĕla" (Fraas) or "hamailĕŏn" (Sibth.), in Egyptian "sōvĕl" (Syn. Diosc.); in which we recognize the ΧΑΜΑΙΛΕΩΝ: ΜΕΛΑΣ of Ulc. 879, — Theophrastus ix. 12, Nicander, Cratevas, growing according to Dioscorides on dry plains and seaside hills and having spinescent hyacinth-coloured flowers, leaves varying according to locality, deep green, hoary, bluish, or red: C. corymbosus was observed by Forskal, Sibthorp, Chaubard, and Fraas, from the Peloponnesus and Greek islands to the Dardanelles, frequent in the situations described by Dioscorides. Westward, the "hamailĕŏn mĕlas" or "pagkarpōn" or "ōulōphōnōn" or "ixian" or "kunōmahŏn" or "ŏkimōĕithĕs" or "knithiōn kōkkōn" or "kunōxulōn" is identified in the Syn. Diosc with the "karthŏus nigra" or "ōuĕrnilagŏ" of the Romans: the account by Pliny xxii. 21 and xxvii. 118 of the "chameleon niger" or "ulophonon" or "cynozolon" seems in part taken from Dioscorides: C. corymbosus was observed by Anguillara, and A. Maranta, in Slavonia and Southern Italy (Spreng.); is described also by Matthioli comm. p. 491, and is termed "c. aculeatus carlinæ folio flore multiplici veluti umbellato" by Tournefort cor. 33.

Cynoglossum officinale of Europe and Northern Asia. Called in Britain *hound's-tongue* (Prior), in Italy "lingua canina" or "cinoglossa" (Lenz), in Greece "gōurgōugiannēs" or "shĕlōglŏssōn" (Sibth.); and the ΣΧΕΛΙΑΣ prescribed in Ulc. 879 — may be compared: C. officinale was observed by Sibthorp frequent in Greece and on the Greek islands; by Hasselquist, in Palestine; root of "cynoglossum" or "lissan-el-kelb" was found by Forskal mat. med. employed medicinally in Egypt; and the living C. officinale according to Clot-Bey has recently been introduced. Westward, the "lingua canina" is mentioned by Celsus v. 27; and a kind of "cynoglossos" bearing "lappas minutas," its root taken in potion against (the poison of) frogs and serpents, is distinguished by Pliny xxv. 41: C. officinale is described by Miraldus, and W. Coles simpl. 27 (Prior); is termed "c. majus vulgare" by Tournefort inst. 139; was observed by Lenz frequent in Italy; and is known to occur in waste ground throughout middle Europe as far as Denmark (fl. Dan. pl. 1147, and Pers.). By European colonists, was carried to Northeast America, where it continues along roadsides and in waste ground from the Saskatchawan (Hook.) to Montreal and North Carolina (Darl., Chapm., and myself). The plant according to Lindley "was once officinal, being used as an antispasmodic," but

"is so fetid that it has long since ceased to be exhibited;" its odour is compared by Smith to that of mice (Pers.; see Lithospermum purpureo-coeruleum).

Cynoglossum Apenninum of the East Mediterranean countries. Also called in Greece "gōurgōugiannēs" or "shĕlōglŏssōn" (Sibth.); and possibly included in the "shĕlias" in question:— the "alia similis cynoglosso quae fert lappas minutas" of Pliny xxv. 41, may also be compared: C. Apenninum was observed by Sibthorp from the Peloponnesus to Cyprus. Westward, is described by Columna ecphr. pl. 170; is termed "c. montanum maximum" by Tournefort inst. 139; and is known to grow in Italy, on the Apennines (Pers.).

Cynoglossum pictum of the Mediterranean countries. Called in Greece "gŏrgōiannēs" (Fraas); and possibly included in the "shĕlias" in question:— C. pictum is termed "c. creticum latifolium" by Tournefort inst. 140; was observed by Chaubard, and Fraas, frequent in Attica and the Peloponnesus. Westward, is described by Scopoli (Steud.); is known to grow in Barbary and various parts of Southern Europe, and even on Madeira (Pers.).

Ruscus aculeatus of Europe and the adjoining portion of Asia. Called in Britain *butcher's broom* from being used to protect meat against mice and bats, or *kneè-holly* or *knee-holm*, in Anglo-Saxon "cneow-holen" (Prior), in France "fragon piquant" (Fée), in Germany "mausedorn," in Italy "pugnitopo" or "spruneggio" or "ruschio" (Lenz), in Greece "smurnakantha" or "kōrallŏhōrtōn" or "lagonēlĕa" (Fraas), by the prophets "gōnōs ērakllĕōus" (Syn. Diosc.); in which we recognize the "rōuskōum" identified through Syn. Diosc. with the MYPPINH : ΑΓΡΙΗ prescribed in Ulc. 880,—or "mursinē agria" of Dioscorides, its sharp-pointed leaves bearing at the middle globular fruit, and the root used for adulterating "phōu:" the "kĕntrōmurrinē" is described by Theophrastus iii. 17. 4 as having fruit upon its leaves: R. aculeatus was observed by Sibthorp, and Fraas, frequent in rugged mountainous situations in Attica and other parts of Greece: was known to Serapion f. 166, by whom its berries were called "khababath," and hence improperly by mediæval writers "cubebae". (Leonicen., and Spreng.). Westward, the "mursinē agria" or "hamaimurtē" or "ōxumursinē" is identified in Syn. Diosc. with the "rōuskōum" of the Romans; the "oxymyrsinen" by Castor with the "ruscum" of which "scopae" are made (Plin. xxiii. 83); "ruscea" are mentioned by Cato orig. i. 7; the "ruscum" by Varro, Virgil, Verrius; and "oxymyrsinae" or "scopa regia" by Scribonius Largus 153: R. aculeatus is described by Anguillara 291, Lonicer 204, and Parkinson; is termed "r. myrtifolius aculeatus" by Tournefort inst. 79; was observed by Lenz in Italy; and is known to grow throughout middle Europe as far as Britain (Engl. bot. pl. 560, and Pers.).

Marrubium alyssum of the Southern division of the Mediterranean countries. A species of *horehound* called in Egypt "frasium" (Forsk.); in which we recognize the Greek "prasiōn" transferred to allied species:—the "alussōn" of Antonius rhizotom., and Galen antidot. ii. p. 449, is referred here by writers, and the "kamēlōpōthiōn" of Syn. Diosc. iii. 109 may also be compared: M. alyssum seems unknown in Greece, but was observed by Forskal p. 213, and Delile, near Alexandria on the Mediterranean border of Egypt. Westward, is described by Dodoens 88, and Clusius hist. ii. 35, and is known to grow in Spain (Pers., and Spreng.).

Marrubium catariæfolium of the East Mediterranean countries. The ΠΡΑΣΙΟΝ prescribed in Ulc. 878—is perhaps the medicinal kind described by Theophrastus vi. 2. 5 as having green and more deeply incised leaves, termed "prasiōi hlōanthĕōs" by Nicander ther. 550, and referred here by Sprengel: M. catariæfolium, received from the East "Oriente" is described by Desroussaux enc. meth. iii. 771, its leaves "ovatis subviridibus profunde crenatis" (Pers.), and according to Sprengel is frequent in Asia Minor.

Marrubium vulgare of Europe and the adjoining portion of Asia. Called in Britain *horehound*, in Anglo-Saxon "hara-hune" (Prior), in France "marrube (Nugent), in Germany "andorn," in Italy, "marrobio" (Lenz), in Greece "skulŏhōrtōn" (Fraas), by the prophets "aima taurōu" or "aphĕthrōs" or "gōnōs ŏrōu," in Egyptian "astĕrōpē" (Syn. Diosc); in which we recognize the marrōuviōum" identified in Syn. Diosc. with the "prasiōn:"—growing according to Dioscorides around dwellings and in waste places, its leaves rounded and wrinkled: the "prasiōn ĕtĕrōn" is distinguished by Theophrastus vi. 2. 5 as having rounder dry or shrivelled leaves not so deeply incised: M. vulgare was observed by Sibthorp, Chaubard, and Fraas, frequent from the Peloponnesus throughout Greece and the Greek islands; is known to occur also about Taurus and Caucasus (Ledeb.); was received by Bentham from Yemen, and may therefore be the unnamed species observed on mountains there by Forskal; was found by Alpinus employed medicinally in Egypt. Westward, the "prasiōn" or "phullōpharĕs" or "philōpharĕs" or "tripĕthilōn" is further identified in Syn. Diosc. with the "atiĕrvĕrzia" of the Numidians, and "lavĕōnia" or "marrōuviōum" of the Romans; the "prasion" or "philochares" or "philopaeda" or "linostrophon," by Pliny with the "marrubium;" the "marrubium candidum" is mentioned by Castor (Plin. xx. 89); and "marrubium," by Macer Floridus 42: M. vulgare is described in Ortus Sanitatis 256 (Prior); is termed "m. album vulgare"

by Tournefort inst. 192; was observed by Lenz in Italy, by Forskal near Marseilles; and is known to occur in waste places from Algeria and the Canary Islands to Sweden, and to Kasan in Russia (Pers., Fries, and A. Dec.). Eastward from Caucasus, is known to occur in Persia and as far as Cashmere, but continues unknown in Eastern Asia (Ledeb.). By European colonists, was carried to Northeast America, where it continues in gardens and waste ground in our Atlantic States; also to Mexico, California, Southern Brazil, Buenos Ayres, and Chili (Benth., A. Saint-Hil., and herb. Dec.). Its extract according to Smith, and Lindley, "is a popular remedy for coughs and asthmatic complaints."

Marrubium pseudodictamnus of the East Mediterranean countries. Called in Greece "maurō-markōs" (Fraas) or "mavrōmargō" or "asprōpikrōpanthi" (Sibth.); and the ΨΕΥΔΟΔΙΚΤΑΜΝΟΝ of the Hippocratic writings, — described by Theophrastus ix. 16. 2 as resembling in leaves "thiktamnŏn" and used medicinally for the same purposes but less efficacious, by Dioscorides as growing in many countries, and by Pliny xxv. 53 to xxvi. 31 as sometimes called "chondris," is referred here by writers: M. pseudodictamnus is described by Dodoens (Spreng); is termed "pseudodictamnus verticillatus inodorus" by Tournefort inst. 188; and was observed by Sibthorp, and Fraas, frequent from the Peloponnesus and Crete throughout the Greek islands.

Origanum Tournefortii of the Greek islands. The ΔΙΚΤΑΜΝΟΣ : ΚΡΗΤΙΚΟΣ of the Hippocratic writings — may be compared; also the "ĕtĕrōn thiktamnōn" of Theophrastus ix. 16. 3, bearing the same name with the preceding and peculiar to the same island, but differing in medicinal properties and in aspect, the leaves like those of "sisumvriŏ:" the "ĕtĕrōn ĕithŏs thiktamnōu" from Crete is described by Dioscorides as having flowers like "ōriganŏ agriŏ" soft and black, the odour of its leaves exquisite, between that of "sisumvriōu" and "ĕlĕlisphakōu:" O. Tournefortii is termed "o. dictamni cretici facie folio crasso nunc villoso nunc glabro" by Tournefort cor. 13 and trav. i. pl. 91 as observed by him on Amorgos (Pers.); and was found by Sibthorp on the same island, on rocks near the monastery.

Teucrium scordium of Europe and the adjoining portion of Asia. Called in Britain *water germander* (Ainsw., and Prior), in Italy "scordio" (Lenz), in Greece "skōrthĕō" or "skōrthōhōrtōn" (Sibth.), by the prophets "aima pōthōtōs," in Egyptian "aphŏ" (Syn. Diosc.); in which we recognize the ΣΚΟΡΔΙΟΝ of the Hippocratic writings, — and Galen: the "scordiŏn" or "scordotin" growing according to Mithridates in the fertile humid plains of Pontus, bitter to the taste, a cubit high and branching, stem quadrangular and leaves "lanuginosis," is attributed to him by Lenaeus (Plin. xxv. 27): the "skōrthiōn" is described by Dioscorides as growing in marshes and best in quality in Pontus and Crete, bitter and astringent to the taste with a slight odour of garlic, stems quadrangular, leaves like those of "hamaithrui" but larger and less incised; is identified in the added Synonyms with the "mithrithaniōs:" the "shkordium" is mentioned also by Ebn Baitar: T. scordium was observed by Forskal, Sibthorp, and Fraas, in watery places from the Peloponnesus to the Dardanelles; by Schimper, in Abyssinia (A. Dec. g. b. 1015); and according to Clot-Bey has recently been introduced into Egypt; imported "scordium" is enumerated among the ingredients of the Egyptian theriac, and was observed by Forskal mat. med. employed medicinally. Westward, the "skōrthiōn" or "skōrviōn" or "plĕuritis" or "thusōsmōn" is further identified in Syn. Diosc. with the "phrixagŏ palōustris" of the Romans; and the medicinal use of "scordium" is enumerated by Pliny xxvi. 48 to 85: T. scordium is termed "chamædrys palustris canescens seu scordium officinarum" by Tournefort inst. 205; was observed by Lenz in Italy; and is known to grow throughout middle Europe as far as Denmark (fl. Dan. pl. 593, Lam. fl. fr., and Pers.). "T. scordioides," termed "c. cretica palustris canescens scordioides betonicæ folio" by Tournefort cor. 14, and observed by Sibthorp, and Bory, on Crete and the Peloponnesus, is regarded as not distinct (Steud.).

Corylus avellana of Europe and the adjoining portion of Asia. Called in Britain *filbert* or *hazel*, in Anglo-Saxon "hæsl" or "hæsel" from "hæs" behest (Prior), in France "noisette" or "aveline" (Nugent), in Germany "hasel," in Italy "nocciolo" or "avellano" (Lenz), in Greece "lĕphtōkaria" (Sibth.) or "phōuntōukia" (Forsk.), in Egypt "bondok" (. . .), in Egyptian "pantŏki" (Kirch.): the ΘΑΣΙΑΙ : ΚΑΡΥΑΙ of the Hippocratic writings — are referred here by Sprengel: the "ĕraklĕōtikē karua" is described by Theophrastus iii. 15. 1 as hardy, wild on the mountains as well as cultivated, its leaves like those of the alder but wider; and "pōntika" are identified by Dioscorides i. 179 with "lĕptōkarua:" C. avellana was observed by Forskal, and Sibthorp, on the mountains of Greece and around Constantinople; and imported nuts were seen by Abd-allatif, and Baumgarten i. 14, in Egypt. Westward, cultivation of the "nux avellana" is mentioned by Cato, Virgil, Columella, and Pliny, the name derived by Servius from the town of Avellano in Campania; the "corylus" is mentioned by Virgil, Columella vii. 9. 6, by Pliny xvi. 30 as growing both on plains and mountains, and "coryleta" hazel-thickets by Ovid: C. avellana occurs in remnants in forests buried under the sea along the coast of France and England; in peat-bogs on the Shetland Islands, where the living shrub is no longer known (Edmonst., Austen, and Beud.); also in debris of the earliest lake-villages

of Switzerland (Heer); is termed "c. sylvestris" by Tournefort inst. 582; was observed by Munby in one locality in Algeria, perhaps not indigenous; by Lenz, wild in Italy; is known to grow wild on the mountains of Sicily Sardinia and Corsica (Guss., Moris, and Salis) and throughout middle and Northern Europe as far as Lat. 65° 30′ (A. Dec.). Eastward from the Black Sea, is known to grow in Northern Asia (Pers.); and was observed by Kaempfer, and Thunberg, in Japan. Filberts are largely imported into Northeast America, but I have not heard of attempts at cultivation. (See C. colurna.)

Lepraria flava of Northern Climates. The ΨΩΡΑΝ: ΕΛΑΙΗΣ and ΔΑΦΝΗΣ of the Hippocratic writings,—and Theophrastus iv. 16, is referred to this genus by Billerbeck: the "limus arborum" by the Greeks called "lichena," is described by Pliny xxiii. 69 as growing on plum trees wild and cultivated, and used medicinally: L. flava was observed by Sibthorp on old trees in Greece. Westward, is termed "b. pulverulenta flava lignis adnascens" by Dillenius iii. pl. 1; and is known to grow throughout middle Europe (Engl. bot. pl. 1350).

The ΤΕΤΡΑΓΩΝΟΥ of the Hippocratic writings — is identified by Galen voc. Hippocr. 578 with "stimmi" or *antimony:* "stibium" is mentioned by Celsus; and "stimmi," by Dioscorides, and Pliny.

"363 B. C." (Diod., and Clint. iii. p. 421), Mithridates succeeded by Ariobarzanes II. as king of Pontus in Asia Minor.

Origanum Heracleoticum of the Mediterranean countries. Called in Greece "rigani" (Fraas); and the "kŏnīlēn" discovered by Conilus — is identified through Syn. Diosc. with the "ōriganŏs ērakllĕŏtikē" of Dioscorides, strewn to drive away reptiles as well as taken against their bites, having an umbel not rotate but as if separated, and referred here by writers: the "lĕukē ōriganōu" is mentioned by Theophrastus vi. 2. 3; and the "ērakllĕiōn ōriganōn" by Nicander ther. 627: O. Heracleoticum was observed by Sibthorp, Chaubard, and Fraas, in dry mountainous situations from the Peloponnesus throughout Greece; and by Forskal within the city of Constantinople. Westward, the "origanum heracleoticum" of the Greeks is identified by Pliny xx. 62 with the "cunila gallinacea," known to Plautus trinum. 4 as growing in Pontus; mentioned also by Cato 127, Serenus 909; and termed "gallicam" by Apuleius 122 (Spreng.). O. Heracleoticum is described by Matthioli comm. 519, and Lobel pl. 492; is termed "o. sylvestre album" by Tournefort inst. 199; was observed by Lenz in Italy; and is known to grow in other parts of Southern Europe (Pers.; see O. Creticum).

"362 B. C." (Sm. b. d.), at Rome, Q. Servilius Ahala and L. Genucius consuls, half of the military tribunes for the first time elected by the people.

"June" (Plut., and Clint.), defeat of the Spartans at Mantinea by the Thebans under Epaminondas; who however was mortally wounded.

After the battle at Mantinea and before the close of the year ("Ol. 104, 3" of Diodor. xv. 92, and Blair), by Agesilaus III. Proclid king of Sparta, an army sent into Egypt to assist Tachos against the Persians.

361 B. C. = "45th year of Artaxerxes II.," in a Greek inscription (2691 of Boeckh ii. p. 468).

"In this year" (Polyb., Diodor., and Clint.), peace among the States of Greece.

"The same year" (Sm. b. d.), at Rome, C. Sulpicius Peticus and C. Licinius consuls; invasion of the Gauls; and a Gaul advancing and challenging the Roman army killed in single combat by T. Manlius, who from the captured chain received the name of Torquatus.

"360 B. C." (Sm. b. d.), at Rome, C. Poetelius Libo Visolus and M. Fabius Ambustus consuls; the Gauls and Tiburtines defeated by the dictator Q. Servilius Ahala.

"359 B. C." (Diodor., and Clint.), Perdiccas king of Macedonia slain in battle against the Illyrians, and succeeded by his brother Philip. Who defeated the Athenians at Methonē; made peace with them; and before the close of the year, defeated the Illyrians under Bardylis.

"The same year" (Astronom. can., and Clint. ii. p. 382), Artaxerxes II. succeeded by Artaxerxes III. Ochus, eleventh Persian emperor.

Tamarix dioica of Hindustan. A very graceful shrub called "surroo" or "lal jhau" (Roxb.), in Sanscrit "jhavaca" or "pichula," and along the Ganges pointed out to W. Jones as the "gaz" of the Persians, used by them for arrows in ancient times, the celebrated shaft of Isfendiya being made of it — (asiat. res. iv. 268): the Indian "murikēs" is described by Theophrastus v. 4. 8 as differing in having strong wood: T. dioica was observed by Graham "common in the beds of the Concan and Deccan rivers;" by Roxburgh, and Wight, in other parts of Hindustan as far as Bengal.

"358 B. C." (Sm. b. d.), C. Fabius Ambustus and C. Plautius Proculus consuls, fighting around Rome against the Tarquinians, Gauls, and Hernicians, and the alliance with Latium renewed.

"357 B. C. = 12th year of Hien-wang" (Chinese chron. table), beginning of the Thirty-ninth cycle.

"The same year" (Sm. b. d.), at Rome, C. Marcius Rutilus and Cn. Manlius Capitolinus Imperiosus consuls; C. Licinius fined for violating his own law, having acquired too much public land.

"Aug. 9th" (Plut., and Clint.), *eclipse:* Dion immediately afterwards sailing from Zacynthus for Sicily:

"356 B. C." (Sm. b. d.), at Rome, M. Fabius Ambustus and M. Popilius Laenas consuls; the Etruscans defeated by C. Marcius Rutilus the first plebeian dictator.

"In this year," defeat and death of the historian Philistus, and expulsion of Dionysius II., Dion establishing himself as king at Syracuse. — He reigned less than four years.

Euphorbia falcata of the Mediterranean countries. The ΠΕΠΛΟΣ prescribed by (Leophanes) Superfœt. 19, — and Paulus Aegineta, spreading on the ground according to Dioscorides in gardens and vineyards, and identified in the added Synonyms with the "sukēn" or "mĕkŏna aphrŏthē," is referred here by Sibthorp: E. falcata was observed by Sibthorp, and D'Urville (Bory), in vineyards and cultivated ground in Greece and on the Greek islands. Westward, the account by Pliny xxvii. 93 of the "pĕplis" or "sycen" or "meconion" or "mecona aphrode" seems taken from Dioscorides: E. falcata is described by Barrelier pl. 751; is termed "tithymalus annuus supinus folio rotundiore acuminato" by Tournefort inst. 87; was observed by Boccone xxiv. pl. 13 in Sicily, and is known to occur in cultivated ground in Southern and as far as middle Europe (Jacq. austr. pl. 121, Pers., and Lindl.).

Euphorbia peplus of Europe and Northern Asia. An allied species called in Italy "rogna" or "fico d' inferno" (Lenz), in Greece "galazitha" (Sibth.), in Egypt "mælæke," in Yemen "sabia" or "subbejd" (Forsk.); and possibly the "sukēn" of Syn. Diosc. and "pĕplŏs" in question: — E. peplus was observed by Sibthorp, and Chaubard, in vineyards and cultivated ground from the Peloponnesus throughout Greece and the Greek islands; by Forskal, and Delile, in Egypt; and by Forskal among the mountains of Yemen. Westward, is described by Bauhin hist. iii. 670, and Morison x. pl. 2; is termed "t. rotundis foliis non crenatis" by Tournefort inst. 87; was observed by Lenz in Italy; and is a "weed in cultivated ground" throughout middle Europe as far as Britain (Engl. bot. pl. 959, Pers., and Lindl.). Eastward from Greece, was observed by Thunberg in various parts of Japan, but no native name is given. By European colonists, was carried to Northeast America, where it continues in "waste places in the Eastern States, rather rare" (A. Gray). Its medicinal properties according to Lindley are "the same as in E. falcata."

"355 B. C." (Sm. b. d.), at Rome, C. Sulpicius Peticus and M. Valerius Poplicola consuls, both of them patricians in violation of the Licinian law.

"354 B. C." (Sm. b. d.), at Rome, M. Fabius Ambustus and T. Quinctius Pennus Capitolinus Crispinus consuls, again in violation of the Licinian law both of them patricians. League with the Samnites.

Sargassum natans of the North Atlantic and the Mediterranean. The ΦΥΚΟΣ of the Scylacean Periplus — is referred here by Sprengel: S. natans is termed "f. folliculaceus serrato folio" by Tournefort inst. 568; was observed by Sibthorp, and Bory, floating at sea from Cadiz throughout the Mediterranean to the Greek archipelago and the Propontis; and is known to occur in frequent tufts throughout the Gulf Stream to the terminal accumulation called the "Sargasso Sea," and is sometimes driven Northward as far as the coast of Britain (Engl. bot. pl. 1967).

Laminaria bulbosa of the Mediterranean. A species of *sea-belt* (Prior) or *kelp:* and the ΦΥΚΟΣ of Scylax p. 126 — is further identified by Sprengel with the "zōstēra;" described by Theophrastus iv. 6. 2 as "platuphullōn tainiōĕithĕs" and having an onion-like root, referred here by writers: L. bulbosa is described by Turner, and Lamouroux, and was observed by Fraas on the coast of Attica. *L. Blosevillii*, four to eight feet long, and according to Bory formerly discovered by Bloseville among the Greek islands, may also be compared.

"353 B. C." (Sm. b. d.), at Rome, C. Sulpicius Peticus and M. Valerius Poplicola again consuls. War against the Tarquinians and Caere; and a truce made with Caere for a hundred years.

"In this year" (Diodor., and Clint.), death of Mausolus king of Caria. — His memory was consecrated by his widow Artemisia by a tomb much celebrated for its magnificence; and the origin of our English word "mausoleum."

"352 B. C." (Sm. b. d.), at Rome, P. Valerius Poplicola and C. Marcius Rutilus consuls, "quinqueviri mensarii" appointed for a general liquidation of debts.

"351 B. C." (Sm. b. d.), at Rome, C. Sulpicius Peticus and T. Quinctius Pennus Capitolinus Crispinus consuls, the first plebeian censor C. Marcius Rutilus; war against Tarquinii, and a truce for forty years granted.

"In this year" (Blair), Sidon besieged by a Persian army, and burned by its inhabitants; involving in the flames their own destruction.

The same year (= 369 — "18 years"), end of the Egyptian Chronicle.

Sison amomum of Europe and the adjoining portion of Asia. Called in Italian drug-shops "amomo germanico" (Targ.); and the ΣΕΙΣΩΝ of Axionicus — (Poll. onomast. x. 122), a small seed according to Dioscorides resembling that of "sĕlinō" but hot to the taste, growing in Syria and employed there as a condiment, is referred here by writers: S. amomum was observed by Sibthorp from the Bithynian Olympus to the environs of Smyrna. Westward, the "sison" is mentioned by Pliny xxvii. 15, and Apuleius Barbarus 94 (Fraas); the "amomon" herb by Pliny xxvi. 19; and from mediæval times "semen amomi" have been sold in the drug-shops of Europe (Spreng., and Lindl.): S. amomum is described by Dalechamp 708; is termed "sium aromaticum, sison officinarum" by Tournefort inst. 308; and is known to occur in "chalky fields" in Carniolia, France, and Britain (Scop., Pers., Engl. bot. pl. 954, and Lindl.). The seeds according to Lindley are "pungent and aromatic" but have a nauseous smell when fresh.

"350 B. C." (Diodor., and Clint. ii. p. 383), Egypt re-conquered by the Persians with the aid of Greek mercenaries. The name of the reigning emperor, Artaxerxes III. Ochus, has not been found on the Egyptian monuments (Glid., and Leps. k.).

Auckland̆ia costus of Cashmere. An imported root called in commerce *costus*, in Arabic "kust" (Royle), in Egyptian "ris" — (Edw.); in which we recognize the "kōstōs" enumerated among imported fragrant roots by Theophrastus ix. 73 and odor. 28 to 34; used by the Romans in supplicating the gods (Plin. xxii. 56), mentioned also by Horace, Ovid, Celsus, Lucan ix. 917; and according to the Erythræan Periplus brought from the Indus: three kinds are mentioned by Dioscorides; and two kinds "from the island of Patale at the mouth of the Indus" by Pliny xii. 25: the "kust" is mentioned by Rhazes, Avicenna, Abd-allatif, Ebn Baitar, and Persian medical writers; and the root in question was traced by Falconer to A. costus, observed by him growing in the valley of Cashmere. Eastward, was found by Garcias brought to Malacca for export to China; and according to Royle (in Kitt. bibl. cycl.), is an ingredient in the incense burned in Chinese temples and houses.

"In this year" (Liv., App., and Sm. b. d.), the Gauls defeated by the consul M. Popilius Laenas; and a triumph celebrated, the first obtained by a plebeian. A second temple to Apollo built in Rome.

"In this year" (Böthling, Roth, Lassen, and Buns. iv. 7. 3.), Panina the grammarian, founder of *Sanscrit literature*: — the oldest Sanscrit prose occurring in the Bramana or books of ritual, and the Upanishad or philosophical treatises. (Panina may have lived to the time of Alexander's invasion).

As early probably as this date (Theophrast., and Cic. acad. quaest. ii. 39), Hicetas of Syracuse maintaining that the heavens are stationary, and that the Earth turns on itself or rotates.

The Niobe group of statues — (referred by writers to the Fourth century B. C., Lubke and Lutrow) impressed me more deeply than any work of art I ever met with. For a different reason, I was interested in the Scythian slave preparing to skin Marsyas; as being in the days of the sculptor a truthful representation of the people on the North of Greece.

"348 B. C." (Sm. b. d.), at Rome, M. Valerius Corvus and M. Popilius Laenas consuls, renewal of the treaty with Carthage.

The same year (= 339 + "2 + 3 + 4 years" of the Afr.-Maneth. table = 332 + "6 + 4 + 6 years" of the Euseb.-Maneth. table), a date thus found in both the Maneth. tables, and possibly marking some event (see B. C. 339).

The Greek physician Mnesitheus may have been at this time writing. — He is quoted by the comic poet Alexis.

The tree MYAΣ enumerated among articles of food by Mnesitheus — (Oribas. ii. 68) is referred by writers to the *dormouse*, Myoxus glis: the "muŏxōs" is mentioned by Oppianus cyn., Epiphanius haer. 64, and as eaten in Italy by Galen al. fac. iii. 2: the "glis" is mentioned by Plautus, Lupinus or Hirpinus, Petronius, Pliny, Martial, and Apicius; was the subject of a Roman sumptuary law in "B. C. 115;" and the "glirarium" park for keeping dormice, is described by Varro iii. 15. The dormouse continues to be eaten in Italy, and is even reared for that purpose in Carniolia, Carinthia, and Styria (Gesn., Matthiol., Valvasor, and Daremb.).

"347 B. C." (Clint. ii. p. 156), Syracuse recovered by Dionysius II.

"In this year" (= Ol. 108. 1, Cic., Senec., D. Laert., and Sm. b. d.), at Athens, death of Plato. He was succeeded by his pupil Speusippus as head of the Academic school of philosophy.

Brassica napus of Europe and the adjoining portion of Asia. Called in Britain *coltza* or *rape* or *navew* (Prior), in France "colza," in Italy "rapaccione" or "navone selvatico" or "napo silvestre" (Lenz), in Egypt "selgam" (Del.); in which we recognize the "napus" identified through Pliny with the BOYNIAΣ of Speusippus, — Diphilus Siphnius, Artemidorus, Nicander fr., Columella, Dioscorides, and Athenæus ii. 71: B. napus was observed by Fraas in hilly situations in Greece, where it is or has been cultivated; is known to occur seemingly wild in Armenia, Russia, and "perhaps Siberia" (Billerb. p. 170, Ledeb., and A. Dec.); the "seljam" was seen in Egypt by Abd-allatif; and B. napus, by Delile, and Clot-Bey, cultivated in Upper Egypt for the oil from its

seeds. Westward, "coles rapicii" and "semen rapicium" are mentioned by Cato; the "napus" by Columella xii. 56, and Pliny xx. 11: B. napus is described by Miller; is cultivated in middle Europe for the oil from its seeds, and is known to grow wild in maritime situations as far as Gothland and the neighbouring portion of Sweden (Pers., and Fries p. 29).

"345 B. C." (Sm. b. d.), the comic poet Alexis mentioned by Aeschines in his oration against Timarchus. — Alexis satirized Demosthenes in "343," alluded to the decree through Sophocles of Sunium against the philosophers in "316," exhibited plays in "306," and was alive in "288" (Sm.).

Tordylium maximum of Europe and the adjoining portion of Asia. Called in Britain *hartwort* (Prior); in which we recognize the ΣΕΣΕΛΙ of Alexis, — resorted to before delivery by the female stag according to Aristotle an. ix. 5: T. maximum was observed by Sibthorp, and Chaubard, from the Peloponnesus to Constantinople. Westward, the "seselis" is mentioned by Cicero, and as sought by the female stag by Pliny viii. 50: T. maximum is described by Parkinson th. 908, and Tournefort inst. 320; is known to occur in waste places and along hedges throughout middle Europe as far as the three Southern counties of Britain (Ray, Jacq. austr. pl. 142, Pers., Wats., and A. Dec.).

Nardostachys jatamansi of the Himalayan mountains. A Valerianaceous herb called there "jatamansē" or "balchur" (W. Jones), and *spikenard* in Hindustanee "jatamasi" or "chhar" or "sambuluttib" or "nard" (D'roz.); in which we recognize the "nardus indica spica" found by Forskal mat. med. imported from Hindustan into Egypt, the "nardi spica" of an ointment used by the Parthian kings (Plin. xiii. 2), and perhaps the ΝΑΡΔΟΝ: ΒΑΒΥΛΩΝΙΑΚΟΝ of Alexis — (Poll. onom., named from the route of importation): "narthōs" having a spike is mentioned by Nicander ther. 604; "narthōu inthikēs" called "gaggitis" from the river along the mountains on which it grows, by Dioscorides; "nardum indicum," by Pliny; "narthōu stahuōs" by Galen fac. simpl. viii. 84, and Paulus Aegineta; and "sunbul hindē" by Avicenna, and Persian medical writers: "espi" of "Bangala" was seen in Hindustan by Marco Polo 126; the spikenard of commerce was traced by W. Jones to the long hairy root of N. jatamansi, and living specimens were brought from the Himalayan mountains to Royle (Kitt. bibl. cycl.). Imported spikenard according to Lindley "has been highly esteemed not only as a perfume, but as a stimulant medecine." (See Rosa centifolia).

Patrinia scabiosaefolia of the Himalayan mountains. An allied plant, possibly the "narthōn vavulōniakōn" in question: — beyond Babylon and before reaching Hindustan, Alexander met with the "narthōs" growing wild (Onesicrit., and Strab. xv. 1. 22): the "narthōu suriakē" growing according to Dioscorides on the same mountains with the first kind, but on the slope facing Syria, yellow and very fragrant but with a "kupĕirizĕin" odour, enumerated by Pliny xii. 26 as highly esteemed by the Romans, is referred here conjecturally by Sprengel: P. scabiosaefolia is described by Fischer; and was ascertained by Sprengel to grow "in Imao et Emodis montibus."

344 B. C. (= 322 + "22 years reign" in the Mahavamsa v.), Dasesittica-Nandeya succeeded by Danepala-Nandeya now Hindu king. — He is called Nanda in the Avadana-asoka (Burn. i. 359, see also Puranas, and Wilford as. res. ix. 87).

343 B. C. (= 347 — "4 years," Clint.), Dionysius II. finally expelled from Syracuse by Timoleon.

"The same year" (Blair, and Sm. b. d.), M. Valerius Corvus and A. Cornelius Cossus Arvina consuls, the Romans now gaining more than local importance: Eastward beyond the limits of Latium, the Campanians claiming their protection, and war commenced in that direction against the Samnites. — The war continued at intervals fifty-three years.

Elettaria cardamomum of the Siamese countries. The imported seeds are called in commerce *cardamoms* (Johnson); in which we recognize the "karthamōmōn" mixed in the Egyptian "kuphi" incense — (Maneth. in Plut. is. and osir. 80), prescribed by Diocles (Orib. excerpt. 52, and Daremb.), and in 1 Morb. mul. 52, imported partly from Media and partly from India in the days of Theophrastus ix. 7, mentioned also by Dioscorides, Celsus, and Pliny. Farther South, "hal" or "kakulah" are mentioned by Gafeki, Avicenna, and Ebn Baitar; cardamoms were observed by Abd-allatif, and Delile in Egypt; by myself, imported there through Mecca and the Thebaid, and everywhere in use in Southern Arabia. Eastward, are called in Persian "hil," in Hindustanee "kakulah," in Sanscrit "buhoola" or "ela nishkooti," in Bengalee "elachi," in Telinga "sanayallacci" (D'roz., and Lindl.), in Tamil "aila-cheddie" (Drur.): the living plant was observed by Rheede xi. pl. 4 and 5, Roxburgh, and Lush, under cultivation in Hindustan (Graham), and springing up spontaneously on clearing the forest in Wynaad and other hilly districts (Drury). Farther East, cardamoms are enumerated by Edrisi as brought to Aden from "China" (meaning Siam); E. cardamomum is described by Sonnerat ii. pl. 136; was observed by Bontius on Java; and according to Mason v. p. 496, abounds in the "forests of Tavoy and Mergui," the seeds collected in former times by the Karens for tribute, and is called "bala."

This word "bala" seems the origin of the Sanscrit, Persian, and Arabic names, and may therefore be regarded as an early specimen of the *Burman language*.*

"340 B. C." (Sm. b. d.), total defeat of the Latins at mount Vesuvius by the consul T. Manlius Torquatus, partly through the self devotion of his colleague P. Decius Mus. A son of T. Manlius Torquatus, having contrary to orders engaged and slain an enemy in single combat, was put to death by his father; and the supremacy of Rome over Latium was now established.

The same year = "20th year of Artaxerxes III. Ochus," mentioned in both the Maneth. tables.

"In or about this year" (Lubke and Lutrow), at Priene in Asia Minor, building under the architect Pytheos of the temple to Minerva.

Various animals of "Ethiopia" or Abyssinia described by Dinon, as ΟΡΝΙΘΑϛ : ΤΟΥϛ : ΜΟΝΟΚΕΡΩϛ — (Aelian xvii. 10), the Abyssinian *hornbill*, Buceros.

The Υϛ : ΤΕΤΡΑΚΕΡΩϛ — the Abyssinian boar, *Phacochoeres Aeliani:* mentioned also by Agatharchides (Ael. v. 27); the "hōirĕlaphōn" seen and eaten in Abyssinia by Cosmas Indicopleustes xi. p. 336, according to his accompanying figure, is clearly the same animal:

And ΠΡΟΒΑΤΑ devoid of wool, ΤΡΙΧΑϛ : ΔΕ : ΚΑΜΗΛΩΝ : ΕΧΟΝΤΑ — the Somali or hairy variety of the *sheep* (already mentioned).

"339 B. C." (Diodor., and Clint.), the Carthaginian army defeated in Sicily at the river Crimisus by Timoleon king of Syracuse.

"In this year" (. . . . Sm. b. d.), at Athens, Speusippus succeeded by Xenocrates as head of the Academic school of Philosophy.

"The same year" (Syncell.), end of the Maneth. tables. Clearly the initial point of reckoning, — notwithstanding that Arses is mentioned, and the death of Darius. (If however as Syncellus further states, the point of reckoning is from the conquest of Egypt by Alexander, see B. C. 348).

"338 B. C." (Clint. ii. p. 382, = 340 — "2 years" of the Afr.-Maneth. table, see Astronom. can.), Artaxerxes III. succeeded by Arses, twelfth Persian emperor. He reigned only "two" years (according to the Astronomical canon); and his name has not been found on the Egyptian monuments.

"The same year" (Dionys., Diodor., and Clint.), the Athenian and Theban armies defeated at Chaeronea by Philip, and the last obstacle to his ascendancy over the States of Greece now removed. On the battle-field, a colossal statue of a lion was erected: — mentioned by Pausanias ix. 40. 10; but at the present day in fragments, and the only sepulchral monument of "the better days of Hellas, with the exception perhaps of the tumulus of Marathon, the identity of which is beyond dispute" (Mure in Sm. geogr. dict.).

Acacia fistula of the Upper Nile. A tree called by the Arabs "soffar" flute, by the natives of Soudan "whistling tree" (Schweinf.); and the ΚΙΘΑΡΑ plant of Clitonymus, growing on mount Pangaeus from the blood of Orpheus, and emitting the sound of a harp during the Dionysia — (Plut. flum. 3. 4), notwithstanding the different locality may be compared: A. fistula was observed by Schweinfurth iii. in Lat. 10° on the Upper Nile, conspicuous in the Acacia groves throughout an area a hundred miles square, yielding gum, and the holes left by the departure of a gall-insect rendered musical by the wind like "a thousand flutes give out their hollow dirge."

"337 B. C." (Sm. b. d.), at Rome, C. Sulpicius Longus and P. Aelius Paetus consuls, the first plebeian praetor Q. Publilius Philo.

"336 B. C." (Eratosth., Arrian, and Clint.), Philip slain; and the accession of his son Alexander as king of Macedonia.

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* *Croton thet-yen-nee* of Burmah. Its roots from early times employed by the natives as a cathartic: — observed by Mason v. 492 abounding "in some parts especially on the Maulmain hills."

"*Croton thet-yen-ka-dau*" of Burmah. A shrub three or four feet high, having similar properties with the preceding — according to the natives: observed by Mason v. 492 frequent "in the neighborhood of Rangoon," and found occasionally in Tenasserim.

Alstonia? let-htuk of Burmah. An Apocynous tree, its bark employed from early times to cure rheumatism, and its very white smooth wood to make yokes, — also chopped and boiled with jaggery by the natives to mix in segars: observed by Mason v. 538.

Wrightia sp. of Burmah. A small Apocynous shrub, from early times employed as a vermifuge: — observed by Mason v. 415 "abundant in the Toungoo forests."

Cynomorium sp. of Burmah. A fungus-like flowering plant, valuable as a styptic: — observed by Wallich in Tenasserim, "parasitical on the roots of trees" (Mason v. 505).

Colocasia odora of the Siamese countries. The *fragrant arum* called "peing-ma-haw-ya" (Mason) cultivated from early times, — according to the Burmese "for medicine:" observed by Voight, and Mason v. 436 to 816, the flowers said to be odorous.

"In this year" (Clint. ii. p. 384, = 332 + "4 years" of the Afr.-Maneth. table = 330 + "6 years" of the Euseb.-Maneth. table, see Astronom. can.), Arses succeeded by Darius III. Codomanus, thirteenth Persian emperor. The name of Darius III. has not been found on the Egyptian monuments.

Rice, called in Arabic "arz" or "rouz" (Del.), heard of by the Greeks as a production of Hindustan as early probably as this date, — for "ōinōn ōruzēs" *arrack* is mentioned by Aristotle viii. 26 as sometimes given to elephants: "ōruza" was found by Alexander's Expedition under cultivation in Hindustan (Aristob.), and the account by Theophrastus iv. 4. 10 seems to imply that the living plant continued unknown in the Mediterranean countries. If the above names are derived from the Malay "bras," this may prove the earliest instance of the incorporation of a *Malay word* in the Greek language (see Oryza sativa).

"335 B. C." (Plut., Arrian, and Clint.), Boeotian Thebes, having revolted, destroyed by Alexander, and Pindar's house alone left standing. Next sending to Athens, Alexander demanded the persons of the orators; but was propitiated by Demades. The following orators were named, Demosthenes, Polyeuctus, Ephialtes, Lycurgus, Moerocles, Damon, and Callisthenes, with the Athenian general Charidemus; according to other accounts, the demand was for "ten;" and (according to Arrian), Hyperides, Diotimus, and the Athenian general Chares, were included.

"The same year" (Suid., and Clint.), comedy exhibited by Philippides; by grammarians regarded as one of the six standard poets of the "New Comedy."

"In this year" (Evaenetus being archon, according to the inscription), building at Athens of the choragic monument of Lysicrates.

"The same year" (Sm. b. d.), Aristotle returning from Macedonia to Athens.

Aristotle meteor. i. 3 speaks of the Earth as shown by astronomical theorems to be "much smaller than some of the stars;" and that these are far more distant from us than the sun; the sun being at the same time more distant than the moon (i. 8).

The phenomenon of *red snow* described by Aristotle animal. v. 19; and "red and hairy ΣΚΩΛΗΚΕΣ worms" mentioned in connexion.

The ΙΠΠΕΛΑΦΟΣ described by Aristotle ii. 1 as inhabiting Arachosia — (South of the Paropamisus), is admitted to be the *Indian stag*, Cervus hippelaphus.

The "badizahr," mentioned by Aristotle — according to Ebn Baitar, also by Rhazes, Haly Abbas, Avicenna, and Serapion, is admitted to be *bezoar stones*; highly prized among Orientals, and ascertained by Bontius to be alvine concretions formed in various quadrupeds, in goats, gazelles, and monkeys.

The ΜΥΣ : ΤΟ : ΚΗΤΟΣ described by Aristotle an. iii. 12 as having in the mouth instead of teeth bristles like those of the swine, — is referred by writers to the *right whale*, Balæna mysticetus. Confirmation is found in the ΚΗΤΗ being enumerated in iii. 20 among other sea-animals having mammæ and milk.

The insect produced among books, described by Aristotle an. v. 32 as resembling the garment moth, — may be compared with the *Lepisma*. This insect has been introduced by European colonists into North America; where it is now often seen in houses and among heaps of paper.

The other insect produced among books, described by Aristotle as small and like ΣΚΟΡΠΙΟΙΣ : ΑΝΕΥ : ΤΗΣ : ΟΥΡΑΣ, scorpions without the tail, — is clearly the false-scorpion or Chelifer. This insect has been introduced by European colonists into North America; where it is now occasionally met with in houses.

Habzelia Æthiopica of Equatorial Africa. A tree whose transported fruit is called in Darfour "kumba" (Browne), in Egypt "amama" (. . . . .); in which we recognize the ΑΜΩΜΟΝ of Aristotle, — Theophrastus ix. 7. 2 and od. 32, described by Dioscorides as woody and convoluted in the form of grapes, termed "amomi uva" by Pliny xii. 28, mentioned also by Athenaeus xi. 11, and Isidorus: the dried fruit of H. Æthiopica was received from Egypt by Matthioli; is termed "piper Æthiopicum" by Lobel pl. 205, "habzeli" and "piper nigrorum" by C. Bauhin pin. 412; was seen by Forskal mat. med. p. 164, and Delile, in the drug-shops of Egypt; by Browne, brought by the Soudan caravans to Darfour; and according to Lindley, the tree grows in Sierra Leone and in the "palmwoods of Senegambia," and its "fruit, pungent aromatic and often substituted for other spices, is the "piper æthiopicum" of commerce. *H. aromatica* found by Aublet i. pl. 243 in the woods of Guiana, the fruit "employed by the Blacks in lieu of spice" (Lindl.), is described as distinct, but is at least an introduced tree, indigenous according to Bojer on the Mauritius Islands.

Phaca Boetica of the Mediterranean countries. Called in Greece "agriōkōukia" or "agriōlōupinō" (Sibth.); and the ΣΙΣΤΡΟΝ plant growing along the Scamander according to Aristotle probl. 160, resembling the ΕΡΕΒΙΝΘΟ and named from the rattling seeds, — may be compared: P. Boetica was observed by Sibthorp, and Chaubard, on mountains from the Peloponnesus to Cyprus. Westward, is termed "astragalus primus sive boeticus" by Clusius hist. ii. 233, "astra-

galoides lusitanica" by Tournefort inst. 399; and is known to grow in Barbary, Spain, and Portugal (Desf. atl. ii. 180, Pers., and Spreng.).

Rosa glutinosa of Crete. The ΡΟΔΑ with ΟΜΦΑΛΟΣ : ΤΡΑΧΥΣ mentioned by Aristotle probl. v. 8, — by Theophrastus vi. 6. 4 as large and sweet-scented "trahu tō katŏ," may be compared: R. glutinosa is termed "r. cretica montana foliis subrotundis glutinosis et villosis" by Tournefort cor. 43; is described by Sibthorp "fructibus globosis pedunculisque hispidis," as observed on the mountains of Crete.

Picris? asplenioides of the Mediterranean countries. An herb called in Greece "pikralitha" (Sibth.), in which we recognize the ΠΙΚΡΙΔΟΣ of Aristotle an. ix. 8, — named from its bitterness and flowering throughout the year according to Theophrastus vii. 11. 4, mentioned as edible in the Septuagint translation of ex. xii. 8: P. asplenioides is regarded by Chaubard as a species of Apargia, and was observed by him and Sibthorp, in the Peloponnesus and on Zacynthus. Westward, is described by Linnæus sp. 1115; is termed "leontodon muricatum" by L'Heritier pl. 82; was observed by Scopoli in Italy; by Desfontaines 222, in the maritime sands of Barbary (Pers.).

Carthamus leucocaulos of the East Mediterranean countries. A thistle-like plant called in Greece "atraktuli" or "stauragkathi" (Sibth.); in which we recognize the ΑΤΡΑΚΤΥΛΙΣ of Aristotle an. ix. 30, — whiter than others according to Theophrastus vi. 4. 6, emitting blood-like juice and therefore termed "phōnōn," having also the smell of blood: the "atraktulis" is mentioned also by Theocritus iv. 52, is prescribed by Paulus Aegineta; and the description by Dioscorides so far as relates to the flowers being sometimes purplish, may belong here: C. leucocaulos is termed "cnicus creticus atractylidis folio et facie flore leucophæo sive candidissimo" by Tournefort cor. 33; and was observed by Sibthorp, and D'Urville frequent in Southern Greece and on the Greek islands. Westward, the "atractylis" emitting "sanguineum succum" seems known to Pliny xxi. 56 only from the account of Theophrastus. (See C. lanatus).

Convolvulus dorycnium of the East Mediterranean countries. A branching erect species; and the "dorycnium" of Aristotle — (Plin. xxviii. 21), Demophon, Lysimachus the Hippocratean, Nicander alex. 376, growing according to Dioscorides in stony places not far from the sea and resembling a young olive but with smaller and very rough leaves, its branches not a cubit long, flower white, "ĕrĕvinthōu"-like follicles containing five or six round variegated seeds almost like "ōrōvōi mikrōi," root a cubit long and believed to induce sleep and even death, is referred here by Linnæus, and Fraas: the "thōrukniōn" is identified in Syn. Diosc. with the "kalĕan" or "alikakavōn" of Cratevas; and there is further confusion in names, as appears from Pliny xxi. 105, Galen comp. med. loc. x. 356, and the author of Delet. pharm. 6: C. dorycnium is termed "c. ramosus incanus foliis pilosellæ" by Tournefort inst. 84; was observed by Sibthorp, Chaubard, and Fraas, in dry stony places near the sea from Crete to the Peloponnesus and Attica.

Stachys lanata of the East Mediterranean countries and Siberia. Called in Greece "stahus" (Sibth.); in which we recognize the ΣΤΑΧΥΣ of Aristotle probl. ined. ii. 80, — Aratus, Theocritus x. 47, Apollonius Rhodius, and Nicander ther. 803, growing according to Dioscorides in mountainous and broken places and resembling "prasiŏ," but whiter and somewhat longer with more stems from the root, the leaves numerous and subrotund hard fragrant hairy and white. S. lanata was observed by Sibthorp, and Chaubard, from the Peloponnesus to Smyrna and Constantinople; is known to grow also in Siberia (Jacq. rar. pl. 107, and Pers.).

Avicennia tomentosa of Tropical shores. A *mangrove* called in Yemen "schura," at Muscat "germ" (Forsk.); and trees growing in salt-water around the Indian Ocean are mentioned by Aristotle mund. c. 4 — (Callim., and Antig. mirab. 147): the "ĕlaa" growing in the Red Sea beyond Coptum and having fruit like an olive, is mentioned by Theophrastus iv. 7. 1; and the sea-washed "ĕlaian" with fruit like a chestnut, by Agatharchides 43: A. tomentosa was observed by Forskal p. 37 frequent along the islands and shores of the Red Sea, the wood used for fuel, and the leaves eaten by camels, donkeys, and sheep. Eastward, is called in Bengalee "bina," in Telinga "nalla-madu" (Drury); was observed by Rheede iv. pl. 45 in Malabar; by Graham, abundant about Bombay; by Roxburgh, Wallich. Wight, as far as the mouths of the Ganges; and by Mason, along the shores of Burmah.

Rhizophora conjugata of the shores of the Indian Ocean. Another *mangrove* included doubtless among the salt-water trees of the Indian Ocean mentioned by Aristotle; — at the mouth of the Indus, the companions of Alexander found trees nearly covered at high-water, one of the two kinds having lupine-like fruit; and Theophrastus iv. 7. 1 to 5 further speaks of a "thaphnēn" besides the "ĕlaan" growing in the Red Sea beyond Coptum; Megasthenes also mentions "trees growing in the Indian Sea" (Callim., and Antig. mirab. 147): R. conjugata was observed by Rheede vi. pl. 34 in Malabar; by Graham, "abundantly in salt marshes all along the coast;" by Roxburgh, and Wight, along the Eastern coast of Hindustan; by Mason, along the coast of Burmah, and called "pyu;" by Rumphius iii. pl. 71 and 72, among the Moluccas; by Blanco, around the Philippines, and called in Tagalo "bacao" or "bacavan." (Compare R. Mangle.)

One hundred and nineteenth generation. Sept. 1st, 334, mostly beyond youth: the Greek poet Myro of Byzantium; the comic poets, Stephanus, Straton, Euphron, Philemon, Menander, Apollodorus of Gela, Dionysius of Sinope, Timocles, Theophilus, Sosippus, Anaxippus, Demetrius, Archedicus, and Sopater; the culinary poet, Archestratus of Syracuse; the philosophers, Crates the cynic, Crates of Tarsus, Stilpo, Polemon, Crantor, Pyrrhon, and Anaxarchus; the mathematician, Dinocrates (Blair); the medical writers, Dieuches (Bussem.); the historians, Leo of Byzantium, Callisthenes, Anaximenes of Lampsacus, Palaephatus, Marsyas of Pella, Demophilus, Cleitarchus, Ephippus, Cyrsilus, Medius, Clytus of Miletus, and Hecataeus of Abdera; the orators, Dinarchus, Stratocles, Philinus, Hegemon, and Pythocles; the grammarian Zoïlus; the musician Aristoxenus; writers on other subjects, Eudemus, Heracleides of Pontus, Clearchus of Soli, Theocritus of Chios, Chamaeleon, Menaechmus, and Euhemerus; the sculptor Lysippus; the painters, Protogenes, Apelles, Melanthus, Nicophanes, and Nicomachus (Bryan).

"The same year" (Lubke and Lutrow), at Athens, building of the Choragic monument of Lysicrates.

The Laocoon group, "the joint work of Agesander, Polydorus, and Athenodorus," is regarded as "probably belonging to the time of Alexander" — (Lubke and Lutrow).

Astragalus Creticus of the East Mediterranean countries. As early probably as this date, "tragakantha" *gum tragacanth* brought from Crete, and supposed to be produced only on that island — (Theophrast. ix. 1. 3): A. Creticus, termed "tr. cretica incana flore parvo lineis purpureis striato" by Tournefort cor. 29 and trav. i. pl. 21, was observed by him on Crete, yielding white gum tragacanth; by Sibthorp, on Crete as well as on sandy hills in Ionia as far as the Bithynian Olympus, also yielding tragacanth. A small quantity according to Lindley, supposed by Th. Martius to be the sort "received in the form of threads or slender strips." (See A. aristatus, and A. verus.)

"333 B. C." (. . . . Sm. b. d.), the consuls at Rome for this year, not mentioned by any ancient authority.

Apollonius of Myndus, educated among the Chaldeans, teaching that *comets* return in long regulated paths — (Senec. quaest. nat. vii. 3 to 17).

Mencius or Meng-tseu ii. 8. 38 (according to his own account) writing more than a hundred years after Confucius.* — He died in his "eighty-fourth year about B. C. 314" (Stan. Julien).

"332 B. C." (Sm. b. d.), A. Cornelius Cossus Arvina and Cn. Domitius Calvinus consuls at Rome. Alexander uncle of the Macedonian and king of Epirus, at the request of the Tarentines entering Italy; the Lucanians and Samnites defeated by him near Paestum, and a treaty entered into with the Romans.

About this time (Strab. and Pliny ii. 77), Pytheas from Massalia (near Marseilles) after traversing the whole of Britain on foot, sailed "six days North to ΘΟΥΛΗ" (identified by Claudius Ptolemy with the Shetland Islands, "called by seamen Thylensel" to the present day, according to Ainsworth dict.). In the deficiency of cattle and cultivated fruits, some grain was produced on "Thoulē," as "kĕghrŏ" millet, "sitōs" wheat; besides "lahanŏis" vegetables, and roots for food, and even "mĕli" honey; also that the wheat, on account of the climate, was threshed in "ōikŏis mĕgalŏis" barns. Pytheas sailed far enough North to see *icebergs*; described by him as something neither air, sea, nor land; but a concretion of these resembling jelly-fish (Medusa); and he was informed that such bound the Universe in this direction, being inaccessible alike to ships and the foot of man. Pytheas also speaks of the Polar circle, where the longest day continues twenty-four hours; and of the region beyond, where there is constant day during the six summer months and constant night during the six winter ones.

The ΚΑΝΤΙΟΝ described by Pytheas as "some days sail from Kĕltikēs" (Strab. i. 4. 3), is possibly Kent; but may be in Scotland. — The "Kantai" are described by Claudius Ptolemy as dwelling "Northeast of the Caledonian forest" (which would place them at or near the Northern extremity of Scotland).

The ΩΣΤΙΜΙΟΥΣ are described by Pytheas as inhabiting the ΚΑΒΑΙΟΝ promontory (Bretagne in Northern France). — By Cæsar, Strabo iv. 4. 1 and 5, Mela, Pliny, and Claudius Ptolemy, they are called "Osismii."

The island ΟΥΞΙΣΑΜΗ, described by Pytheas as the last one at the extremity of the promontory (Strab. i. 4. 5), is clearly Ushant. Pytheas also maintained, That the Northern portion of Spain is more accessible across France, than by way of the ocean: — a statement repeated by Eratosthenes, but opposed by Artemidorus (Strab. iii. 2. 11).

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* *Salix Japonica* of Japan. The "k'i-lieou" according to Meng-tseu ii. 5. 1 woven into baskets, — may be compared with some species of *willow*: S. Japonica is described by Thunberg p. 24 as observed in Japan (Pers., and Steud.).

Pytheas mentions "mentonomon," an estuary or bay of the Northern Ocean, upon which the Guttones dwelt (compare Gothland); and a day's sail from this, the amber-producing island named "abalus" — (Plin. xxxvii. 7 or 11). By Timaeus, this island is called "basilia;" a name identified by Zeuss p. 270 with Oesel. The "vasílěiōi" and "ōurgōi" are also mentioned by Strabo, and (according to Talvi introd. and iii. 3) the "idols" also of the Slavonian population of this quarter. The "rugii" are mentioned by Tacitus germ. 43; and are referred by Latham to the people around the Gulf of Riga. In that vicinity, idol-worship and widows "burning themselves with the corpses of their husbands" continued to a comparatively recent period: indicating connexion with Hindustan.

"The same year" (Q. Curt. iv., Churchill coll., and Clint.), at Tyre, a wooden mole built by Alexander destroyed by the besieged citizens by means of a *fire-ship:* a novelty in warfare.

After the fall of Tyre, Alexander entered Egypt, where he founded the city of Alexandria; and after visiting the Oasis of Ammon, returned to Memphis (see Clint.). The city wall of Alexandria — continued standing to the time of the visit of Baumgarten i. 14.

Hieroglyphic ovals of Alexander occur in Egypt (Leps. k. pl. 51): from this date, — the monuments becoming comparatively uninteresting. The imposing temples by no means devoid of taste and all in the Egyptian style of art erected by Alexander's successors, are chiefly inscribed with representations of deities and the ostentatious enumeration of conquests, yet present genealogies, astronomical records, and dates, that the historian might consult with advantage.

From this date also, — *Greek inscriptions* become frequent in Egypt: *Greek papyri* or books also make their appearance: the lost oration of Hyperides discovered by A. C. Harris, being probably among the earliest of these papyri.

"331, in the spring" (. . . .), Alexander leaving Egypt, on his expedition Eastward.

"Sept. 30th" (Blair, and Clint.), *eclipse of the moon.* Eleven days afterwards, the army of Darius III. defeated at Arbela by Alexander, and Persian dominion brought to a close. A few days after the battle, Alexander entered Babylon.

The magian, Osthanes the younger, accompanying Alexander on his Eastern expedition — (Plin. xxx. 2).

Pyrethrum parthenium of the Taurian and Caucasian mountains. Called in Britain *feverfew* or *may-weed* or *maghet* or *maithes*, in old English "maydenwede" or "mayde-wede" or "maythys" from the Anglo-Saxon "mægth" maid, by Galfridus pr. pm. "feder-foy" (Prior), in Germany "mutterkraut," in Italy "matricale doppio" (Lenz), in Greece "asprōkhi" (Fraas), in Egypt "achaovan" (Alpin.); in which we recognize the "parthenium" used against intermittent fevers by the Magians — (Plin. xxi. 104), and the "anthĕmis" used also according to Dioscorides iii. 144 for the same purpose: the "anthĕmōn phullŏthĕs" having stem-leaves according to Theophrastus vii. 8. 3, is referred here by Fraas: the "duhn el-ukhuwan" is mentioned by Ebn Baitar; and the "ukhowan" in the Thousand-and-one Nights: P. parthenium was observed by Guldenstadt on the Beschtau peak of Caucasus (Ledeb.); by Grisebach ii. 203, in mountain meads on the Bithynian Olympus and in European Turkey; by Sibthorp, and Fraas, frequent about dwellings from Euboea throughout Greece; by Alpinus pl. 39, in Egypt; and perhaps the same species, by Forskal on the mountains of Yemen and called "mŏniat." Westward, is regarded by A. Decandolle as introduced anciently into Britain, perhaps before the visits of the Romans; was already there in the days of Gerarde; is described by Brunfels iii. 63 (Spreng.); is termed "m. vulgaris seu sativa" by Tournefort inst. 493; seems unknown in Sicily and Barbary (Guss., and Munby); but was observed by Moris on Sardinia, by Lenz seemingly wild in Italy; is known to occur in waste places in Spain and Portugal and throughout middle Europe as far as Denmark (fl. Dan. pl. 674, Brot., and Colm.). By European colonists, was carried before 1669 (Joss.) to Northeast America, where it continues under cultivation in our Northern and middle States, and according to A. Gray "escaped from gardens in some places." The plant according to Lindley is reckoned tonic stimulant and anti-hysteric, was "once a popular remedy in ague," and its odour is said to be peculiarly disagreeable to bees.

"330, July 1st" (Blair, see also Arrian iii. 22. p. 213, and Clint. ii. p. 410 to 419), the dethroned emperor Darius III. put to death; the beginning of the *Cycle of Calippus*, of 76 years = 27,759 days = 940 lunations.

"After the death of Darius III." (Arrian, and Clint.), Alexander entered Hyrcania, subduing the country along the Caspian, and next proceeded to Bactra in Central Asia.

"329 B. C." (Arrian, and Clint.), Alexander on his "Sixth" campaign proceeding across the Oxus, and "about four hundred and twenty miles North of Bactra" founding Alexandria on the Jaxartes; changing the name of this river to "Tanais" (Strab. xi. 7. 4). Crossing the river, he next attacked the Scythians; and returned to Bactra, where he passed the winter.

Astragalus aristatus of the mountainous portion of the Mediterranean countries. Called in Greece "kŏllŏstōupa" or "tĕtragkathō" or "tragakantha" (Sibth.); in which we recognize the "tragakantha" *gum tragacanth* found about this time to be produced in other countries besides Crete, and especially of excellent quality in the Peloponnesus — (Theophrast. ix. 1. 3 to 15. 8), mentioned also by Dioscorides, and Galen: A. aristatus was observed by Sibthorp, and Fraas, on mountains from the Peloponnesus to Thessalonica and Cyprus, and the collected gum exported from Patras; a fact confirmed by Bory and Chaubard. Westward, "tragacantha" is mentioned by Celsus iv. 4, and Pliny xxvi. 87, doubtless the imported article; but the living A. aristatus is described by Garidel pl. 104, and is known to grow on the Alps, and Pyrenees (Hall. 177, All., Pers., and Spreng.).

Astragalus verus of Persia. Perhaps yielding the "tragakantha" about the same time ascertained to be produced in Media — (Theophr. ix. 1. 3): A. verus was observed by Michaux in Persia, and was found by Olivier trav. iii. pl. 44. to yield the principal part of the *gum tragacanth* of commerce: "ketire adjami" from Persia was found by Forskal mat. med. in the drug-shops of Egypt; and "cake tragacanth" is regarded by Th. Martius as the product of A. verus (Lindl.; see A. gummifer).

"328 B. C." (Arrian, and Clint.), after spending in the same quarter his "Seventh" campaign, Alexander wintered at Nautaca "about twenty-two miles from Samarcand, and two hundred and thirty miles North of Bactra."

Amygdalus persica of Central Asia. Called in Britain *peach*, by old writers "peshe" or "peesk," in France "peche," in Old French "pesche," in Spain and Persia "al-berchigo" (Prior), in Germany "pfirsiche," in Italy "peskanoce" or "perseg nos" (Lenz), in Greece "rōthakĕkĕa" and its fruit "rōthakēna" (Fraas), in Egypt "khoukh" (Del.), in Yemen "choch" or "fersik" (Forsk.); and possibly in this campaign first made known to the Greeks: — Theophrastus iv. 4. 2 to vii. 13. 7 had heard of the "pĕrsikōn" as growing in Media and Persia, yet supposed the almond to be the only tree that puts forth flowers before the leaves; the "persica" was planted in the East Mediterranean countries in the days of Diphilus Siphnius, Philotimus, Dioscorides, Athenaeus iii. 24, and according to Pliny xv. 13 came by the way of Egypt: the "choch" is mentioned by Ebn Baitar: A. persica was observed in Egypt by Forskal, Delile, and Clot-Bey; by Forskal, under cultivation on the mountains of Yemen; and by Fraas, cultivated with great success in Greece. Westward, is not mentioned by Cato, and only at a late period came from Asia and Greece into Italy (Plin.); is not mentioned by Virgil, but is figured in the Herculanean paintings; and at the present day, is cultivated from Italy throughout middle Europe (Pers., and Lenz). Eastward from Persia, is called in Hindustanee "shaftalu" or "alubalu" or "alubukhara" (D'roz.); has been long known in Northern Hindustan (A. Dec.), and within the Tropics according to Graham "thrives well in the Deccan." Farther East, several kinds came from Persia, Samarcand, and Thibet into China, and the emperor "Vou-ty who began to reign B. C. 130" had in his garden from distant lands peaches, some yellow, others with cloven fruit, and others with fruit detaching itself from the stone (Cibot mem. Chin. xi. 280). By European traders and colonists, A. persica was carried to America and the islands of the Pacific, succeeding very generally in Temperate climates, in our Middle States, Chili and Juan Fernandez, New Zealand, and Australia; but in low moist Tropical countries rarely ripening fruit.

Pistacia vera of Central Asia. The *pistachio nut* is called in Italy "pistacchio" or "pistacchio verde" (Lenz), in Greece "phistakia" or "psittakia" (Fraas), in Egypt "festoq" (Del.), in Persia "bstk" (Spreng.); and the rare "tĕrminthōu" bushes, the only thing like a tree found by Alexander in crossing the mountains into Bactria — (Strab. xv. 2. 10), may be compared: a Bactrian tree resembling the terebinth but bearing almond-like nuts, is mentioned by Theophrastus iv. 4. 7: pistachio nuts are called in Hindustanee "pista" or "fistak" (D'roz.), and P. vera is known to grow wild in Affghanistan (Royle). The tree was afterwards introduced into the Mediterranean countries, for "pistaki amugthalōĕnta" are mentioned by Nicander ther. 891; the "vistakiōn" by Posidonius the Stoic, Athenaeus, and Hesychius; "pistakia" growing in Syria, by Dioscorides; "psittakia" from growing in the city of Psittace on the Tigris, by Damophilus, Athenaeus, Eustathius, Stephanus Byzantinus, Nonus morb. cur. 91 to 240, and the Geoponica: P. vera was observed by Chaubard, and Fraas, under cultivation in the Peloponnesus; by Forskal, and Clot-Bey, in the gardens of Egypt, and the importation besides of the nuts from Aleppo is mentioned by Abd-allatif, and Delile. Farther West, the "pistacia" tree was introduced into Italy by Vitellius, and at the same time into Spain by Flaccus Pompejus (Plin. xv. 24); its cultivation in Italy is mentioned by Palladius xi. 12. 3; P. vera was observed there under cultivation by Lenz, and is known to have become naturalized in various parts of Southern Europe (Pers., and Lindl.).

"327 B. C." (Aristobul, and Clint.), Alexander next proceeded South, to and across the Paropamisus ridge of mountains; and spent "about ten months" in the country West of the Upper Indus. A "cave" in the Paropamisus was regarded by the Greeks as the one in which

Prometheus was chained (Arrian ind. 5); probably the great *cave-temples* at Baymian, — extant to the present day.

Prangos pabularia of the Northern slope of the Himalayan mountains. Called in Indian bazaars "fiturasulioon" (Royle); and the ΣΙΛΦΙΟΝ observed on the Indian Caucasus by Aristobulus, eaten by cattle — (Arrian ind.), is referred here by Royle ill. 230, and Burnes: P. pabularia was re-discovered by Moorcroft on the border of Thibet near Draz, the leaves dried as winter fodder for cattle; was observed also by Burnes in crossing in the direction of Alexander's route, greedily cropped by sheep and eaten even by his fellow-travellers; a statement confirmed by Kinnier (Lindl.).

Ferula asafœtida of Eastern Persia. The "silphiōn" product seen by Aristobulus, — was doubtless *asafœtida:* an imported drug "much used by" Burmese physicians, and the plant producing it described in Buddhist books "as one of the ornaments of the Himmalay forest" (Mason v. 497): Burnes trav. ii. 243 found the asafœtida plant at the elevation of seven thousand feet on the Hindu Kush, eaten by sheep, and its hardened milk put into hair bags and exported, but its root "annual;" and two different fruits were obtained by Royle from the bazaars of India: F. asafœtida, having a perennial root and growing in Beloochistan, around Herat and on the mountains of Laristan, is described by Kaempfer am. pl. 536 as the asafœtida plant. Farther West, the "ōpōs mēthikōs" is mentioned by Strabo xi; the "silphiōn" of Media Armenia and Syria, by Dioscorides as having a stronger odour than that of Cyrene; and the "laser" from Persia Media and Armenia was the only kind brought to Rome in the days of Pliny xix. 15: the asafœtida seen in Egypt by Forskal mat. med. came from "India." (See F. Persica).

"In this year" (= 355 — "28 yrs," Puranas, and Wilford as. res. viii. 87), death of the Hindu king Nanda. He was succeeded by his sons.

"326 B. C." (Sm. b. d.), C. Poetelius Libo Visolus and L. Papirius Mugillanus consuls at Rome. Alexander king of Epirus hitherto successful in Italy, defeated and slain near Pandosia by the Bruttians and Lucanians: war now re-commenced between the Romans and Samnites.

Viburnum tinus of the West Mediterranean countries. Called in Britain *laurestinus* (Prior), in Italy "tino" or "lauro tino" (Lenz); in which we recognize the "tinus" identified by Pliny xv. 39 with the "silvestrem laurum:" clearly the ΔΑΦΝΗΝ: ΑΓΡΙΑΝ of Antigonus (the historian of Italy?), — and schol. Nicand. ther. 575, enumerated among evergreen trees by Theophrastus i. 93, although V. tinus has not been observed in Greece by modern travellers. Westward, the "laurus silvatica" is mentioned by Cato r. r. 3; the "tinus" by Ovid as having blue berries, by Pliny as by some authorities regarded a tree "sui generis:" V. tinus is described by Linnæus, and is known to grow wild in Italy, Barbary, Spain, and Portugal; is besides cultivated for ornament throughout middle Europe (Lam. fl. fr., Pers. and Lenz). By European colonists, was carried to Northeast America, where it has become frequent in greenhouses.

"The same year" (Arrian, and Clint.), crossing the Indus, Alexander reached the city of Taxila; whose inhabitants are described by Aristobulus as "exposing their dead to the vultures" (Parsees); and as having in use the *war-conch* (Strab. xv. 1. 62).

Continuing Southward across the Hydaspes and other tributaries of the Indus, Alexander defeated the army and *elephants* of Porus; and building boats for his own army, proceeded in them down the river.

Cedrus deodara of the Himalayan mountains. The timber of which these boats were built was doubtless in part *deodar* or *Himalayan cedar*, — known to abound on the tributaries of the Upper Indus, the forests on the mountain-slopes extending from the elevation of "three thousand to nine thousand feet" (Drur.); Royle met with temples and palaces built exclusively of this timber, and leaves and twigs exported Southward are much employed in native medicine (Kitt. bibl. cycl.). Westward, the "diwdar" is mentioned by Avicenna, and according to Ebn Baitar the name is Persian.

Pinus excelsa of the Himalayan mountains. Called there "cheel" (Drur.), growing with the preceding, and its timber doubtless also used by Alexander in building the boats: — tar according to Cleghorn is also afforded by this *pine* (Drur.). Westward, at the distance of "twenty-two hundred miles," P. excelsa was observed by Grisebach on the mountains bordering Northern Greece (J. D. Hook. linn. soc. viii. 31, and Daub. 136); if really indigenous there, must exist also on some of the connecting mountain-chains.

Pinus longifolia of the Himalayan mountains. Called there "cheer" or "cheersullah" or "sarul" or "thansa" (Drur.), growing lower down than the two preceding species, from "six thousand to two thousand feet," and its timber or product doubtless used by Alexander in building the boats: — the "sarala" tree to which elephants are tied, and exhaling a pleasant odour when rubbed by them, is mentioned by Kalidasa kum. i. 9 and raghuv. iv. 75: P. longifolia was observed by Pearson forming extensive forests towards the sources of the Jumna and Tonse rivers; and tar and turpentine

continue to be obtained from this *pine* by the natives of Upper India (Drur.). From transported specimens, described by Lambert pl. 21.

Euphorbia nereifolia of Tropical Hindustan. Cactiform, called in the environs of Bombay "thor" or "seej" (Graham), in Bengalee "shij," in Hindustanee "ptoon," in Telinga "akoojemmoodoo," in Tamil "elakullie" (Drur.); and probably included in the ΚΑΥΛΟΣ with stout spines and copious fig-like juice seen by Aristobulus — (Arr. exp. vi. 22): E. nereifolia was observed by Preedy "about Karrachee in Scinde," becoming "a small tree," by Graham all over the "rocky parts of the Deccan," also "common in the Concans," affording "shelter to tigers and other wild animals," and "for a short period during the rains" putting "forth a few leaves;" by myself, in scattered clumps in the open country to the end of my journey; by Rheede ii. pl. 43 in Malabar, employed medicinally by the natives; by Buchanan, and Roxburgh, in other parts of Hindustan as far as Coromandel and Bengal.

Euphorbia ligularia of Tropical Hindustan and the Siamese countries. Cactiform, sacred to Munsa the goddess of serpents, and called in Bengalee "munsa sij" (Drur.); possibly included in the "kaulōs" seen by Aristobulus: — E. ligularia was observed by Graham "common in Bombay;" by Roxburgh, in Bengal; and according to Drury, is employed as a remedy in snake-bites, and offerings are made to the tree on certain days in July and August; the trunk is used besides by the natives to purify arsenic (journ. agri. Ind. x. 37). Farther East, was observed by Mason indigenous in Burmah and called "sha-zoung;" is known to grow in the Malayan archipelago (Lindl.); "E. pentagona" observed on the Philippines by Blanco, and called in Tagalo Pampango and Bisaya "sorosoro" or "sorogsorog" or "bait," in Ylocano "carambuaya," may also be compared.

Cassia (*Cathartocarpus*) *fistula* of Tropical Hindustan and Burmah. Called in Egypt and Yemen "chiar schambar" (Forsk.), in the environs of Bombay "bhawa" (Graham), in Hindustanee "amultas," in Telinga "rela," in Tamil "koamay," in Bengalee "sonaloo" (Drur.) or "soondali," in Sanscrit "soovurnuka" (Lindl.); and the small tree seen by Aristobulus in Hindustan, its ΚΥΛΜΟΣ-like pods ten inches long and full of honey which whoever eats will hardly escape death — (Strab. xv. 1. 21), may be compared; also the poisonous "kinnam" fruit sweet as honey, of the Mahavamsa iv. p 44: C. fistula was observed by Rheede i. pl. 22 in Malabar; by Graham, on "the Ghauts and hilly parts of the Concan;" by Buchanan, in Karnata held sacred to Ganeshwar and called "cacay," in Mysore stakes of it put in the ground and worshipped; by Roxburgh, Wight, and Drury, in other parts of the peninsula. Farther East, its Pali name "chaturengula," four fingers, is translated in Burmese books, but the tree is at present called "gnu-gyee," is further enumerated by Mason v. 404 to 530 as indigenous, its wood valuable, and selected in preference by the Karens for making bows; was observed by Linschoten in Malacca and Cambaia. Westward, is mentioned by Priscianus (Rhaz.), Nicolaus Myrepsus, and Actuarius; and the "khiar janbar" by Ebn Masawia, Maserjawia, Rhazes, Haly Abbas, and Ebn Gnefith; C. fistula was observed by Forskal among the mountains of Yemen, and I found quantities of the pods stored at Mocha for exportation up the Red Sea; the living tree was observed by Abu'l Abbas Nebati, Abd-allatif, Ebn Baitar, Belon, Forskal, Delile, and myself, under cultivation in Egypt; is said to occur also in "Tropical Africa" (Lindl.). By the first Spanish colonists, was carried from Egypt to the West Indies (Sloane ii. 42).

Ficus Indica of Tropical Hindustan. The *Banyan tree* is called in the environs of Bombay "wur" (Graham), in Telinga "marri," in Tamil "ala-marum," in Bengalee "bur" or "but" (Drur.), in Sanscrit "vuta," in Cingalese "bagha" (Lindl.); and the tree seen by Aristobulus and Onesicritus along the Acesines and Indus, its branches descending to the ground, rooting and becoming trunks, — or the "inthikēs sukēs" of Theophrastus i. 7. 3 to iv. 4. 4, and Strabo xv. 1. 21, clearly belongs here: F. Indica in Hindu mythology is "one of the four shadow-giving trees that grow on mount Meru" (Mason v. 415); was observed by Rheede i. pl. 28 in Malabar; by myself, from Bombay to the end of my journey on the Deccan only in places where it had been planted, trees with more than a single trunk being rare; by Roxburgh, and Drury, in other parts of Hindustan, used medicinally by the natives, and bird-lime manufactured from the milky glutinous juice. Farther East, was observed by Mason "exotic" in Burmah; by Blanco, on the Philippines, and called in Tagalo and Pampango "baliti," in Bisaya "dalaguit" or "nonoc," its inner bark employed by the Negrillos of the mountains to cover their nakedness.

Dillenia pentagyna of Tropical Hindustan. A stately forest-tree called in the environs of Bombay "kurmul" (Graham), in Telinga "rawadam" or "chinna-kalinga," in Tamil "rai" or "pinè" or "nai-tek" (Drur.); and the leaves large as a shield or buckler attributed to the preceding tree — (Theophr. iv. 4. 4, and Plin. xii 11), may belong here: D. pentagyna is "common along the West face of the Ghauts," its leaves are sold in market "as a substratum for chuppered roofs," and a tree in Kennery forests having "leaves four or five feet long" is regarded by Graham as probably this species, whose leaves diminish in size as the tree grows older: D. pentagyna was observed by Law

in the Southern Mahratta country; by Roxburgh cor. i. pl. 20, Wight, and Drury, in other parts of Hindustan, its wood close-grained and used for a variety of purposes, and in Assam for canoes.

Phœnix sylvestris of Tropical Hindustan. The *wild date* is called in the environs of Bombay "sindee" (Graham), in Hindustanee "seyndie," in Telinga "eeta," in Tamil "eetchum-pannay," in Bengalee "khajoor" (Drur.); and the trees resembling "ficis" and called "occhi," from which honey flows for two hours in the morning, growing according to Onesicritus in the valleys of Hyrcania — (Plin. xii. 18), may be compared ("ook" being Bengalee and "uch" Hindustanee names of sugar-cane): "phœnikas" were seen by Androsthenes on the isle of Tyle (Theophr. iv. 7. 8); P. sylvestris was observed by Rheede iii. pl. 22 to 25 in Malabar; by Graham, in the environs of Bombay; by Roxburgh, Royle, and Drury, common all over India, and on the Coromandel coast "as well as in Guzerat and especially in Bengal," is "the only tree whose sap is much employed for boiling down to sugar." Farther East, was observed by Mason "exotic" in Burmah. (See P. dactylifera, and Arenga saccharifera).

Asclepias (*Calotropis*) *procera* of the Tropical portion of the Desert from the Cape Verd Islands and shores of the Atlantic to the Red Sea and Hindustan. Large-leaved and chiefly herbaceous in defiance of the surrounding aridity, and called in Nubia "abouk," in Egypt "o'char" (Del.), in Yemen "öschar" (Forsk.); and possibly the "occhi" of Onesicritus: — "sukkar eluscher" is mentioned by Israeli or Ishak ben Soliman, Avicenna, Serapion temp. simpl. 50, Edrisi, Ebn Baitar, and was ascertained by Ange de Saint-Joseph pharm. pers. 361 to be a kind of sugar produced by an insect puncturing the plant, the geographical limits of the insect not extending beyond Persia: C. procera was observed by myself on the Deccan, apparently the same termed "c. Hamiltonii" by Don, Wight, and Graham. Westward, was observed by Hasselquist in the heated deeply sunk valley containing the Dead Sea, and again on the Sinai peninsula; by Forskal, everywhere in Tropical Arabia; by Grant, as far as "3° 15′ N." on the Nile; by myself, in Upper Egypt in the Desert; by Alpinus, Norden, and Delile, also in Egypt, its juice employed against ringworm and other cutaneous affections, also a powerful depilatory; and again by myself, on the Cape Verd Islands.

"Brahmanas" were brought to Alexander (*Brahminism* being already in existence). The burning of widows with their dead husbands, among the Kathaians, is also mentioned by Onesicritus (Strab. xv. 1. 30 to 66).

The flute or pipe ΑΥΛΟΣ, according to Onesicritus (Strab. xv. 1. 22) unknown to the Indians; their only musical instruments being the ΚΥΜΒΑΛΩΝ cymbals, ΤΥΜΠΑΝΩΝ drum, and ΚΡΟΤΑΛΩΝ little bells, used by *conjurers*. ΣΚΙΑΔΙΑ *umbrellas*, according to Nearchus (Arrian ind. 16) were carried before persons of any note.

Onesicritus obtained information of Taprōvanē, an island five thousand stadia in diameter and twenty days sail from the main land, but the vessels badly provided with sails and otherwise imperfectly constructed (undecked?); between this and India there are intervening islands, but Taprōvanē is the Southernmost of all; — is also placed by Eratosthenes seven days sail South from the Southern extreme of India (Strab. xv. 1. 14): the name seems derived from the Negro class of languages, and the descriptions agree with Madagascar. (In later times, the name Taprōvanē was transferred by the Greeks to Ceylon. See Cosmas Indicopleustes).

The ΚΗΤΗ: Δ: ΑΜΦΙΒΙΑ described to Onesicritus as inhabiting the coast of Taprōvanē, — may have been the *dugong*. Not far distant at Zanzibar, a dugong captured by the native fishermen was sketched by myself.

"325 B. C." (Sm. b. d.), L. Furius Camillus and D. Junius Brutus Scaeva consuls at Rome. Victory over the Samnites gained by Q. Fabius Maximus "magister equitum" in the absence and contrary to orders from the dictator: flight to Rome and the intercession of the senate, people, and his own family, barely saved his life.

"The same year" (Clint., see also Quint. Curt.), after witnessing the bore or overwhelming tide-wave at the mouth of the Indus, Alexander and his army commenced their return Westward. Leaving Nearchus and the ships to follow by sea; the navigation of the Persian Gulf being as yet unknown to the Greeks.

Artocarpus integrifolia of Ceylon and Java. The *jack tree* is called in Tamil "pila" (Yule), in the environs of Bombay "phunnus" (Graham), in Telinga "panasa," in Bengalee "kantal," and its fruit in Sanscrit "tchackka" (Drur.); in which we recognize the "mĕgalōkarpōn" tree, remarkable for the size and sweetness of its fruit, on which the naked wise men of India live — (Theophr. iv. 4. 5), also the "palae" tree of Pliny xii. 12 putting forth from its bark fruit called "arienae," a single one satisfying four persons: the "chaqui" was seen in Hindustan by Jordanus mirab. (soc. Hakl.); and the "shaki" producing fruit at the base of the trunk, by Ebn Batuta: A. integrifolia was observed by Rheede iii. pl. 26 to 28 in Malabar; by Graham, "generally to be met with about villages throughout the Concans, the large fruit" an article of diet with the natives, "and the wood

in common use" for household furniture; by Roxburgh cor. iii. pl. 250, Wight, and Drury, planted in other parts of Hindustan as far as Bengal; but by Rumphius i. 106, wild in the Ceylon forest. Farther East, was observed by Mason "exotic" in Burmah and called "peing-nai;" by Loureiro, under cultivation in Anam and Tropical China; by Rumphius i. 105, becoming rare in the Eastern portion of the Malayan archipelago and devoid of a native name; by Blume, a wild kind on Java. Westward from Hindustan, was observed by myself on Zanzibar, introduced probably by either Banyans or Arabs. By European colonists, was carried to the Mauritius Islands, observed by Bojer inclining to become naturalized; about A. D. 1800 to the West Indies, where it continues under successful cultivation (Hook. bot. mag. pl. 2833, and A. Dec.).

Areca catechu of the Malayan archipelago. The *betel palm* is called in the environs of Bombay "foflee-sooparee" (Graham), in Telinga "poka-chettu," in Tamil "paak-maruṁ" or "camooghoo," in Bengalee "gooa" (Drur.); and the tree with leaves like ostrich plumes on helmets, but two cubits long — (Theophr. iv. 4. 5), mistranslated by Pliny xii. 12, may be compared: A. catechu was observed by Rheede i. pl. 5 to 8 in Malabar; by Graham, "commonly cultivated" in the environs of Bombay, also by myself; by Roxburgh cor. i. pl. 76, Simmonds, and Drury, in other parts of Hindustan, and from Ceylon to Northern Bengal. Farther East, by Mason "exotic" in Burmah and called "kwon-thee;" by myself, under cultivation throughout the Malayan archipelago as far as the Philippines, where according to Blanco it is called in Tagalo and Bisaya "boñga," in Pampango "luyos." Westward from Hindustan, was observed by myself under cultivation on Zanzibar: the "pĕtrōs" of the Erythraean Periplus is regarded as the imported nut; and "areca" nuts according to Wilkinson have been exhumed in ancient Egyptian tombs: the "fawfal" is mentioned by Maserjawia, Ebn Amran, Abu Hanifa, Gafeki, Mesue, Avicenna, Serapion, Ebn Redwhan, and Ebn Baitar; and "arica" nuts called "fufal" were found by Forskal mat. med. imported into Egypt. (See Acacia catechu, and Piper betle).

Inga bigemina of Tropical Hindustan and Burmah. The tree with long twisted fruit sweet to the taste, but inducing dysentery and therefore prohibited by Alexander — (Theophr. iv. 4. 5), an account copied by Pliny xii. 12, may be compared: I. bigemina was observed by Rheede vi. pl. 12 in Malabar; by Nimmo, in the Concans as far as Bombay (Graham); by Roxburgh, and Wight, in other parts of Hindustan. Farther East, by Mason v. 459 to 772 indigenous in Burmah and called "ta-nyen," planted besides by the natives who "are extravagantly fond" of the seeds as "a condiment" to preserved fish, notwithstanding sometimes disastrous consequences.

Mimusops hexandra of Tropical Hindustan. Called in the environs of Bombay "kernee" or "rayanee" or "rajun" (Graham), in Telinga "palla," in Tamil "palloe" (Drur.); and the tree with fruit like that of the cornel "kranĕōis" — (Theophr iv. 4. 5), may be compared: M. hexandra was observed by Gibson, and Graham, planted by Muslims, "very common on Malabar hill" near Bombay, the fruit eaten, and in Guzerat the wood much used for a variety of purposes where toughness is required; by myself, planted trees around the Imampoor station where we rested for a night; by Roxburgh cor. pl. 15, on the Circar mountains (Pers.); and according to Drury, the berry is of the "size and shape of an olive."

Diospyros ebenum of Ceylon. Of the two kinds of *ebony* met with, that with good and beautiful wood, but rare — (Theophr. iv. 4. 6), may be compared: "nigrum ebenum" produced only in India, is mentioned by Virgil geor. ii. 117: D. ebenum is described by Rumphius viii. pl. 6; is termed "ebenoxylum verum" by Loureiro, "d. glaberrima" by Roxburgh (Steud.); was observed by Retz v. 31 in the Ceylon forest (Pers.); and according to Tennent i. 117, grows in great abundance throughout all the flat country West of Trincomalee, and so large that the central black portion furnishes logs two feet in diameter by ten or fifteen long, excelling all other kinds in the evenness and intensity of its colour (Drury). The living tree has recently been introduced by Nimmo into the environs of Bombay (Graham).

Diospyros melanoxylon of Tropical Hindustan and the Siamese countries. The *Coromandel ebony* is called in Tamil "tumballi," in Telinga "toomida," in Hindustanee "tindoo," in Bengalee "kendoo" or "kiew" (Drur.); and is possibly the beautiful kind of "ĕvĕnē" in question: — "ĕvĕnōs" was also seen in India by Megasthenes (Strab. xv. 1. 37): D. melanoxylon is described by Roxburgh cor. i. pl. 46; is known to grow from Malabar to Orissa, a large tree "twenty to twenty-five feet to the branches" with the trunk "eight or ten in circumference," yielding according to Drury "a fine kind of ebony" exported in small quantities "from Madras;" the bark astringent and taken by the natives in dysentery (Lindl.). Farther East, was observed by McClelland in Pegu and called "ouk-chin-ya" (Mason v. 542); "bonus qe est mout noir" was observed by Marco Polo 162 abounding in the forests of "Cianba" (Tsiompa), the species doubtless the same seen by Loureiro p. 752 throughout the forests of Anam.

Diospyros montana of Tropical Hindustan. Called in Mysore "ingalagunte" scolding wife (Buch.); and the second kind of "ĕvĕnē" met with, inferior in quality but abundant — (Theophr.

iv. 4. 6), may be compared: D. montana was observed by Graham on hills in the environs of Bombay, growing "probably throughout the Concans;" by Roxburgh cor. i. pl. 48, and Buchanan, in other parts of Hindustan, the wood very hard and durable, variegated with dark and white-coloured veins, but from some prejudice not used by the natives (Beddome, and Drur.).

Phaseolus trilobus of Tropical Hindustan and Burmah. Procumbent, and called in Telinga "pelli pessara," in Hindustanee "kakhal-kuluy" (Lindl.) or "triangguli," in Bengalee "mooganee" (Drur.); and the "phakŏs"-like pulse met with — (Theophr. iv. 4. 9), may be compared: P. trilobus was observed by Lush, and Graham, "common in the Deccan;" by myself, wild there on the arid plain; by Roxburgh, as far as Bengal but only in its wild state; by Ainslie, in Behar, given by the Vytians in irregular fever; was also seen in Hindustan by Burmann ind. pl. 50, and Wight; and according to Drury, "is cultivated for its seeds which are eaten by the poorer classes," and "affords good fodder." Farther East, was observed by Mason v. 467 in Burmah, "spontaneously everywhere in the country." Transported to Europe, is described by Plukenet alm. pl. 120, and Linnæus.

Dolichos uniflorus of Tropical Eastern Asia. The *gram* or *horse gram* is an annual plant called in Hindustanee "koaltee," in Bengalee "koolthee," in Tamil "kolloo," in Telinga "woolawaloo (Drur.); and the "ĕrĕvinthŏs"-like pulse met with — (Theophr. iv. 4. 9), may be compared: the "kulatt'ha" or "yavaka" commended for food in the stanzas of the Ayurvedas (Susrut. sarir. 2), is referred here by Hessler: D. uniflorus was observed by Lush "cultivated in the Deccan;" by Roxburgh, and Wight, as far as Coromandel and Bengal, the seeds according to Drury eaten by the natives in curries, and everywhere in the peninsula given to cattle, but the "plant has never been seen in a wild state." Transported to Europe, is described by Plukenet pl. 113, and Lamarck.

Paspalum scrobiculatum of Tropical Hindustan. A grain called in Guzerat "menya," in the environs of Bombay "kodro" (Graham); and the kind of "agriŏn krithŏn" furnishing good bread and gruel, but which at first killed the horses of the Greeks until by degrees they became accustomed to it (Theophr. iv. 4. 9), may be compared with the "vōsmōrōu" of Onesicritus, — planted according to Eratosthenes together with "kĕghrōs" in the rainy season (Strab. xv. 1. 13 to 18): the "kodru," a sort of millet, was observed by Ebn Batuta plentiful in Hindustan: P. scrobiculatum was observed there by Roxburgh, and Sykes; by Gibson, and Graham, in the environs of Bombay, "a very common and cheap grain but not wholesome, the natives say it will keep good for twenty years," a variety called "bareek" is "narcotic, and in this respect resembles Lolium temulentum." Farther East, P. scrobiculatum is described by Houttuyn pl. 89 (Pers.).

Cyamopsis psoraleoides of Tropical Asia. An erect annual called in the environs of Bombay "mutkee" or "gaur" or "goor" (Graham); and the other plant called by Alexander's army "phakŏn" but having the aspect of "vōukĕras" — (Theophr. iv. 4. 10), may be compared: C. psoraleoides, having small purplish flowers, was observed by Graham in the environs of Bombay, "cultivated for the sake of the pods which are eaten like French beans;" by Roxburgh, and Wight, in other parts of Hindustan; is known to occur also in Arabia (Pers.). Farther East, was observed by Mason v. 467 "exotic" in Burmah and called "pai-pa-soon," cultivated by the natives and "esteemed by them a good vegetable." Transported to Europe, is termed "dolichos fabaeformis" and "indigofera tetragonoloba" by L'Heritier pl. 78, "psoralea tetragonoloba" by Linnæus, "dolichos psoraloïdes" by Lamarck, and "lupinus trifoliatus" by Cavanilles i. pl. 59.

Vitis Indica of Tropical Hindustan and Burmah. The "ampĕlōn" growing in the mountain-region — (Theophr. iv. 4. 11), may be compared: V. Indica was observed by Rheede vii. pl. 6 in Malabar; by Graham, in "the Concans" as far North as Bombay; by Wight, in other parts of Hindustan. Farther East, by Mason, indigenous in Burmah and called "yen-doung."

Olea? dioica of Tropical Hindustan. The *Indian olive* is called in the environs of Bombay "Parr jamb" (Graham); and the "ĕlaan" growing in the mountain-region, barren and as if intermediate in nature and form between the "ĕlaas" and "kōtinōu" — (Theophr. iv. 4. 11), an account copied by Pliny xii. 14, may be compared: the "jummum" seen by Ebn Batuta in Hindustan, a "high tree with black fruit resembling that of the olive as does likewise its stone," seems distinguished by him from that met with in East Africa (see Chionanthus sp. . . .): O. dioica was observed by Rheede iv. pl. 54 in Malabar; by Graham, "a large tree" with fruit much resembling a sloe, growing "near Kandalla" and "very common towards the top of the Rotunda ghaut, Mahableshwur;" by Roxburgh, Hamilton, and Wallich, in other parts of Hindustan (Drury); and the "Tetrapilus brachiatus" found by Loureiro in Anam, is regarded by Graham as not distinct.

Sterculia foetida of Tropical Eastern Asia. Called in Bengalee jungle-"baddam," in Tamil "kudrapdukku" or "peenaree-marum;" (Drur.); and possibly included among the "akrōthrua" nut-bearing trees of the mountain-region — (Theophr. iv. 4. 11)?: S. foetida was observed by Graham in woods near Bombay "but evidently planted," a "very stately tree" furnishing masts called *poon spars*, its leaves deciduous in the cool season, and seeds "roasted and eaten like chestnuts;" by Roxburgh, Wight, and Drury, in other parts of Hindustan as far as Travancore and Bengal. Farther

East, by Mason 457 to 487 "not uncommon in the forests" of Burmah and called "let-khok," yielding with other species a gum "similar to tragacanth," and its seeds "eaten like filberts;" by Horsfield, on Java; is described by Rumphius iii. pl. 107, and Sonnerat pl. 132; was observed by Blanco on the Philippines, in Tagalo called "calumpang," in Ylocano "bangar," and its seeds eaten.

Sterculia guttata of Tropical Hindustan. A large tree called in the environs of Bombay "kookur" or "goldar" (Graham), in Tamil "pee-marum" (Drur.); and included perhaps among the "akrōthrua" of the mountain-region — (Theophr. iv. 4. 11): S. guttata was observed by Rheede iv. pl. 61 in Malabar; by Graham, "common along the Ghauts" as far as Bombay, the seeds size of a chestnut "roasted and eaten by the natives;" by Roxburgh, Royle, and Wight ii. pl. 487, in other portions of the peninsula, clothing and cordage made of the inner bark.

Sterculia balanghas of Tropical Eastern Asia. A tree possibly included among the "akrōthrua" of the mountain-region — (Theophr. iv. 4. 11): S. balangas was observed by Rheede i. pl. 49 in Malabar; by Nimmo, in the Concan South of Bombay (Graham); by Wight v. pl. 30, in other parts of the peninsula; and according to Roxburgh, the seeds when roasted are nearly as palatable as chestnuts (Drur.). Farther East, is described by Rumphius iii. 107 (Pers.), and in Amboyna according to Hooker a pigment called "cassoumba" is made from the burnt pericarp (Drur.).

Sterculia (Cavallium) urens of Tropical Hindustan. A large tree called in the environs of Bombay "kavalee" (Graham), in Telinga "kavalee," in Hindustanee "bulee" (Lindl.), in Tamil "vellay bootalli" (Drur.); and possibly included among the "akrōthrua" of the mountain-region — (Theophr. iv. 4. 11): S. urens was observed by Gibson, and Graham, "common throughout the Concans" and Hindu guitars "made of the wood;" by Roxburgh cor. i. pl. 24, Royle, and Wight, as far as Courtallum and the mountainous parts of Coromandel, yielding a gum extremely like tragacanth; and the seeds according to Drury "are roasted and eaten."

Guarea binectarifera of Tropical Hindustan. A Meliaceous pinnate-leaved tree called in the environs of Bombay "yerindee" (Graham); and possibly included among the "akrōthrua" of the mountain-region —(Theophr. iv. 4. 11): G. binectarifera was observed by Graham in ravines near Bombay "not common," the fruit with hard rind containing seeds "size of a chestnut, monkeys are very fond of them:" is however not certainly identical with the "G. binectarifera" of Roxburgh.

Buchanania latifolia of Tropical Hindustan and Burmah. A tree called in the environs of Bombay "pyal" or "char" or "charolee" (Graham), in Hindustanee "peeyar cheroonjie," in Bengalee "piyala," in Telinga "chara puppoe," in Tamil "mowda" or "moræḍa" or "kat mango marum" (Drur.); and probably included among the "akrōthrua" of the mountain-region — (Theophr. iv. 4. 11): dust of the flowers of the "priyala" tree is mentioned by Kalidasa kum. iii. 31, and the "priyala" or "piyala" or "rajavrūksha" of Susrutas sutr. 36 and 46 to chikits. 2 is referred here by Hessler: B. latifolia was observed by Gibson, Law, and Graham, in the environs of Bombay, also "common in the Barria jungles east of Baroda" and its kernels collected and sold by the Bheels; by Roxburgh, Wight, and Drury, in Mysore and on the mountains of Malabar and Coromandel, the kernels "a general substitute for almonds among the natives," yielding an oil called *cheroonjie oil*, also a black varnish, and the wood "used for various purposes." Farther East, was observed by Mason indigenous in Burmah.

Balsamodendron mukul of Scinde. Called there "googul" (Drur); and the "akantha" of the bordering Arian district, yielding under the rays of the sun an exudation that resembles myrrh in aspect and odour — (Theophr. iv. 4. 12), may be compared: B. mukul according to Stocks, and Drury, has been ascertained to be a peculiar species. (See B. agallōcha, B. myrrha, and Borassus dichotomus).

Carissa diffusa of the country on the Lower Indus. A thorny shrub whose wood is called "ajar" (Drur.); and the "akantha lĕukē triōzōs" growing in the Arian district and called "ēraklĕōus," juicy and spongy and its wood made into staffs and clubs — (Theophr. iv. 4. 12), may be compared: C. diffusa was observed by Powell in the Punjaub, bearing a small black edible fruit, its wood used for fences and for making "native combs," that of a very old tree turning quite black and acquiring a strong fragrance, and sold at a high price as a medicine (Drur.).

Guidia eriocephala of Western Hindustan. Called in the environs of Bombay "rameta" (Graham); and the other bush growing in the Arian district and as large as a "raphanōs," its leaves laurel-like and fatal to whoever eats, so that horses are always held by hand on alighting near — (Theophr. iv. 4. 12), may be compared: G. eriocephala is described by Wallich; was observed by Murray very common at Mahableshwur, by Law on the hilly parts of the Southern Mahratta country, by Graham on the Ghauts and about Karlee caves, "a highly ornamental shrub" with "willow-like leaves" and "large terminal umbels" of "yellow flowers," the "natives attribute poisonous qualities to it."

Stylocoryne webera of Tropical Hindustan. A large-branched Coffeaceous shrub called in

Malabar "cupi," in Telinga "eommi" (Drur.); and the tree on Tyle furnishing staffs variegated like a tiger's skin — (Theophr. v. 4. 7), may be compared: the "karenu" of Susrutas sarir. 4 to chikits. 30, is referred here by Hessler: S. webera was observed by Rheede ii. pl. 23 in Malabar; by Nimmo in the Concan South of Bombay, and by Lush in the Goa jungles (Graham); by Roxburgh, and Wight, in other parts of the peninsula as far as Coromandel; is known to grow also on Ceylon (Pers. i. 200); and according to Drury, its "wood is hard and prettily marked, and is much esteemed by the natives."

Excoecaria agallocha of the Tropical seashore from Hindustan to Tongatabu. The *tiger's-milk tree* is called in Malabar "cametti" (Drur.); and the "laurino" leaved "spina" whose juice sprinkled on the eyes induces blindness — (Plin. xii. 18), may be compared: E. agallocha was observed by Rheede v. pl. 45 in Malabar; by Nimmo, and Graham, "in salt marshes along with the" mangroves as far as Bombay; by Drury, in Travancore and Cochin, the natives "afraid almost to cut the branches;" by Roxburgh, at the Sunderbunds or mouths of the Ganges, woodcutters complaining that the milky juice is very dangerous. Farther East, the "ta-yau" or "ka-yau" of Burmah is regarded by Mason as probably identical; E. agallocha was observed by Blanco frequent along the seashore of the Philippines, called in Tagalo "buta" or "butabuta," in Pampango "butabuta," in Bisaya "lipata" or "alipata" or "himbabao" or "siac," and employed medicinally, smoke from the burning wood causing intolerable pain in the eyes; is termed "arbor excoecans" by Rumphius ii. pl. 79 to 80, sailors sent to cut wood on Amboyna having been blinded by juice falling in their eyes; was observed by myself as far as the Feejeean and Tongan islands, frequent along the seashore.

Nyctanthes arbor-tristis of Hindustan and Burmah, from "Lat. 18° to 30°" along the base of the Himalayan mountains. A small tree called in the environs of Bombay "shiooli" or "har" or "singahar" (Graham), in Bengalee "singahar," in Hindustanee "hursinghar," in Tamil "pagala-mully" (Drur.); and the tree large as a fig, having exceedingly fragrant flowers with inedible lupine-like fruit, seen by Androsthenes on the isle of Tyle — (Theophr. iv. 7. 7 to caus. ii. 5, and Plin. xii. 21), may be compared: the "sep'halica" of the Amara-cosha is referred here by pandits and W. Jones (asiat. res. iv. 244), and the "sop hali" is mentioned by Susrutas sutr. 8 to chikits. 2: N. arbor-tristis was observed in Hindustan by Garcias 225 (Spreng.); by Rheede i. pl. 21, in Malabar; by Graham, very common "in gardens and about villages," by Vaupell in Guzerat "probably introduced;" by myself, clearly indigenous towards Adjunta on the Deccan; by Royle, along the base of the Himalayan mountains; by Wallich, wild on hills near Prome on the Irrawaddy; by shedding a delicious fragrance, and before morning falling and covering the ground; by Mason, Roxburgh, and Drury, under cultivation in various parts of Hindustan, the flowers opening at night, "exotic" in Burmah and called "hseik-ba-lu," cultivated for its ornamental fragrant flowers that also yield a beautiful orange dye.

Bauhinia variegata of Tropical Hindustan. A tree twenty to thirty feet high called in Sanscrit "canchanara" or "covidara" (W. Jones), in the environs of Bombay "kunchum" or "kana raj" (Graham), in Hindustanee "sona" (Drur.); and the tree seen by Androsthenes on Tyle, its flower like that of "leukoio" but four times larger than in "ion" and scentless — (Theophr. iv. 7. 8, and Plin. xii. 22), may be compared: the "kovidara" is mentioned in the Saddharma pundarika (Burn. ii. 219 and 416); and the "kanchana" or "kovidara" or "karbudara" or "kanaka" in the stanzas of the Ayurvedas (Susrut. sarir. 10): B. variegata was observed by Rheede i. pl. 32 in Malabar; by Graham, in "gardens Bombay," but "perhaps the 'apta' tree of the Concans is identical," the flowers "very beautiful;" by W. Jones (as. res. iv. 279), Roxburgh, and Wight, as far as Coromandel, Bengal, and Oude, the flowers in one variety varied with purple, in the other whitish, the buds eaten as vegetables; or in the Punjaub according to Powell dried and used medicinally by the natives (Drur.). Farther East, was observed by Mason "exotic" in Burmah, and cultivated for ornament. (See B. purpurea).

Averrhoa bilimbi of the Moluccas. Called in the environs of Bombay "anvulla" or "bilimbi" (Graham), in Bengalee "bilimbi," in Hindustanee "kamarunga" (Drur.); and the tree seen by Androsthenes on Tyle, "poluphullon" like the rose, the flower closing at night, opening again with the rising sun, and fully expanding at noon — (Theophr. iv. 7. 8, and Plin. xii. 23), is referred here by Link: A. bilimbi was observed by Rheede iii. pl. 45 to 46 in Malabar; by Graham, "in gardens Bombay," the fruit growing "on the trunk and branches," of "an agreeable acid flavor," and "sold in the bazar;" by Roxburgh, Wight, and Drury, under cultivation in other parts of Hindustan. Farther East, by Mason v. 454 "exotic" in Burmah; by Nieuhoff, the "bilinbing" fruit among the Javanese and Malayans; by Navarrete, in Tropical China and the Malayan archipelago, the "milinbines or carambolas of Terranate" being the most famous; by Blanco, on the Philippines; and is figured by Rumphius i. pl. 36.

Ficus comosa of Tropical Hindustan. The *tufted fig* is perhaps included among the evergreen

"sukas" seen by Androsthenes on Tyle — (Theophr. iv. 7. 8): F. comosa was observed by Graham "on the Ghauts and hilly parts of the Concans" as far as Bombay, a tree with smooth shining leaves, "fruit size of a gooseberry;" by Roxburgh cor. ii. pl. 125, in other parts of Hindustan.

Ficus benjamina of Tropical Hindustan. A beautiful tree called in the environs of Bombay "nandrook" (Graham), in Telinga "tella barinka" (Drur.); and perhaps included among the evergreen "sukas" on Tyle — (Theophr. iv. 7. 8): F. benjamina was observed by Rheede i. pl. 26 in Malabar, a decoction of the leaves mixed with oil applied to ulcers; by Graham, "between the Kamatkee Ghaut and Wye," and "common throughout the Mawul districts," the leaves polished shining; by Roxburgh, Wight pl. 642 and 648, and Drury, in other portions of the peninsula.

Ficus racemosa of Tropical Hindustan. The *red-wood fig-tree* is called in Hindustanee "gooler," in Telinga "maydi," in Tamil "attie marum" (Drur.); and is perhaps included among the evergreen "sukas" on Tyle — (Theophr. iv. 7. 8): F. racemosa was observed by Rheede i. pl. 25 in Malabar; by Graham, in "the Concans" as far as Bombay; by Ainslie, and Drury, in other parts of Hindustan, the fruit edible, and the leaves root and bark employed medicinally by the natives; the leaves according to Lindley are "on the upper side dark-green and shining:" the tree is termed "grossularia domestica" by Rumphius iii. pl. 87 to 88.

November, when the "Etesian winds" or Southwest *monsoon* ceased (Arrian ind. 21), Nearchus sailed from the mouth of the Indus and "Krŏkala" (to the present day called Crocola), passing the Araviōs (Araba-il-mend), and continuing along the Desert coast Westward. The people of this coast were found to be exclusively fishermen, living on fish which in the cooked state were sometimes ground into meal; a few date-palms were met with, also some gardens, with *sheep* and *goats* fed however mainly on fish-meal (the detailed description of the natives and their habits being, according to Kempthorne, "strictly correct even to the present day"). The bones of *whales* were used in constructing dwellings; and on afterwards meeting with living whales (a novelty to the Greeks) the sailors were much terrified; but Nearchus bearing down with the clang of arms and the ships in battle array, put the dreaded monsters to flight: a dead whale fallen in with, measured "fifty cubits," having many ΟΣΤΡΕΑ shell-fish, ΛΟΠΑΔΑΣ *barnacles*, and ΦΥΚΙΑ sea-weed, adhering to the skin (Arrian l. c. 30 and 39).

Hydnocarpus inebrians of Tropical Hindustan and Ceylon. Called in Malabar "morotti," in Tamil "maravuttie" (Drur.): and the tree seen by Nearchus whose fruit inebriates if eaten, and from which honey also is extracted — (Strab. xv. 1. 20), may be compared: H. inebrians was observed by Rheede i. pl. 30 in Malabar; by Nimmo, and Graham, in the Concan, "common" as far at least as Bombay; by Buchanan, Wight i. pl. 16, and Drury, very common on the Western coast as far as Travancore, the fruit if eaten occasioning giddiness, and on Ceylon the seeds used for poisoning fish: oil from the seeds is used medicinally by the natives (Rheede, and Ainslie).

Arenga saccharifera of Tropical Eastern Asia. A very stately palm called in the environs of Bombay "bhirlee" (Graham); and the "phlōiōu phoinikinōu" of which fishermen seen by Nearchus made their nets — (Strab. xv. 2. 2), may be compared: A. saccharifera was observed by Graham planted near Bombay, affording "tolerably good *sago*, the sap palm wine and sugar, and the black horse-hair like fibres of the trunk are converted into excellent cordage;" by Roxburgh iii. 626, and Buchanan, under cultivation in other parts of Hindustan. Farther East, by Mason v. 506 indigenous in Burmah "on the mountains north-east of Toungoo;" by Parish, observed also in Siam; by Loureiro 759, in Anam; by Marsden, and Crawfurd, on Sumatra and the neighbouring islands, planted according to Griffith very commonly by the Malays, the cordage from black fibres of the trunk renowned for its power of resisting wet, the sap drunk as toddy or converted into sugar, and the young albumen in syrup forming one of the well-known preserves of the Straits; the palm is termed "gomutus gomuto" by Rumphius i. pl. 13; and according to a writer in soc. tract Lond., its very acid fruit, exciting inflammation when chewed, was the basis of the "infernal water" used by the Moluccans in war to pour over their enemies. Is termed also "saguerus Rumphii" by Roxburgh, and "gomutus saccharifer" by Sprengel. (See Caryota urens, and Phœnix sylvestris.)

Michelia champaca of Ciampa and Anam. The *peela* or *golden-flowered chumpa* is a tree thirty to forty feet high called in Sanscrit "champaca" or "champeya" or "hemapushpaca" (W. Jones), in Bengalee "chumpaka" or "chumpa" (Drur.); and the "alla anthĕa" seen in a garden by Nearchus, the flowers worn in the hair — (Arrian ind. 27), may be compared: the fragrant "champa" is mentioned in the Mrichchhakati iv; garments scented with a "champa flower," by Vachespati Misra tatwa-kaum. (Wils. sankh.); and the "katu" or "kanaka" or "kanchana" or "gand'ha" or "nagapushpa" or "surab'hi" or "hemanga" of Susrutas sutr. 28, is referred here by Hessler: M. champaca was observed by Graham "in gardens" around Bombay, "a highly ornamental and sacred tree;" by W. Jones as. res. iv. 287, Roxburgh, and Wight i. 13, in gardens throughout the peninsula and as far as Bengal, dedicated according to Drury to Vishnu, and its flowers used by the natives to adorn their heads. Farther East, was observed by Mason v. 402 "exotic" in Burmah, planted about

villages, and its "golden flowers" in the "dark long hair" of the maidens celebrated in Burmese poetry; is known to grow wild in Ciampa (Drur.); was observed by Blanco on the Philippines, around villages in the environs of Manila, and called in Tagalo "sampac," its flowers sold in the market. By European colonists, was carried to the Mauritius Islands, where it continues under cultivation (Boj.).

Andropogon Martini of Tropical Hindustan. The *roussa grass* is called in Tamil "kamakshi-pullu," or "kasattam-pullu," in Telinga "kamakshi-kasuvu" or "kamanchi-gaddi," in Bengalee "khama-kher," in Hindustanee and on the Deccan "ganjni" (Drur.); in which we recognize the grass West of the Indus recognized by Phoenicians in Alexander's army as one of the perfumes of commerce; also the "kŏmakōn" enumerated by Theophrastus ix. 7. 2 among imported perfumes: A. Martini is termed "a. nardus" by Linnæus; "a. calamus-aromaticus" by Royle (in Kitt. bibl. cycl.), who further states that it grows from Nagpore as far North as Delhi, its "leaves culms and roots" yielding the fragrant *grass oil* called "oil of Namur," much used in perfumery, also medicinally by the natives, but in the shops is often confounded with "oil of spikenard:" the grass was brought by Martin from the highlands of Balaghaut to Lucknow and Calcutta (Roxb. fl. i. 277), and abounds on the Deccan, universally spread over the trap districts (Drur.).

Andropogon pachnodes of Tropical Hindustan. Said to yield also a volatile oil (Drur.); and possibly the grass in question; — the "nartē" enumerated among perfumes by Theophrastus ix. 7. 3, may be compared: A. pachnodes is described by Trinius. The *ginger grass* of Ainslie ii. 401, yielding an essential oil called by the natives "koshel," was observed by Law in the environs of Bombay "common between Dhowe and Krishna," by Nimmo in the Concan North and South, by Heddle in the "vale of the Nerbudda," and is further identified by Graham with the "nardus indica" of Lamarck enc. ii. 375.

Caryota urens of Tropical Hindustan and Ceylon. A stately palm called in the environs of Bombay "bherlee-mhar" (Graham), in Telinga "mari" (J. F. Wats., and Beddome 60) or "jeeroogoo" (Lindl.), in Tamil "coonda-panna" (Drur.); and the "phōinikŏn" in Gedrosia inducing "katanōēthēnai" if eaten crude — (Theophr. iv. 4. 13), "strangulati" as translated by Pliny xiii. 9, may be compared: the "marih" is mentioned by Rhazes, by Ebn Baitar as an Indian seed; and the "belluri" met with by Jordanus, yielding toddy of superior quality, is referred here by Yule: C. urens was observed by Rheede i. pl. 11 in Malabar; by Graham, "common on the Ghauts and Concans," also "in gardens," its pith yielding *sago*, and its sap or toddy in common use for yeast; by myself, clearly indigenous on the Ghaut; by Buchanan, the trunk the favourite food of elephants; by Roxburgh, Ainslie, Royle, and Drury, in Travancore, Coromandel, and other parts of Hindustan, fifty to sixty feet high, the thin rind of the fruit very acrid and producing a burning sensation on the tongue; is termed "saguaster major" by Rumphius i. pl. 14, and is known to grow on Ceylon, where the split trunks are used as rafters, and the fibre of the leaf-stalks made into ropes for tying wild elephants (fl. zeyl. 369, and Drur.). Farther East, a species of Caryota yielding sago was observed by Blanco on the Philippines, common in many parts and called "pugaham." (See Arenga saccharifera).

Nerium oleander of Subtropical Persia. The *oleander* is called in France "laurier-rose" (Nugent), in Italy "oleandro" or "alloro indiano" (Lenz), in Greece "pikrōthaphnē" or "rōthōthaphnē" (Sibth.) or "arōthaphnē," in Egypt "tiflæ" (Forsk.), in Egyptian "skinphē" (Syn. Diosc.); and the "thaphnē"-like plant that poisoned cattle of Alexander's army in Gedrosia along the Persian Gulf — (Strab. xv. 2. 7), may be compared: in the days of Dioscorides, the "nēriōn" having a rose-like flower and fruit in the form of horns, was a well known shrub in gardens, growing also by the seaside and along streams; and somewhat later, the "wild laurel bearing roses" is mentioned by Apuleius asin., and Lucian: N. oleander was observed by Forskal, Sibthorp, Bory, and Fraas, frequent along streams from the Peloponnesus to Constantinople; is known to occur also seemingly wild in Syria . . .; and was observed by Forskal, and Delile, in the gardens of Egypt. Westward, the "nēriōn" or "rōthōthaphnē" or "rōthŏthĕnthrōn" is identified in Syn. Diosc. with the "ikmanē" of the Lucanians (of Southern Italy), and "laurōrōsa" or "ōlĕanthrōum" of the Romans; the "nerion" or "rhododendron," from having no Latin name, is regarded by Pliny xvi. 33 to xxiv. 53 as brought from Greece; and the "rhododaphne" is mentioned in the Virgilian Culex, and by Palladius i. 35. 9, and Vegetius: N. oleander is termed "n. floribus rubescentibus" by Tournefort inst. 605; was observed by Desfontaines i. 208 along streams on the Atlas mountains (Pers.); and is known to occur seemingly wild from Italy to Portugal (A. Dec., and Lenz). By European colonists, was carried to Northeast America, where it continues under cultivation as a hardy greenhouse plant. A decoction of the leaves and bark according to Lindley is employed "in the South of France to cure the itch and to destroy cutaneous vermin," and "the powdered bark and wood to poison rats."

Nerium odorum of Hindustan. An allied species called in Upper India "hayamaraca" horse-killer (W. Jones), in Broach "nermudda," in the environs of Bombay "kunher" (Graham), in Hin-

dustanee, "karpud," in Bengalee "kurubee" (Lindl.), and possibly the plant in question: — the "karavira" is mentioned in the Mrichchhakati x., and by Susrutas; and the "hayamaraka" by Susrutas sutr. 36 to chikits. 18: N. odorum was observed in Hindustan by Hermann lugdb. pl. 448, Rheede ix. pl. 2, and Roxburgh; by Graham, "in gardens" and "wild by the banks of Deccan rivers;" by myself, clearly indigenous along the river-bank of the Godaveri; and according to Lindley, "the bark of the root and the sweet-smelling leaves are considered by the" natives "powerful repellants, applied externally." Farther East, the shrub is enumerated by Mason as "exotic" in Burmah; and is known to occur in gardens in China and Japan (Barrow trav. p. 505, and Blume).

At Armōzĕia (Ormuz) opposite the projecting promontory of Arabia, a man was seen who wore the Greek dress and spoke Greek, and who proved to be a straggler from Alexander's army; then, according to his account, only "five days journey" distant. After an interview with Alexander, Nearchus resumed his voyage; and in the inner portion of the Gulf, in addition to *canoes* propelled not by oars attached to the sides but paddled, met with ships of burden (Arrian l. c. 27 and 38). Continuing along the coast of Carmania, Persis proper, and Susiana, Nearchus and the fleet at length reached Thirithŏtis or Teredon at the mouth of the Euphrates. By this voyage, a more accurate idea of the configuration of a large portion of Asia was made known to the Greeks.

"324 B. C." (Sm. b. d.), at Rome by decree of the senate, the dictator L. Papirius Cursor and the "magister equitum" L. Papirius Crassus continued in office without any consuls. The Samnites defeated.

"323 B. C." (Clint.), death of Alexander. In the ensuing partition, Ptolemy obtained the government of Egypt. His earliest buildings there bear the hieroglyphic ovals of Philippus Aridaeus and Alexander IV.; nominal successors to the whole Empire.

The first mention of the lunate sigma C is ascribed to the poet Aeschrion, a pupil of Aristotle and said to have accompanied Alexander on some of his expeditions — (Tzetz., Franz, and Sm. b. d.). This form of sigma occurs in an inscription found on Sicily and perhaps anterior to "B. C. 282;" also in an inscription under Ptolemy III.

Campanula ramosissima of the East Mediterranean countries. A species of *bell-flower* called in Greece "agria gōulia" (Sibth.); and the ΕΡΙΝΟΝ of Diocles of Carystus, growing about springs and streams and at the base of mountains, — giving out according to Dioscorides five to seven branches a span long, its leaves incised at the apex, flowers white, fruit or seed small black and austere, the stem and leaves abounding in juice, is referred here by Fraas: C. ramosissima is described by Sibthorp; and was observed by him, Chaubard, and Fraas, from Zacynthus and the Peloponnesus to the Bithynian Olympus. Westward, the "ĕrinŏs" or "ŏkimōĕithĕs" or "uthrērōn" is identified in Syn. Diosc. with the "ōkimōum akōuatikōum" of the Romans; the account by Pliny of the "herba" called by the Greeks "erineon" seems chiefly taken from Dioscorides, but he adds that its juice is milky and sweet.

Bupleurum protractum of the East Mediterranean countries. A simple-leaved Umbelliferous plant called in Greece "skullōmarathrōn" (Fraas); and the "aliud hippomarathri genus" having according to Diocles long narrow leaves and coriander-like seed — (Plin. xx. 96), according to Dioscorides small narrow oblong leaves and round coriander-like fruit fragrant and heating, the medicinal properties as in the first kind but weaker, may be compared: B. protractum is described by Link, and was observed by Fraas in vineyards and cultivated ground in Southern Greece.

"322 B. C." (Plut., and Clint.), submission of Athens to Antipater; by whom, "twelve thousand" of the poorer citizens were disfranchised, and some of them carried into Thrace.

Montia fontana of extreme Northern and Austral Climates. A diminutive subaquatic, growing around springs, and called in Britain *blinks* or *blinking chickweed* or *water chickweed* or *water b'inks* (Prior); in which we recognize the ΜΥΩΨ herb of Dercylus, growing in the Achelous, and inducing blindness if mixed in water for washing, sight to be recovered by appeasing Diana — (Plut. fluv. 22, 5): M. fontana was observed by Sibthorp, and Chaubard, in the Peloponnesus; by Grisebach, in Roumelia; by Savi, in Italy; by Moris, in Sardinia; by Boissonade, on the mountains of Southern Spain; by Brotero, in Portugal; and is known to grow from the environs of Paris and London to Iceland and Lapland (Pers., Curt. fl. lond. iii. pl. 8, Fries, and Wats.). Farther West, was observed by Hooker on Iceland; by Lapylaie, as far South as Lat. 52° on Newfoundland; by Mertens, at Norfolk Sound on the Pacific coast; by Chamisso, on Unalascha and throughout the Arctic portion of Northwest America; is known to grow also in East Siberia (Ledeb.); and on Antisana and Pichinca, peaks of the Equatorial Andes (Kunth). In the Southern Hemisphere, was observed by C. Gay in Chili; by J. D. Hooker, on the Falkland Islands, New Zealand, the Auckland Islands, Campbell Island, and Kerguelen Island (A. Dec.).

In this year (= 288 + "34 years reign" in the Mahavamsa v.), through the brahmin Chanacca, Danepala-Nandeya (Nanda) slain and succeeded by prince Chandragutta or Sandracottus.

"321 B. C." (Clint., see Strab. xvii. 1. 8), the body of Alexander brought into Egypt by Perdiccas,

Philippus Aridaeus, Alexander IV., and their mother Roxana. Perdiccas in reality seeking the government, was prevented by Ptolemy and put to death. The body of Alexander was then buried, and the Royal family departed for Macedonia. —In the time of Strabo, the original golden sarcophagus having disappeared, the body was contained in one of glass. A sarcophagus of solid gold is mentioned by Bonomi as recently discovered by Arabs in Egypt.

"The same year" (Blair, and Sm. b. d.), near Beneventum in Italy, the defeated Romans passing under the Samnite yoke. The peace made by the consuls, was however not ratified by the home government, and war continued.

Trigonella elatior of the Mediterranean countries. Called in Greece "ēmĕrōn triphulli" or "agria murŏthia" (Fraas); in which we recognize the "murōlŏtōs" of ancient Greek writers — (J. P. lex.): the "lŏtōs" herb according to Theophrastus vii. 8. 3 to 15. 3 has stem-leaves only, and there are several kinds; is mentioned as coronary by Theocritus xvii. 43; and the "lŏtōs agriōs" of Dioscorides, growing mostly in Libya, two cubits high with leaves like those of the "lŏtŏ triphullŏ" of gardens, and seed like fenugreek but much smaller, is referred here by writers: T. elatior is termed "melilotus syriaca odora" by Lobel ii. pl. 42; was observed by Sibthorp, Chaubard, and Fraas, frequent in cultivated ground from the Peloponnesus to Cyprus and Asia Minor. Westward, the "lŏtōs agriōs" or "livuōn" or "triphullōn" is identified in Syn. Diosc. with the "triphōliŏum minōus" of the Romans; and the "trifolium cujus minima sint folia" is mentioned by Pliny xxi. 88: T. elatior is termed "lotus sylvestris ex codice cæsareo" (illustr. ms. Diosc.), also "trifolium italicum sive melilotus italica corniculis incurvis" by Bauhin hist. ii. 372. *T. corniculata*, called in Greece "nikaki" (Sibth.), but regarded as perhaps not distinct (Steud.), was observed by Sibthorp, and D'Urville, from the Peloponnesus throughout the Greek islands; and Westward, is described by Gesner hort. f. 265; is termed "melilotus major" by Tragus 592, "m. italica" by Fuchsius 528, "trifolium corniculatum alterum" by Dodoens 573, "fœnum-græcum sylvestre meliloti facie" by Tournefort cor. 28; and is known to grow in various parts of Southern Europe (All., and Pers.).

Melilotus Messanensis of the East Mediterranean countries. Also called in Greece "ēmĕrōn triphulli" (Fraas); and probably one of the kinds of "lŏtōs" already known to the Greeks: — the "lŏtōs ēmĕrōs" of Dioscorides, springing up in gardens, its juice removing spots and cloudiness from the eyes, identified in the added Synonyms with the "triphullōn" or "trivōliōn" or "tripōthiōn," is referred here by Sibthorp, and Fraas: M. Messanensis is termed "m. m. procumbens folliculis rugosis sublongis spicis florum brevibus" by Tournefort inst. 407; was observed by Sibthorp, Bory, and Fraas, in cultivated ground from the Peloponnesus throughout Greece; by Delile, around Rosetta, Damietta, and Cairo. Westward, was observed by Desfontaines ii. 192 in Barbary; is said to occur also in Italy and Sicily (Pers.), but seems unknown around Messina (Arrosti, and Sibth. 1782).

Trifolium resupinatum of the Mediterranean countries. Called in Egypt "djulban" or "gurt" (Forsk.); and possibly one of the kinds of "lŏtōs" in question: — the "lŏtŏ triphullŏ" springing up in "hŏrtōkŏpĕiōis" is mentioned by Dioscorides iv. 110 and 111; the "gramine herba" called "chortinon" from which oil is procured in Egypt, by Pliny xv. 7; and the "kurth," by Abu Hanifa, Ebn Redwhan, and Ebn Baitar: T. resupinatum is termed "t. melilotus diffusa vel bicornis" by Forskal, and was observed by him, and Delile, at Rosetta Damietta and Cairo; by Sibthorp, and Chaubard, frequent throughout Greece and the Greek islands. Westward, is described by Bauhin hist. ii. 379, and Barrelier pl. 872; is termed "t. pratense folliculatum" by Tournefort inst. 404; and is known to grow seemingly wild as far as middle Europe: was once introduced into England, where it continued many years, but finally disappeared (Wats. cyb. 301, and A. Dec).

"320 B. C. = 1st year of Chin-tseng-wang, of the Tcheou" or Fifth dynasty (Chinese chron. table).

In his reign (Pauth. 193), more than "eighty thousand" persons slain in civil or rather feudatory warfare by the adherents of the prince of Thsin.

Taheiti colonized directly or indirectly from the Samoan Islands, the "mother country" of the Polynesians (next after "Pulotu" or "Purotu"), long before — the Marquesas (J. Williams miss. ent. 57, and Hale ethnog. Expl. exp. 120 to 148. See Taumaco).

Urena lobata of Tropical Africa and Asia. A suffruticose weed called on the Upper Nile "milenda" (Grant), in Hindustanee and Bengalee "bun-okra" (Drur. p. 483); and carried to Taheiti possibly by the first colonists: * — occurring on the islands of the Pacific in the days of Rumphius

* *Urena sinuata*, closely allied, but regarded as distinct. Called in the environs of Bombay "jungly kapas" (Graham); and known as far as the Feejeean Islands as early perhaps as this date; — observed a weed there by myself; is described by Rumphius vi. pl. 25; was observed by Rheede x. pl. 2, in Malabar: by Graham, "common in waste lands" in the environs of Bombay; by Rox-

vi. pl. 25 (A. Dec.); observed by myself in cultivated ground and neglected clearings on the Taheitian, Samoan, Tongan, and Feejeean Islands; by Rumphius, and myself, in the Malayan archipelago; known to occur also in China (Pers.); was observed by Mason v. 519 in Burmah, "a weed which abounds all over the coast" and is used for making cordage; by Roxburgh, Royle, and Wight, "common in most parts of India" and useful for its fibres; by Graham, as far as Bombay, "common in waste places during the rains;" but according to A. Decandolle is not known to have a Sanscrit name. Westward, was observed by Grant from "2° to 3° N." along the Nile, frequent and its bark made into cordage; is known to grow also in Western Equatorial Africa (J. D. Hook., and Benth. fl. nigr. 226). By European colonists, was carried to the Mauritius Islands and the West Indies (Descourtilz), no Carib name being given; to Southern Brazil, observed by myself frequent in the outskirts of Rio Janeiro. Transported to Europe, is described by Dillenius elth. pl. 319, and Linnæus.

"318 B. C." (Sm. b. d.), M. Foslius Flaccinator and L. Plautius Venno consuls at Rome. Truce with the Samnites for two years.

"The same year" (Lubke and Lutrow), at Athens, the Choragic monument of Thrasyllus erected.

As early perhaps as this year, the physician Apollodorus writing to king Ptolemy on the different kinds of wine, those of Italy being as yet unknown — (Plin. xiv. 9).

Ajuga iva of the Mediterranean countries. Called in Egypt "missæka" (Forsk.) or "meskeh" (Del); and the ΧΑΜΑΙΠΙΤΥC identified by Apollodorus with the ΙΩΝΤΑΝ of the Athenians or CΙΔΗΡΙΤΙΝ of Euboea or ΟΛΟΚΥΡΟΝ — (Athen. xv. 28), may be compared: the "iŏnia" is enumerated by Theophrastus ii. 1. 3 to vi. 1. 1 among frutescent small-leaved coronary plants; is identified through Syn. Diosc. with the "ōlōkurōn" of Pontus; and according to Dioscorides, the "hamaipitus" having leaves like "ačizŏŏ mikrŏ" is used at Heraclea in Pontus as an antidote against "akōnitōn;" is further identified in the added Synonyms with the "aima athēnas" of the prophets: A. iva is termed "c. moschata foliis serratis, an prima Dioscoridis" by Tournefort inst. 208; was observed by Sibthorp, Chaubard, and Fraas, from the Peloponnesus and Crete throughout the Greek islands; by Forskal p. 158, and Delile, on the Mediterranean border of Egypt. Westward, the "hamaipitus" or "pitusōrusin" or "orĕizēlōn" or "vruŏnian agrian" is identified in Syn. Diosc. with the "thōhĕla" of the Dacians, and "kupripōum" of the Romans: A. iva is described by Clusius hist. ii. 186; was observed by Lenz in Italy; and is known to grow in dry sandy situations throughout Southern Europe (Cav. pl. 120, and Pers.).

Asclepias Dioscoridis of the East Mediterranean countries. The ΚΙΡΚΑΙΑΝ: ΡΙΖΑΝ prescribed by Apollodorus — (Athen. iii. 15. 6), clearing the matrix according to Dioscorides, growing in stony airy and sunny situations, its several shoots with numerous small black flowers, "kĕghrōĕithē" fruit within as if horns inducing abundance of milk, may be compared: is identified in the added Synonyms with the "thirkaian:" A. Dioscoridis with flowers "nigro purpureis" is described by Fraas, as observed at Delphi on Euboea, at the elevation of three thousand feet.

Cynanchum nigrum of the West Mediterranean countries. — Referred here by Anguillara p. 229 (Spreng.): C. nigrum has not been observed in Greece, but is known to grow on the hills of Italy and Southern France (Pers., and Lenz).

Heliotropium Europæum of Tropical Arabia. Called in Italian drug-shops "verrucaria" (Lenz),

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burgh, Royle, and Wight, as far as Bengal, the fibres of its bark of like quality with those of U. lobata. Transported to Europe, is described by Linnæus

Colubrina Asiatica of Tropical Eastern Asia and the Malayan archipelago. A shrub called in the environs of Bombay "gootee" (Graham); and known doubtless to the first colonists of Taheiti: — observed by myself in clearings and natural openings on the Taheitian, Samoan, Tongan, and Feejeean Islands, but not in the inland forest, seemingly indigenous also in the Malayan archipelago; is known to grow on Luzon (Pers.); is enumerated by Mason as indigenous in Burmah; was observed by Burmann pl. 48 on Ceylon; by Rheede v. pl. 47, in Malabar; by Roxburgh, and Wight, in other parts of Hindustan; and by Graham, as far as Bombay, "common on Elephanta and the Ghauts."

Melastoma Malabathrica of Tropical Eastern Asia and the Malayan archipelago. A shrub called in Tagalo "buyong" (Blanco); and known at least to the first colonists of Taheiti: — observed by myself in clearings and natural openings on the Taheitian, Samoan, and Feejeean Islands and in the Malayan archipelago, but nowhere producing edible fruit; by Blanco on the Philippines, a single branch brought from Cebu; by Jack (linn. trans. xiv. 4), abundant on Sumatra and the neighbouring islands; by Burmann pl. 73, on Ceylon; by Rheede iv. pl. 42, in Malabar; by Nimmo, in the Southern Concan, and by Lush "about Asunwaree" in the Southern Mahratta country (Graham); by Roxburgh, and Wight, in other parts of Hindustan.

in Greece "vrōmōhōrtōn" or "ēliōtrōpiōn," by the Turks "bambal otu" (Sibth.), in Egypt "sackran" inebriating, its leaves if eaten believed to induce vertigo, in Yemen "kerir" or "akrir" (Forsk.); in which we recognize the "verrucariam" identified by Pliny with the "heliotropium" prescribed by Apollodorus, — and Apollophanes; also the "ēliōtrōpiōn mĕga" of Dioscorides, with leaves following the sun, and from the fashion of its whitish or ruddy flowers sometimes called "skōrpiōurōn:" the "ikrar" is mentioned by Abul Abbas; and Ebn Baitar: H. Europæum was observed by Forskal p. 38. near Mor in Yemen; by Grant from "Lat. 16°" on the Nile banks near cultivation; by Forskal, and Delile, in Egypt; by him, and Sibthorp, abounding in cultivated ground from the Peloponnesus throughout the Greek islands to Marmora. Westward, the "heliotropium" is mentioned by Varro i. 46, and that following the sun is described by Pliny xxii. 19 as occurring chiefly in cultivated ground, half a foot high and having blue flowers; the "solago major" is mentioned by Apuleius 49, and the "verrucaria" by Isidorus Hispalensis: H. Europæum is termed "h. majus Dioscoridi" by Tournefort inst. 139, "h. erectum" by Lamarck fl. fr.; was observed by Lenz in Italy, and is known to occur in other parts of Southern Europe (Jacq. austr. pl. 207, and Pers.). By European colonists, was carried to Northeast America, where it continues in "waste places, Maryland, Virginia etc. in a few places" (A. Gray). "H. villosum," observed by Tournefort cor. 7 on the island of Melo (Pers.), and by Fraas in continental Greece, is regarded by Bory as perhaps not distinct.

"317 B. C." (Diodor., and Clint.), Philippus Aridaeus put to death by Olympias. Who was at once besieged at Pydna by Cassander, — and after two years, captured and slain.

"The same year" (Diod. xviii. 3, xix. 14, and Buns. iv. 7. 2), Porus decoyed into the power of Eudemus Greek king of Bactria, and put to death: Sandracottus being present.

Not earlier than the last-named year (D. Laert., and Clint.), commencement of the government of Demetrius Phalerius over Athens. — He ruled "ten" years.

Stachys betonica of Europe and the adjoining portion of Asia. Called in Britain *betony* (Prior, and Lindl.), in France "betoine" (Nugent), in Germany "betonie," in Italy "betona" or "betonega" (Lenz), in Greece "priōnētēs" (Sibth.); in which we recognize the "vettonica" of the Gauls, discovered in Spain by the Vettones (Plin.) and hardly later than this date, — being identified through Pliny with the "kĕstrōn" prescribed in 1 Mul. morb. 111 to 119 and 2 Mul. morb. 63: while in Syn. Diosc. the "kĕstrōn" called "psuchōtrōphōn" from growing in the coldest places is identified with the "ōuĕttōnikēn" of the Romans: "herba vettonica" is prescribed by Celsus v. 27 against the bite of serpents; and in the days of Pliny xxv. 46 was called in Italy "serratula;" the "prionitis" (a Greek translation of this name) is mentioned by Alexander Trallianus (Billerb.): S. betonica was observed by Sibthorp in the Peloponnesus, by Forskal near Constantinople; is known to grow also in Asiatic Russia; and "aquæ betonicæ" was found by Alpinus, and "betonica" syrup "from Europe" by Forskal mat. med., employed medicinally in Egypt. Westward, s. betonica is described by Brunfels f. 89, Tragus f. 180, Valerius Cordus f. 165, and Clusius hist. ii. 38 (Spreng.); is termed "b. purpurea" by Tournefort inst. 203, "b. officinalis" by Linnæus; was observed by Lenz wild in North Italy; and is known to grow throughout middle Europe as far as Denmark (fl. Dan. pl. 726, Curt. lond. iii. pl. 33, and Pers.). Continues in medicinal use as appears from Lindley, and from "the fine rigid hairs" when powdered inducing sneezing "is generally made an ingredient in herb-snuffs."

"315 B. C." (Sm. b. d.), coalition of Seleucus, Ptolemy, Cassander, and Lysimachus, and war commenced against Antigonus.

"In this year" (Sm. b. d.), at Athens, death of Xenocrates. He was succeeded by Polemon as head of the Academic school of philosophy.

Sisymbrium polyceratium of Europe and the adjoining portion of Asia. Called in Greece "agriōpra" (Forsk. and Sibth.) or "skullōvrōuva" (Fraas), by the prophets "ērakllēōus alphita," in Egyptian "ĕrĕthmōu" (Syn. Diosc.); and the EPYCIMON enumerated as esculent by Polemon diæt. 14, — mentioned also in 2 Mul. morb. 81, by Dioscorides as growing around towns and dwellings and having leaves like those of "ĕuzōmŏ agriŏ," yellow flowers, and at the summit slender horned fenugreek-like pods containing small seeds that are used medicinally, is referred here by writers: S. polyceratium was observed by Forskal, Sibthorp, Chaubard, and Fraas, in waste places and around villages from the Peloponnesus throughout Greece and the Greek islands. Westward, the "ĕrusimōn" or "hamaipliōn" is identified in Syn. Diosc. with the "ĕriōnĕm" of the Romans; the "irio" is mentioned by Columella, by Pliny xviii. 10 as cultivated in Italy: S. polyceratium is described by Anguillara p. 173 (Spreng.); is termed "erysimum polyceration vel corniculatum" by Tournefort inst. 228; is known to occur in Italy and throughout Southern Europe as far as Portugal (Pers., Brot., and Lenz), and escaping from gardens has been found springing up spontaneously in Britain (Wats. cyb. i. p. 152 and iii. p. 384, and A. Dec.; see S. irio).

Avena sativa of Abyssinia. Called in Britain *havet* or *oat*, in Anglo-Saxon "ata" meaning originally food, in Holland "haver," in Germany "hafer" or "haber," in old high German "haparo"

(Prior), in Bohemian and Russian "oves" or "owes," in Hungary "zab" (Moritz.), in France "avoine" or "aveine" (Nugent), in Italy "avena coltivata" (Lenz), in Greece "vrŏmŏs" (Zalikogl. and Fraas), in Egypt "zammeyr" (Clot-Bey); in which we recognize the BPOMOC commended for food by Polemon diæt. ii. 12 — (Athen. xi. 56), and Dioscorides ii. 116, mentioned also by Dieuches, Theophrastus viii. 4. 1 to 9. 2, Oribasius, Hesychius, by Galen alim. fac. i. 14 as abundant in Asia Minor, especially in Mysia, and made into bread as well as given to horses: A. sativa was observed by Chaubard under cultivation in Greece and springing up spontaneously; by Fraas, cultivated only as a curiosity; ten varieties according to Clot-Bey were introduced under Mohammed Ali into Egypt and cultivated for fodder; was observed by Bové in the Desert around Sinai (Decaisne ann. sc. nat. ii. 13); by Bruce, wild in Abyssinia and sometimes tall enough to conceal horse and rider, the straw "thick as the little finger" formed into huts "like bee-hives," the grain "not valued but the taste is good" and cakes of the meal were often made by him "in remembrance of Scotland" (Grev.). Westward, the cultivated "avena" is mentioned by Horace sat. ii. 80; by Pliny iv. 27 to xviii. 44 as the only "pulte" of the Germans, and with bird-eggs the only food of the Oonae of the Baltic: A. sativa continues under cultivation from Italy to "65°" in the Scandinavian peninsula, but remains unknown on the Faroe Islands (A. Dec.). Eastward from Syria, is called "sulu" by the Tartars (Moritz.); was observed by Kaempfer, and Thunberg, in Japan, and called "ienbaku," or usually "karasmuggi;" and var. "nuda" by Bunge in waste ground around Pekin. By European colonists, was carried to Northeast America, where it continues under cultivation; to Austral America, observed by A. Saint-Hilaire naturalized around Montevideo; to Juan Fernandez (Bertero); to California, observed by myself naturalized and covering hills for many miles around San Francisco Bay, but in Oregon under cultivation only; to the Mauritius Islands (Boj.); and to Hindustan (Royle himal. 419).

"314 B. C. = 1st year of Nan-wang, of the Tcheou" or Fifth dynasty (Chinese chron. table). In his reign, *walls* were built on the Tartar frontier, from the Hoang-ho river to Pĕ-tchi-li, and from the border of Chan-si to the Gulf of Liao-toung.

Coronilla securidaca of the Mediterranean countries. Called in Greece "pikrōlōuvi" (Sibth.); and the ΠΕΛΕΚΙΝΟΙ : ΕΝ : CITΩ prescribed by (Soranus?) mul. morb. ii. 63, — or "pĕlĕkinŏs" of ointment-makers identified by Dioscorides with the "ēthusarōn" growing among wheat and barley, its horn-like pods containing bitter seeds shaped like a two-edged axe, is referred here by writers: C. securidaca was observed by Sibthorp, Chaubard, and Fraas, frequent in cultivated and fallow ground from the Peloponnesus to Asia Minor. Westward, the "pelecinum" is described by Pliny xxvii. 95 as springing up among grain and having pods by threes or fours and curved or hooked in the manner of horns: C. securidaca is described by Matthioli p. 641 (Spreng.); is termed "securidaca lutea major" by Tournefort inst. 399; and is known to occur in Italy, Southern France, and Spain (Dec. fl. fr., Pers., and Lenz).

Biserrula pelecinus of the Mediterranean countries. Possibly the plant prescribed, — for the "pĕlĕkinŏs" of Theophrastus viii. 8. 3 springing up among "aphakais" (in one ms. "phakŏis" as read by Pliny xviii. 44) and named from the resemblance to an axe, is referred here by some writers: B. pelecinus was observed by Sibthorp, Chaubard, and Fraas, in various parts of the Peloponnesus. Westward, the "pelecinon" that destroys "lentem" is identified by Pliny with the "herba securidaca:" B. pelecinus is described by Clusius hist. ii. 347; is termed "pelecinus vulgaris" by Tournefort inst. 417; and is known to grow in various parts of Southern Europe (Pers.).

Cotyledon umbilicus of Europe and the adjoining portion of Asia. Called in Britain *navel-wort* (Prior), in Germany "nabelblatt," in Greece "zōumĕra" or "sampōuni" (Fraas) or "samvōuni" or "kōtulētha" (Sibth.); in which we recognize the ΚΟΤΥΛΗΔΟΝΟC whose leaves are prescribed in 1 Mul. morb. 117, — mentioned also by Nicander, Cratevas, and according to Dioscorides its saucer-like leaves used medicinally: C. umbilicus was observed by Sibthorp, Chaubard, and Fraas, frequent on walls and rocks from the Peloponnesus throughout the Greek islands. Westward, the "kŏtulēthŏn" or "skutaliōn" or "kumvaliōn" or "kēpos aphrōthitēs" or "gēs ōmphalōs" is identified in Syn. Diosc. with the "ōumvilikōum vĕnĕris" of the Romans; the "cotyledon" having a fleshy concave leaf and growing in maritime and stony places, is mentioned by Pliny xxv. 101; and the "umbilicus veneris," by Apuleius 43: C. umbilicus is termed "c. major" by Tournefort inst. 90; was observed by Forskal near Marseilles; is known to grow also in Spain and Portugal and as far as Britain (Engl. bot. pl. 325, and Pers.).

Sedum stellatum of the Mediterranean countries. A species of *stone-crop* called in Greece "agria anthrakla" (Fraas); in which we recognize the "anthrahnēn agrian" identified through Syn. Diosc. with the ΤΗΛΕΦΙΟΝ of 2 Mul. morb. 80, — its leaves according to Nicander ther. 873 employed against bites of venomous animals; also with the "tritōn ĕithōs aĕizŏōu" of Dioscorides, pungent and ulcerating, growing on rocks, its leaves broader than those of "anthrahnēs" and hairy: S. stellatum was observed by Sibthorp, Chaubard, and Fraas, in clefts of rock on the mountains of

Crete and Southern Greece. Westward, the "anthrahnēn agrian" is further identified in Syn. Diosc., and by Pliny, with the "illĕkĕvraan" of the Romans; "illecebrae" is prescribed against calculus by Scribonius Largus, and according to Plīny xxv. 103 is besides collected for food: S. stellatum is described by Camerarius hort. pl. 2, and Columna phyt. pl. 11; is termed "s. echinatum vel stellatum flore albo" by Tournefort inst. 263; and is known to grow in Italy and Southern France (Pers., and Spreng.; see S. telephium, and S. altissimum).

Bupleurum junceum of the Mediterranean countries. The name "bupleurŏ" is given in Italy to an allied species (Lenz), but the ΒΟΥΠΛΕΥΡΟΝ or ΒΟΥΠΗΡΤΙΣ of 1 Mul. morb. 619, commended as food by "Hippocrates," — Lycon, Epaenetus, Antigonus, and as medicine by "Glaucon, and Nicander" (Plin. xxii. 35), seems referred here by Dodoens: the "vōuprēstis" herb is mentioned also by Theophrastus vii. 7. 3, and Galen: B. junceum "a foot and a half high" was observed by Sibthorp near Smyrna. Westward, the "bupleuron" classed by the Greeks among spontaneous potherbs, is according to Pliny xxii. 35 a cubit high with numerous long leaves and "capite anethi:" B. junceum is described by Dodoens pempt. pl. 633; is termed "b. annuum angustifolium" by Tournefort inst. 310, "isophyllum junceum" by Hoffmann, as observed by him in Germany; is known to grow also in Italy, Switzerland, and France (Pers.).

Laserpitium siler of the mountains of middle and Eastern Europe. The CECEΛΙ:ΜΑCCΑΛΙΩΤΙΚΟΝ prescribed in 1 Mul. morb. 108, — having according to Dioscorides "marathrŏ"-like leaves, an "anēthŏ"-like umbel, fruit quickly "thrimus" acrid or bitter, and in the added Synonyms identified with the "sphagnōn," is referred here by Valerius Cordus (Spreng.): L. siler was observed by Sibthorp at Delphi and on other high mountains of Greece, the seeds as in all the species intensely bitter. Westward, is described by C. Bauhin pin. 162, and Morison ix. pl. 3; is termed "ligusticum quod seseli officinarum" by Tournefort inst. 323; and is known to grow in Austria, Switzerland, and France (Jacq. austr. pl. 145, and Pers.).

Seseli tortuosum of the Mediterranean countries. The "sĕsĕli massalĕŏtikōn" — is however referred here by Anguillara, Matthioli, Lobel, Clusius, and Sprengel: S. tortuosum is known to grow in Albania (Fraas); was observed by Sibthorp, and Gittard, in Greece; and by Pallas, and Gueldenstaedt, farther East (Steud.). Westward, is described by Anguillara, Lobel adv. 352, and Bauhin hist. iii. pl. 16; is termed "foeniculum tortuosum" by Tournefort inst. 311; is known to grow in North Italy (Lenz); and was observed by Forskal near Marseilles.

Ferula Persica of Persia. The *sagapenum* of commerce is called in Persian "sagapina" (Jao de Sousa), in Arabic "sekhbinedsch" (Spreng.); in which we recognize the CΑΓΑΠΕΝΟΥ of 1 Mul. morb. 108, — described by Dioscorides as the juice of a Ferulaceous plant growing in Media, mentioned also by Celsus, Galen, Marcellus, Oribasius, Paulus Aegineta, and in the days of Pliny xix. 15 used for adulterating the "laser" asafœtida of Persia, Media, and Armenia: "sekhbinej" is mentioned by Rhazes, Avicenna, Ebn Baitar, and according to Mesue 79 is the product of a "tree, an oleander of the mountains." F. Persica was sent from Persia by Michaux as the source of *asafœtida;* is regarded by Nees and Ebermaier "as one of the plants yielding" this substance, and according to Lindley "probably with justice."

Peucedanum nodosum of Crete. The ΔΑΥΚΟΥ:ΑΙΘΙΟΠΙΚΟΥ whose root and fruits are prescribed in 1 Mul. morb. 56, — may be compared, one of the kinds of "thaukōs" being referred here by Honorius Bellus (ad Clus. 301): the "thaukōn thaphnōĕithĕs krōkōĕn" is enumerated by Theophrastus ix. 15. 5 to 8 as growing in Arcadia and of excellent quality about Patras, heating, the root black; and four kinds of "dauci" are distinguished by Petronius Diodotus (Plin. xxv. 64): P. nodosum, yellow-flowered, is described by Linnæus, and is known to grow on Crete, where it is extremely rare (Pers., and Spreng.). "P. creticum" of Decandolle is regarded by Chaubard, as perhaps not distinct, together with "Ferula geniculata" observed by him, and Fraas, on high mountains of the Peloponnesus and Southern Greece, and by Gussone prodr. as far as Sicily.

Thapsia fœtida of the Mediterranean countries. An Umbelliferous plant called in Greece "pōlukarpōs" (Sibth.); and possibly the ΠΟΛΥΚΑΡΠΟΝ prescribed in 1 Mul. morb. 90: — T. fœtida was observed by Sibthorp on Zacynthus and Cyprus. Westward, is described by Lobel ic. 780, Morison ix. pl. 18, and Blackwell pl. 459; and is known to grow in Spain (Pers.; see T. Garganica, and Opopanax chironium).

Crucianella Monspeliaca of the Mediterranean countries. A Rubiaceous plant called in Germany "kreuzblatt," in Greece "agriōsitarō" (Fraas); and the "pōlukarpŏn" in question — is identified by Galen with the "krataiōgōnōn," described by Theophrastus ix. 18. 6 as springing up like "linōn purinōn" its fruit as in "kĕghrōs," by Dioscorides as growing in shady bushy places and very acrid, and referred here by Fraas: the "krataiōgōnōn" is identified in Syn. Diosc. with the "krataiōnōn," is mentioned also by Paulus Aegineta: C. Monspeliaca was observed by Sibthorp, Chaubard, and Fraas, frequent in hilly situations from the Peloponnesus throughout the Greek islands; is known to grow also in Palestine (Pers.). Westward, the "crataeogonon" is described by

Pliny xxvii. 40 as "spicae tritici simile" with many much-geniculated stems from one root, yet his account seems chiefly taken from the Greek: C. Monspeliaca is termed "rubeola supina spica longissima" by Tournefort inst. 130; and is known to grow in Southern France (Pers.).

Pulicaria dysenterica of Europe and the adjoining portion of Asia. Called in Britain *fleabane* (Prior and Lindl.); and the KONYZHC:HΔYOCMOY prescribed in 1 Mul. morb. 108, — or "ĕŭōthōus" of Apollonius (Galen comp. med. loc. ii. 1), may be compared: P. dysenterica was observed by Sibthorp, and Chaubard, in moist places from the Peloponnesus to Constantinople. Westward, the leaves of the coronary "conyzae feminae" according to Pliny xxi. 32 have the odour of honey: the "policarie" is mentioned by Franciscus Pedemontium: P. dysenterica is termed "aster pratensis autumnalis conyzae folio" by Tournefort inst. 482, "inula conyzaea" by Lamarck fl. fr.; was observed by Scopoli in Carniolia, by Allioni in Piedmont (Steud.); and is known to grow throughout middle Europe as far as Denmark (fl. Dan. pl. 410, and Pers.). The herb according to Lindley is "more or less woolly or cottony, glutinous, with a peculiar acid aromatic scent, somewhat like the flavour of peaches;" and according to Keith cured the Russian army of dysentery (Linn. fl. suec. 294), but its medicinal virtues are discredited by Haller.

Onosma echioides of Europe and the adjoining portion of Asia. A Borragineous plant called in Greece "vrahōtzikla" (Fraas); by whom the CXEΔIAC:MEΓAΛH of 1 Mul. morb. 101 — is referred here conjecturally: O. echioides was observed by Sibthorp, Chaubard, and Fraas, frequent from the Peloponnesus to the shores of the Black Sea; and is known to grow farther East (Bieb.). Westward, is termed "symphytum echii folio ampliore radice rubra flore luteo" by Tournefort inst. 138; was observed by Lenz in Italy; and is known to grow as far as middle Europe (Jacq. austr. pl. 295, and Pers.).

Satureja juliana of the Mediterranean countries. A species of *savoury* called in Greece "ussōpō" (Sibth.), in Egyptian "pĕsalĕm" (Syn. Diosc.); in which we recognize the YCCΩΠOC of 3 Mul. morb. 490, — Nicander ther. 872, Cratevas (Anguillar. 198), produced according to Dioscorides of the best quality in Cilicia: S. juliana was observed by Sibthorp, Chaubard, and Fraas, abounding on Crete and the Peloponnesus. Westward, the "ussŏpōs" is identified in Syn. Diosc. with the "ussŏpōum" or "latĕr" or "kassiala" of the Romans; "hyssopum" is mentioned as edible by Celsus ii. 21, "vinum hyssopiten" by Columella xii 35, and "hyssopum cum vino decoctum" by Pliny xxvi. 11: S. juliana is described by Matthioli p. 693, and Cæsalpinus xi. 39 (Spreng.); is termed "thymbra Sancti Juliani sive satureja vera" by Tournefort inst. 198; and is known to grow wild in Italy (Pers., and Lenz).

Satureja Græca, regarded by Bory as perhaps not distinct, is also called in Greece "ussōpō," but sometimes "thrōumpi," and by the Turks "supha" (Forsk.); was observed by Alpinus exot. pl. 264, Sibthorp, and Chaubard, on Crete and the Peloponnesus: eating "Greek hyssop" is mentioned in the Talmud (Kitt. bibl. cycl. ii. 533); "zufa" is compared with majorana by Isaac Ebn Amran, with thyme by Mesue; and "hyssopus" from Palestine, and "syrupus hyssopi" called "scherab zufe," were found by Forskal mat. med. employed medicinally in Egypt. *S. nervosa*, also regarded by Bory as not distinct, was observed by Sibthorp on Zacynthus and called there "ēzŏpōn;" and by Desfontaines pl. 121 on the Atlas mountains (Pers.).

Satureja montana of the Mediterranean countries. Called in Italy "santoreggia" or at Verona "isopo" (Lenz); in which we recognize the "ussŏpōum" of the Romans identified through Syn. Diosc. with the "ussŏpōs" in question: — the "ōrĕinē" kind distinguished by Dioscorides, seems to correspond: S. montana was observed by Sibthorp on mount Athos; and is known to grow farther East (Pall., and Steud.). Westward, is termed "calamintha frutescens saturejæ folio facie et odore" by Tournefort inst. 194; was observed by Lenz wild in Italy; and is known to grow in other parts of Southern Europe (Pers.).

Ziziphora capitata of the East Mediterranean countries. The ΠOΛYKNHMON of 1 Mul. morb. 90, whose leaves are prescribed in Sterilib. 24, — mentioned also by Nicander, and fragrant according to Dioscorides, is referred here by Fraas: Z. capitata is described by Plukenet alm. pl. 164; is termed "thymus humilis latifolius" by Buxbaum cent. iii. pl. 51; was observed by Sibthorp, and Fraas, from Boeotia to Cyprus; is known to grow also in Syria, Armenia, and Siberia (Pers.). Westward, the "pōluknēmōn" or "klinōpēthiōn" or "pōlugōnatōn" or "thiōs ēlakatē" or "ĕhĕŏnumōn" is identified in Syn. Diosc. with the "pōutialōgŏnthria" of the Romans; the "polycnemon" is mentioned also by Pliny xxvi. 88, but his account seems taken from Dioscorides.

Chenopodium (*Agathophytum*) *bonus-henricus* of Europe and the adjoining portion of Asia. Called in Britain *wild spinage* (Petiv.) or *allgood* or *good henry*, in Holland "goeden henrik," by Cordus "weyss heyderich" or "gut heynrich," in Germany "guter heinrich" (Prior) or "schmerbel," in Old French "sars" or "sarron" or "serrones," in Switzerland "mangauns" or "vaungas" or "vougas" or "heilmeln" (A. Dec.), in Greece "agriōspanakia" (Sibth.); and possibly the ANΔPAΦAΞIΔOC:AΓPIHC whose fruit is prescribed in 1 Mul. morb. 31, —

both kinds it would seem from Dioscorides being eaten as potherbs, and their fruit used medicinally; Pliny xx. 83 expressly states that the "atriplex silvestre" is used for the same purposes as the cultivated kind, and besides for dyeing the hair: C. bonus-henricus was observed by Sibthorp, Chaubard, and Fraas, frequent in mountainous situations from the Peloponnesus to Aetolia Westward, is described by Gerarde, Bauhin hist. ii. 965, and Parkinson; is termed "ch. folio triangulo" by Tournefort inst. 506; is known to occur in waste places throughout middle Europe as far as Denmark (fl. Dan. pl. 579, and Pers.); was once much cultivated in Britain, but is regarded by Babington, and Watson, as probably exotic and now naturalized. By European colonists, was carried to Northeast America, observed by myself in cultivated ground in the environs of Salem.

Arum arisarum of the Mediterranean countries. A small species called in Greece "thrakōntia" (Sibth.); and clearly the ΑΡΙΜΥ acrid ΒΟΛΒΙΟΝ: ΕΝ: ΠΥΡΟΙC prescribed, especially that from Egypt, in 2 Mul. morb. 63, — the "aris" growing in Egypt and resembling the "aro" but smaller with smaller leaves and a root not exceeding the size of a large olive, is mentioned by Pliny xxiv. 98, also by Galen voc. Hipp. 442, and Hesychius; and the "arisarōn" having according to Dioscorides an olive-like root and more acrid than the "arōu," is referred here by writers: A. arisarum was observed by Sibthorp, Chaubard, and Fraas, extremely frequent from the Peloponnesus throughout Greece; by Delile, on the Mediterranean border of Egypt, and by myself in winter near the pyramids. Westward, is termed "arisarum latifolium majus" by Tournefort inst. 161; was observed by Savi iv. 101 in Italy (Spreng.); and is known to grow in other parts of Southern Europe, as well as in Barbary (Pers.).

Polypodium vulgare of Northern Climates. Called in Britain *polypody* or by the older herbalists *oak-fern* (Prior), in Italy "felce quercina" or "polipodio quercino" (Lenz), in Greece "thĕnthrōphthĕiri" (Fraas) or "pōlupōthi" (Sibth.); in which we recognize the ΠΟΛΥΠΟΔΙΟΝ prescribed in 1 Mul. morb. 45, — mentioned by Theophrastus caus. ii. 17. 4 as sometimes growing on trees, by Dioscorides as a span high and growing on mossy rocks and trunks of trees: P. vulgare was observed by Sibthorp, Chaubard, and Fraas, frequent in such situations in Greece; is known to grow also in Siberia (Hook.). Westward, the pōlupōthiōn" or "skōlōpĕnthrōn" or "pōlurrizōn" is identified in Syn. Diosc. with the "philikōula phlōukitalis" of the Romans, by Pliny xxvi. 37 with the "filiculam:" P. vulgare was observed by Desfontaines in Barbary, by Lenz in Italy; and is known to grow throughout middle and Northern Europe as far as Iceland (Hook., and Bory). Farther West, is known to grow in Subarctic America from Lat. 64° to 54° (Hook.), has been observed by myself along the Atlantic from Northern New England to Lat. 39°, is known to grow on the Alleghanies as far as Alabama (Chapm.), was observed by Nuttall along the Arkansas, and again by myself along the Pacific at Puget Sound.

Piper nigrum of Tropical Hindustan. The *black pepper* of commerce is called in Tamil "molagoo-vully," in Telinga "moloovoo-kodi" (Drur.), in Bengalee "golmarich," in Hindustanee "filfil" or "golmirch" (D'roz.) or "mirtsh" (Fleming), in the environs of Bombay "miree" or "kala miree" (Graham); in which we recognize the Indian round pepper called ΜΥΡΤΙΔΑΝΟΝ of 2 Mul. morb., — the "strōngulōn pĕpĕri" distinguished by Theophrastus ix. 20. 1, and "mĕlan" kind of Dioscorides, Pliny xii. 14, and Galen fac. simpl iii. 97; also the "fulful" of Rhazes, Avicenna, Abd-allatif, and Ebn Baitar: pepper is termed "sacrum" by Persius, and down to the Fifth century was so highly valued as to be enumerated by Attila among other things required for the ransom of the city of Rome (Drur.): in regard to the ancient route of importation, I saw on the Nile a quantity of black pepper that had been brought from Mecca across the Red Sea and through the Thebaid. Eastward from Arabia, the vine producing it was observed by Rheede vii. 12, Roxburgh, and Graham, under cultivation in Hindustan; by Mason v. 494 "exotic" in Burmah, "often seen creeping up the trees" and called "nya-yoke-koung;" by Marsden, on Sumatra, at the present day the principal seat of its cultivation. By European colonists, was carried to the West Indies, where according to Lindley it is also successfully cultivated.

Piper trioicum, regarded as the original state of the same plant by Wight, and Miquel, is called in Telinga "murial-tiga" (Roxb.), in the environs of Bombay "cockerwail" (Grah.); was found by Roxburgh wild in moist rich soil shaded with trees among the Circar mountains; by Graham, "clothing the trunks of high trees" at Lanowlee not far from Bombay. Roxburgh commenced a plantation of some fifty acres, which from 1789 yielded abundantly, and the product was rated by the merchants equal to the best Malabar pepper (Lindl., and Drur.).

Piper betle of the Malayan archipelago. The *betel vine* is called in Sanscrit "nagurulee" or "tamboolee" or "tambooluvulle," in Bengalee "pan" (Lindl.), in Hindustanee "pan" or "tambol" (D'roz.), and at Bombay the roots as a stimulant medicine "paun-ka-jhar" or "pippla mool" (Vaupell); in which we recognize the ΙΝΔΙΚΟΥ of 2 Mul. morb. 47 — identified through Galen with the "pĕpĕrĕōs riza" of Dioscorides ii. 188; also the "fulful mujah" root of pepper plant mentioned by Ishak ben Amran, Ebn Masah, Avicenna p. 237, and Ebn Baitar. The plant itself is

called "tanbul" or "tamul" by Maserjawia, Abu Hanifa, Masudi, Haly Abbas, Gafeki, Avicenna, Edrisi, and Ebn Baitar; and the imported folded leaves have sometimes reached Egypt, where "fufal" or "areca & betel" are enumerated by Forskal mat. med. as "masticatorium." Farther South, P. betle was observed by myself under cultivation on Zanzibar. Eastward, by Rheede vii. pl. 15, Roxburgh, Graham, and myself, under cultivation in Hindustan; by Burmann pl. 82, on Ceylon; by Mason v. 495 "exotic" in Burmah, extensively cultivated by the natives and called "kwon-rwet;" by Rumphius v. pl. 116, and myself, under cultivation throughout the Malayan archipelago, but by Blume once found wild in a marsh among mountains on Java (Lindl.). By European colonists, was carried to the West Indies, where according to Lindley it is now cultivated. (See Areca catechu).

"313 B. C." (Hindu narr., Benfey, and Buns.), Pataliputra* on the Ganges captured and the sons of Nanda dethroned; Sandracottus establishing himself there as king. — Pataliputra (not far from Patna) was visited by Fa-hian.

"312 B. C." (Diodor., and Clint.), at Gaza, Demetrius Poliorcetes defeated by Ptolemy and Seleucus Nicator. Babylonia was now seized by Seleucus; whose entrance into Babylon "March 13th, Tuesday" (Blair) marks the *Era of the Seleucidæ*. — Used especially by the Jews, under the name "Dhilcarnain" or "Era of contracts."

Clearchus of Soli, a pupil of Aristotle, possibly at this time writing.

Prunus domestica of Europe and the adjoining portion of Asia. In its wild state called in France "prunelle," in Lorraine "brimbelle" (Fée); in which we recognize the ΒΡΑΒΥΛΟΝ growing according to Clearchus on Sicily and Rhodes, — mentioned also by Seleucus, Theocritus vii. 145, Athenaeus ii. 10, and Galen alim. fac. ii. 38; and "brabyla" by Pliny xxvii. 32. Cultivated kinds are called in Britain *prune* or *damson* (Prior), in Greece "thamaskēnĕa" (Fraas), in which we recognize the "prōumnēs" having a gum of Theophrastus ix. 1, the "kŏkkumēlĕa" called in Asia "prōumnōn" of Galen simpl. med. fac. vii. 35, and the Syrian "kŏkkumēlĕa" growing according to Dioscorides especially at Damascus and the fruit dried: P. domestica was observed by Sibthorp, Chaubard, and Fraas, under cultivation in Greece and sometimes growing spontaneously; is known to grow wild around Caucasus and the Talysch mountains (Pall. fl. ross. i. p. 18, Ledeb., and A. Dec.); was observed by Forskal, Delile, and Clot-Bey, under cultivation in Egypt; and by Forskal, under cultivation on the mountains of Yemen. Westward, the "cereolum et damasci prunum" is mentioned by Columella x. 405, the "damascena" or "pruna in damasco monte nata" is enumerated by Pliny xiii. 10 and xv. 12 as a tree but recently introduced into Italy, and the dried fruit "pruna peregrinae senectae" is mentioned as laxative by Martial xiii. 29: P. domestica is termed "p. fructu cerei coloris" by Tournefort inst. 622, and cultivated varieties are familiarly known in the gardens of Europe. By European colonists, some of these varieties have been carried to Northeast America, where they continue frequent in gardens in our Northern and Middle States.

"The same year" (Sm. b. d., and Lubke and Lutrow), the "via Appia" or oldest Italian road, built by the censor Appius Claudius Caecus; the earliest literary Roman, writing however in Greek. He also built the oldest of the fourteen aqueducts that supply Rome with water.

"311 B. C." (Sm. b. d.), C. Junius Bubulcus Brutus and Q. Aemilius Barbula consuls, the Etruscans having declared war, defeated by the Romans.

"In this year" (Sm. b. d.), Roxana widow of Alexander, and her son Alexander Aegus, put to death by Cassander.

Pisum ochrus of the Mediterranean countries. A species of *pea* called in Italy "araco nero" (Lenz), in Greece "aukŏs agriōs" (Sibth.); in which we recognize the ΑΡΑΚΩΝ of Dieuches — (Oribas. iv. 8), mentioned as a cultivated pulse by Phanias of Eresus (Athen. ix. 71), and Clemens Alexandrinus strom. i. 7; by Theophrastus viii. 8. 3 as springing up among lentils, its seeds hard and rough: P. ochrus was observed by Sibthorp, and Chaubard, frequent in cultivated ground from the Peloponnesus to Cyprus; and the "aracus" is enumerated by Alpinus among the esculent plants of Egypt. Westward, the "cicer nigrum" is distinguished by Pliny xviii. 32 to xxii. 71: P. ochrus is

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* *Bignonia suaveolens* of Tropical Hindustan. A flowering tree called in the environs of Bombay "purul" (Graham), in Sanscrit "patali" (Koenig); and giving its name to the city of Pat'ali putra on the Ganges — (C. Müll. note to Arrian ind. 10): "patala" flowers are mentioned in the Saddharma pundarika (Burn. ii. 218 to 415), by Jayadeva (res. asiat. iv. 291), Susrutas, Harivansa 18, and as red by Kalidasa raghuv. xvi. 52 to xix. 46: the "po-tch'a-li" seen by Hiouen-Thsang 8 in Hindustan, is referred here by Stanislaus-Julien: B. suaveolens was observed by Gibson, and Graham, on the Deccan, its "flowers in terminal panicles, of a dark purple colour and very fragrant;" is termed "b. gratissima" by Koenig; and was observed by him, and Roxburgh, in Tranquebar and other parts of Hindustan.

described by Morison ii. pl. 3; is termed "ochrus folio integro capreolos emittente semine subluteo" by Tournefort inst. 396; "ochrus uniflorus" by Moench; was observed by Lenz in Italy; and is known to occur in cultivated ground in Southern France and as far as Portugal (Lam. fl. fr., Dec., and Pers.).

Arum Dioscoridis of the East Mediterranean countries. Called in Greece "vourvôs" (Fraas) or "agriōkōlōkuthia" (Sibth.); and the "aron". commended by Dieuches, — Cleophantus, and Diodotus (Plin. xxiv. 92), stemless according to Theophrastus vii. 12. 2 to 13. 2 and its root and leaves steeped in vinegar and eaten, described by Dioscorides as having smaller leaves than those of "thrakōntiōu" and less spotted, is referred here by writers: the "arōn" called on Cyprus "kōlōkassiōn" is identified in Syn. Diosc. with the "lōupha" of the Syrians, and the "luf" of Ebn Baitar is admitted to be an Arum: A. Dioscoridis is described by Sabbati hort. rom. ii. pl. 75 (Bory); was observed by Sibthorp, Chaubard, and Fraas, in waste and cultivated ground from the Peloponnesus and Boeotia to Cyprus, the root cooked and eaten.

"310, Aug. 15th, about 8 A.M." (Diodor., Blair, and Clint.), *eclipse of the sun*, nearly total, "being eleven digits 10′." Agathocles after defeat in Sicily by the Carthaginians transporting his army to carry the war into Africa, with the co-operation of Olynthius or Ophelas of Cyrene, marching by land (pseud-Aristot. oecon. ii. 35, Diodor. xx. 40. 1, Marcian, and C. Mull. geogr. min. p. xxiv).

"The same year" (Sm. geogr. dict.), Q. Fabius Maximus and C. Marcius consuls, the Ciminian forest first crossed by the Romans, and the Etruscans and their allies defeated at the Vadimonian lake by Q. Fabius Maximus: the first decisive blow to the ancient power of Etruria — (according to Livy ix. 39).

Boswellia sp. of Equatorial Eastern Africa. A stunted tree only five feet high, affording a kind of "looban" (Grant) or *frankincense;* perhaps the "livanōtōs" tree (according to Juba) transplanted under the Ptolemys into Egypt: observed by Grant "growing locally in patches in 3° N." on the Nile.

Boswellia papyrifera of Abyssini. Called there "makar" or "makkar" (Rich.); and possibly the "livanōtōs" tree in question, — and that known to Theophrastus ix. 4. 2 as growing near Saba on a mountain whose summit was covered with snow: B. papyrifera was received by Richard from Abyssinia, where it grows at the elevation of about "four thousand" feet on the mountains (C. Mull. geogr. min. i. p. cvii).

"309 B. C." (Sm. b. d.), Heracles, only surviving son of Alexander, put to death by Polysperchon and Cassander.

As early perhaps as this date (Sm. b. d.), Herophilus removing to Alexandria, as affording opportunities for dissecting: — he there made important discoveries in Anatomy, and became eminent as a physician.

Plantago coronopus of the Mediterranean countries and middle Europe. Called in Britain *star of the earth* (Prior), in Italy "piantaccine coronopo" (Lenz), in Greece "kuparissōhōrtōn" (Sibth.), by the Arabs "atariabelal" (Spreng.); in which we recognize the ΓΗC: ΑCΤΕΡΟC prescribed against bleeding by Herophilus — (Gal. comp. med. vii. 4); also the "astriōn" of Syn. Diosc. ii. 157, and Actuarius, referred here by Stapel: the "radschil elgorab" of Ebn Baitar is referred here by Sprengel, and Sontheimer: P. coronopus was observed by Forskal, Sibthorp, and Chaubard, frequent on the seashore of Greece and the Greek islands; by Forskal, and Delile, around Alexandria and Cairo. Westward, the "astriōn" or "ammōnōs" is identified in Syn. Diosc. with the "atirsiptē" of the Numidians, and "kakiatrikēm" or "stilagō" or "saggōuinariam" of the Romans: P. coronopus is termed "coronopus hortensis" by Tournefort inst. 128; was observed by Forskal on Malta, as well as near Marseilles; and is known to grow throughout middle Europe as far as Britain (Blackw. pl. 460, Hall. helv. 658, Pers., Engl. bot. pl. 892).

Symphytum officinale of Europe and the adjoining portion of Asia. Called in Britain *comfrey* (Prior), in Sweden "vallört," in Germany "beinwelle" or "beinheil," in France "consoude" (Spreng.), in Italy "consolida maggiore" or "sinfito consolida" (Lenz), in Greece "xēkōuli" (Sibth.); in which we recognize the CYMΦYTOY whose root is prescribed against bleeding by Herophilus — (Gal. comp. med. vii. 4), not named but alluded to by Theophrastus ix. 18. 2: S. officinale was observed by Sibthorp in Greece and on the Greek islands. Westward, the "sumphutōn allō" or "pēktēn" is identified in Syn. Diosc. with the "sōldagineēm" of the Romans; and the "consolida" is mentioned by Apuleius Barbarus 60: S. officinale is described by Brunfels i. 75 (Spreng.); is termed "s. consolida major flore purpureo quæ mas" by Tournefort inst. 138; was observed by Lenz in Italy; and is known to grow in moist shady situations as far as Britain (Engl. bot. pl. 215, and Pers.). By European colonists, was carried prior to 1669 (Jossel.) to Northeast America, where it continues about dwellings, the flowers according to A. Gray "yellowish-white, rarely purplish." Formerly according to Lindley was "in much repute as a vulnerary, but not now used;" the root however yielding mucilage and "useful in coughs and all internal irritation."

Symphytum brochum of the East Mediterranean countries. Called in Greece "hōrthroutzikō" (Fraas); and probably included in the "sumphutōu" of Herophilus, — and others: the "sumphutōn allō" of Dioscorides, two cubits or more high covered with roughish pubescence that excites itching, stem empty like that of "sōghōu" and rendered angular by adnate "vouglossou"-like leaves, flowers white or yellow, roots black but within white and mucilaginous, is referred here by Fraas: S. brochum is described by Chaubard, and was observed by him, and Fraas, in cool situations in Attica and the Peloponnesus.

Ajuga reptans of Europe and the adjoining portion of Asia. Called in France and Britain *bugle*, in mediæval Latin "bugulus" or "consolida," in old English "consound" or "consoud" (Prior); and possibly the "sumphutōu" of Herophilus, — and "sumphutōn petraiōn" growing according to Dioscorides among rocks and having "ōriganō"-like branches, "thumōu"-like heads, a long reddish root, and employed against spitting blood and among other medicinal purposes for agglutinating wounds. A. reptans was observed by Sibthorp, and Chaubard, in woods from the subalpine portion of the Peloponnesus to Constantinople. Westward, the "symphyti" is identified by Scribonius Largus 83 with the "inulam rusticam" or "alum gallicum" and its root prescribed against bleeding from the lungs, chest, or arteries; the "symphyton petraeum" of the Greeks is identified by Pliny xxvii. 24 with the "alum" of the Romans, resembling "cunilae bubulae," healing broken bones and agglutinating flesh even in cooking, but his further account seems chiefly taken from Dioscorides: A. reptans is termed "bugula" by Tournefort inst. 209; and is known to grow in woods and meads throughout middle Europe as far as Denmark (fl. Dan. pl. 925, Curt. lond. ii. pl. 43. and Pers.).

"308 B. C. = beginning of the Eleventh manwantara" among the Hindus — (Graha Munjari tables, and Bentl.).

"The same year" (= 543 — "235 yrs." of the Mahavans. v. p. 68, and Mason iii. 40), at Pataliputra (near Patna on the Ganges) meeting of the Third great Budhist council.

Corypha umbraculifera of Ceylon. The *talipot palm* is called in Tamil "condapana," in Telinga "sidalum," in Bengalee "talee" (Drur.); and the "tala" leaves on which the early Budhist Scriptures of Kasyapa's council were written — (according to tradition current in the days of Hiouen-thsang 158), may be compared: "the leaf used for writing on" is described by Nicolo Conti as "six cubits long and almost as many broad:" C. umbraculifera was observed by Rheede iii. 1 to 12 in Malabar; by Knox, wild on Ceylon; and according to Roxburgh, and Drury, the leaves are used for writing on with an iron style, for portable tents and for covering houses, for umbrellas by all classes, and the seeds are used as beads by certain sects of Hindus, and the pith converted into a kind of *sago*. Farther East, "leaves so big that five or six men can stand in the shade" were seen by Jordanus mirab. in "India major:" C. umbraculifera was observed by Mason "exotic" in Burmah and called "pæ;" by myself, under cultivation on the Philippines, where according to Blanco it is called in Tagalo and Bisaya "buri" or "buli." By Nimmo, was introduced "in 1833" into the environs of Bombay (Graham).

Corypha taliera of Eastern Hindustan. The *book palm*, an allied species, is perhaps the "tala" in question: — the "tali" of Kalidasa ragh. xiii. 15, and Susrutas chik. 17, is referred here by Hessler: C. taliera was observed by Roxburgh cor. iii. pl. 255 to 256 in Bengal, its leaves used for writing on with an iron style, for thatching roofs, and hats and umbrellas are made from them (Drur.). Farther East, was observed by Mason v. 425 to 812 in Burmah and called "pæ," planted near "religious edifices" and its leaves used for writing on. By Nimmo, was introduced "in 1833" into the environs of Bombay (Graham).

"In this year" (Sm. b. d.), Ptolemy visiting Greece as liberator, obtained possession of Corinth and Sicyon, where he left garrisons.

About this time, "at the expense of kings" (Plin. ii. 65, and Gemin.), the *height of mountains*, Pelion, Cyllene, and others in Greece, measured by Dicaearchus a pupil of Aristotle. Dicaearchus also collected statistics tending to show, that more human beings perish through the violence of man, than from all other causes combined.

"307 B. C." (= 543 — "236 yrs.," Turnour mahawans. xiii., and Elphinst. ii. 4), the *Budhist* religion introduced from Hindustan into Ceylon* (compare B. C. 246).

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* *Odina wodier* of Tropical Hindustan and Burmah. A Terebinthaceous tree called in Sanscrit "ajasringha" (Pidd.), in Tamil "kulleyum" or "woodian," in Telinga "waddi gampina," in Hindustanee "cushmulla," in Bengalee "jiwul" (Drur.), in the environs of Bombay "shimtee" (Graham), in Burmah "hnan-bai" (Mason); in which we recognize the "coliya" tree on the site of and giving its name to a new city — (Mahavams. i. p. 24), and the "ajasringi" of Susrutas sutr. 36: O. wodier was observed by Rheede iv. pl. 32 in Malabar; by Graham, "on the Ghauts pretty common," also

"In this year" (Diodor., and Clint.), by Demetrius Poliorcetes, Athens liberated; Demetrius Phalerius escaping to Egypt.

Phanias of Eresus, a pupil of Aristotle and the contemporary and friend of Theophrastus (Sm. b. d.).

Malva rotundifolia of Europe and the adjoining portion of Asia. Called in Britain *mallows* (Jossel. and Ainsw.); in France "mauve" (Nugent), in Germany "runde käsepappel" (Fraas), in Italy "malva" (Lenz), in Greece "mōlōha" or "mōlōhē" (Sibth.) or "agria mōlōha" (Fraas), in Yemen "hobsen" (Forsk.); in which we recognize the ΜΑΛΑΧΗ whose seed-vessel resembling a sea-urchin in its markings according to Phanias is called ΠΛΑΚΟΥC cakes, — described by Theophrastus vii. 8. 1 as "epigĕiōkaula" its stem resting on the ground, and called "mōlōhē" before the days of Athenaeus ii. 52: the "malahē hĕrsaia" of Dioscorides may also be compared: M. rotundifolia was observed by Sibthorp, Chaubard, and Fraas, frequent in fallow ground from the Peloponnesus to Asia Minor; by Forskal, among the mountains of Yemen, and "aqua Malv. rotundifol." called "habize" in the drug-shops of Egypt. Westward, the "moloche" is mentioned by Columella x. 247; several kinds of "malva," by Pliny xx. 84; and the "malva" flagging in the heat as understood by Gildas ep. 59 writing in Britain, seems to belong here: M. rotundifolia is termed "m. vulgaris flore minore folio rotundo" by Tournefort inst. 95; was observed by Lenz in Italy, used there medicinally; and is known to occur in waste places as far as Denmark (fl. Dan. pl. 721, and Pers.). By European colonists, was carried before 1669 (Joss.) to Northeast America, where it continues along roadsides and around dwellings in our Atlantic States, even according to Chapman in the far South. (See M. sylvestris).

Echinophora tenuifolia of the East Mediterranean countries. Called in Greece "valtōhōrtōn" (Fraas); and the ΜΥΗΦΟΝΟΝ of Phanias, — enumerated by Theophrastus vi. 1. 4 among striate-stemmed ferulaceous plants, by Pliny xxi. 30 as coronary, may be compared: E. tenuifolia is described by Columna ecphr. i. pl. 101; is termed "e. pastinacæ folio" by Tournefort inst. 656; was observed by Sibthorp, and Fraas, frequent from the Peloponnesus to Smyrna, by Chaubard on Antiparos, one of the two plants surviving the September heat of the sun; is known to grow as far West as the Southern extreme of Italy; and as cultivated by Sprengel proved extremely fragrant.

"306 B. C." (Diodor., and Clint.), the forces of Ptolemy defeated in *naval combat* by Demetrius Poliorcetes. The title of "king" now assumed by Ptolemy and three other of Alexander's generals, Seleucus, Lysimachus, and Antigonus. A daughter of Antigonus, Berenice, became the wife of Ptolemy (Plin. xxvii. 8, and Tzetz.).

The hieroglyphic ovals of Ptolemy, not earlier therefore than this date. Obelisks now for the first time removed from their original site; two being brought by Ptolemy from Heliopolis to Alexandria: — where they remain, one of them upright to the present day.

"In this year" (D. Laert. v. 38, Spreng., and Sm. b. d.), the philosophers, including Theophrastus, banished from Athens. — The law was repealed in the following year, and the philosophers returned.

The ΜΥΚΗΤΕC: ΑΠΟΛΙΘΟΥΜΕΝΟΙ of the Erythræan Sea mentioned by Theophrastus iv. 7 — are referred by Lenz to *corals:* and may be compared especially with the genus *Fungia.*

Uvaria narum of Western Hindustan. A climbing shrub called in Malabar "narum-panel" (Drur.); in which we recognize the ΝΑΙΡΟΝ enumerated among perfumes by Theophrastus ix. 7. 3: — U. narum was observed by Rheede ii. pl. 19 in Malabar, the roots fragrant and aromatic, yielding a sweet-scented greenish oil which is employed medicinally; by Graham, in "the Concans" as far North as Bombay; by Wight, and Drury, Southward to Travancore.

Diospyros ebenaster of Tropical Hindustan and Ceylon. A sort of ΕΒΕΝΟΥ: ΠΟΙΚΙΛΗC variegated ebony is mentioned by Theophrastus v. 3. 2 as the product of a large tree with beautiful foliage and resembling the pear: — the Indian "ĕvĕnŏs" is described by Dioscorides as inferior to the Ethiopian kind and marked with light or tawny bands and spots (see also Salmas. comm. Solin. 727): D. ebenaster is described by Rumphius i. pl. 6; was observed by Retz v. 33 near Calcutta (Pers.); is known to grow in other parts of Hindustan and on Ceylon, the wood according to Tennent i. 117 of extreme beauty; the prevailing black stained with stripes of rich brown, approaching to yellow and pink, but the heart never sound (Drury).

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around Bombay, its "leaves deciduous after the rains;" by Wight, one of the most commonly cultivated and best known trees in the peninsula, planted in avenues, and its wood useful; by Roxburgh, Ainslie, and Royle, as far as Bengal, its bark leaves and exuded gum employed medicinally; by Mason v. 540, in Burmah, "not uncommon from Maulmain to Toungoo" and producing "a valuable timber," the trunk according to Berdmore attaining "a girth of twelve feet."

Euphorbia heptagona of Southern Africa. The ΠΙΖΑ: ΘΑΝΗΤΟΦΟΡΟC of Ethiopia in which arrows are dipped, mentioned by Theophrastus ix. 15. 2, — may be compared: E. heptagona is described by Bradley succ. ii. pl. 13, Boerhave lugd. i. pl. 258, and according to Virey "the Ethiopians tip their arrows with the milk which is a mortal poison;" is further attributed by Lindley to the "Cape of Good Hope." The Wazaramo, a Negro tribe inhabiting the coast opposite Zanzibar, were found by Speke ii. 2 to keep their arrows "well poisoned."

Zygia sp. of Eastern Equatorial Africa. A very large tree, the largest in Uhiyow in "7° S.," called "m'koondee" (Grant), and the pods probably already "used for lashing round poisoned arrows instead of leather:" — the pods also "said to be edible," and the wood which "takes a fine polish" used for boats and drums (Speke trav. app.).

Scirpus (*Eleocharis*) *palustris* of Temperate Climates. Called in Britain *club-rush* (Prior); and the ΤΥΦΗ of Theophrastus iv. 10, leafless and growing in and around the Orchomenian lake, — its smooth stem according to Dioscorides having around the summit a densely-crowded "ĕkpappōumĕnōn" flower, may be compared: E. palustris was observed by Sibthorp, and Chaubard, in marshes from the Peloponnesus throughout the Greek islands; by Forskal, Jomard, and Delile, in Egypt as far as the Fayoum; is known to grow in the Tauro-Caspian countries (Bieb.) and Siberia (Wats.). Westward, is termed "s. equiseti capitulo majori" by Tournefort inst. 528; was observed by Brotero in Portugal; and is known to grow throughout middle and Northern Europe as far as Lapland and Iceland (Hook., fl. Dan. pl. 273, and Wats.). Farther West, is known to grow throughout our Atlantic States as far as Florida (Muhl., Nutt., A. Gray, and Chapm.); was observed by Short in Kentucky; by Nuttall, along the Arkansas; and was received by Kunth from the Hawaiian Islands. In the Southern Hemisphere, was observed by Baldwin in the Banda Oriental; by J. D. Hooker, in Patagonia and on the Falkland Islands (A. Dec.); and was received by Kunth from Austral Africa.

Phalaris paradoxa of the Mediterranean countries. A grass called in Greece "alēpŏunōura" (Sibth.); in which we recognize the ΑΛΩΠΕΚΟΥΡΟC of Theophrastus vii. 11. 2 having a spike neither acute nor pointed, but soft and downy like a fox's tail, and flowering in successive portions: — P. paradoxa was observed by Sibthorp, and Bory, frequent in cultivated ground from the Peloponnesus throughout Greece; by Delile, around Salehyeh in Lower Egypt. Westward, is termed "gramen spicatum perenne semine miliaceo radice repente," by Tournefort inst. 519 (Desf.); and is known to occur as far as Portugal (Pers.).

Alopecurus utriculatus of Europe and the adjoining portion of Asia. Also called in Greece "alēpōunōura" (Sibth.); and possibly included in the "alŏpĕkōurōs" of Theophrastus; — A. utriculatus was observed by Forskal, Sibthorp, and Chaubard, in waste places and grassy situations from the Peloponnesus to Constantinople. Westward, is termed "gramen spicatum pratense spica ex utriculo prodeunte" by Tournefort inst. 519, "phalaris utriculata" by Linnæus; was observed by Scopoli insubr. pl. 12, and Savi, in Italy as far as Milan (Pers.).

Polypogon Monspeliense of the shores of the Mediterranean and adjoining portion of the Atlantic. A grass called in Greece "alŏpēnōura" (Fraas), in Egypt "deyl el-far" mouse tail (Del.); and the "alŏpĕkōurōs" of Theophrastus — is referred here by Fraas: the "teil" grass is mentioned in Stephanus' translation of Haly Abbas; and the "thil" grass by Ebn Baitar: P. Monspeliense was observed by Forskal, Sibthorp, Chaubard, and Fraas, frequent from the Peloponnesus to Smyrna; by Forskal, and Delile, as far as Cairo; and by myself frequent on the river-flat of the Nile as far as Thebes. Westward, the account of the "alopecuros" by Pliny xxi. 61 seems taken from Theophrastus; but the "teil" grass is mentioned by Michael de Capella: P. Monspeliense is described by Barrelier pl. 115; is termed "panicum maritimum spica longiore villosa" by Tournefort inst. 515; was observed by Scopoli in Carniolia, by Savi in Italy, by Desfontaines atl. in Barbary; and is known to grow along the Atlantic as far as Britain (Huds., Lam. fl. fr., and Pers.). By European traders and colonists, was carried to Northeast America, where it has become naturalized on the Isle of Shoals (A. Gray), and near the sea in South Carolina (Ell., and Chapm.).

Hordeum bulbosum of the Mediterranean countries. The CΤΕΛΕΦΟΥΡΟC according to Theophrastus vii. 11. 2 by some called ΑΡΝΟΓΛΩCCΟΝ or ΟΡΤΥΞ, its spike flowering throughout at once like that of wheat, and the whole plant resembling wheat ΠΥΡΩ except that the leaves are broader, — may be compared: H. bulbosum is termed "gramen creticum spicatum secalinum altissimum tuberosa radice" by Tournefort cor. 39; was observed by Chaubard in all grassy places in the Peloponnesus; by Sibthorp in maritime sand on Cyprus; and was received by Fischer from the Tauro-Caspian countries (Steud.). Westward, is described by Barrelier pl. 112; is known to grow in Italy (Pers.), and on the arid plains of Tunis (Desf. i. pl. 37, and Schousb. maroc.).

Aegilops ovata of the Mediterranean countries. A grass called in Italy "cerere" or "grano delle formiche" or "egilope" (Lenz), in Greece "makrōgĕnni" or "agriōsitarō" or "sithĕrōstarō" (Sibth.); in which we recognize the ΑΙΓΙΛΩΠΟC of Theophrastus vii. 13. 5 to caus. iv. 16. 2, growing among barley and ΠΟΛΥΧΙΤΩΝ having many tunics, — mentioned also by Nicander ther. 857,

by Dioscorides as having leaves like wheat, seeds in two or three husks in a terminal head from which bristles arise: Ae. ovata was observed by Forskal, Sibthorp, Chaubard, and Fraas, frequent from the Peloponnesus throughout the Greek islands to the Dardanelles: and "Ae. triaristata" (seen in Greece by Bory and regarded by him as perhaps not distinct) was observed by Delile near Alexandria on the Mediterranean border of Egypt. Westward, the "festuca" called "aegilops" is mentioned by Pliny xviii. 44 and xxv. 93, and as killing barley; Ae. ovata is described by Dodoens, p. 539; is termed "gramen spicatum durioribus et crassioribus locustis spica brevi" by Tournefort inst. 519; was observed by Lenz in Italy; is known to occur also in Barbary, and in various parts of Southern Europe (Scop., Pers., and Spreng.). The traditional belief that wheat changes into this grass, was ascertained by Godron to arise from hybridization, lasting only a single generation (A. Dec. p. 933).

Galanthus nivalis of Europe and the adjoining portion of Asia. Called in Britain *snowdrop*, in Germany "schneetropfen" (Prior), in France "perce-neige" (Nugent); the ΛΕΥΚΟΙΟΝ described by Theophrastus vii. 13. 9 as bulbous with a round root, — is referred here by Dodoens, and Fée: G. nivalis was observed by Sibthorp around Constantinople, and by Chaubard in the Peloponnesus. Westward, is termed "narcisso-leucoium trifolium minus" by Tournefort inst. 387; and is known to grow throughout middle Europe as far as Holland (Jacq. austr. pl. 330, prodr. fl. Bat., and A. Dec.); but in Britain was known to Gerarde, and Ray, under cultivation only, and is regarded by Watson as exotic and naturalized. By European colonists, was carried to Northeast America, where it continues under cultivation as a garden flower.

Leucoium æstivum of Europe and the adjoining portion of Asia. The ΟΠΙΤΙΩΝ of Theophrastus vii. 13. 9 — is referred to this genus by Camerarius; and L. æstivum, observed by Sibthorp around Constantinople, seems the only species known in Greece. Westward, the "calathis virentia lilia canis" of Columella x. 99 is referred here by Sprengel: L. æstivum is termed "narcisso-leucoium pratense multiflorum" by Tournefort inst. 387; is known to grow in Austria (Jacq. austr. pl. 202, and Pers.); but is regarded by Watson as cultivated only and naturalized in Britain, and by A. Decandolle as probably also exotic in Holland and Denmark.

Lloydia Graeca of the East Mediterranean countries. The CICYPIΓXION of Theophrastus i. 10, ? 10 caus. vi. 11. 11, an edible bulb having leaves from the root only, and none from the stem, — may be compared: the "sisyrinchion" is enumerated by Pliny xix. 30 among bulbs known to the Greeks: L. Graeca is termed "bulbocodium græcum myosotidis flore" by Tournefort cor. 50; was observed by Sibthorp, and Chaubard, frequent on the loftier mountains from Crete and the Peloponnesus to Cyprus; and by Labillardière v. pl. 8, in Syria.

Scilla hyacinthoides of the West Mediterranean countries. The BOΛBOC: EPIOΦOPOC of Theophrastus vii. 13, having an esculent root covered inside of the bark with a woolly substance of which garments are made, — unknown to Pliny xix. 10, but termed "bulbus fabrilis" by Apicius, is referred here by Dierbach, and Sprengel: S. hyacinthoides is termed "s. eriophora" by Miller; and is known to grow in Portugal and on Madeira (Linn., Ait. i. p. 445, and Pers.).

Ledebouria hyacinthoides of Hindustan. Called in Hindustanee "bankanda" (D'roz.), in the environs of Bombay "boe-kanda" (Graham); and the Indian kind differing according to Theophrastus vii. 13. 8 in being hairy rather than woolly, — may be compared: L. hyacinthoides was observed by Nimmo in "both Concans, with two or three other undetermined species" (Graham); by Ainslie, and Rottler, in other parts of Hindustan as far as Bundelkund, the bulbs "employed in cases of strangury and fever in horses," and according to Theodore Martius also "as a substitute for squills" (Lindl.). Transported to Europe, is described by Sprengel ii. 97, and Boyle bot. mag. pl. 3226.

Urginea Indica of the seashore of Hindustan and Burmah. The *Indian squill* is called in Hindustanee "janglipiyaz" (D'roz.), in Bengalee "kanda," in Tamil "nurrivungayum," in Telinga "addivi-tella-guddaloo" (Drur.); and is possibly the Indian BOΛBOC in question: — U. Indica was observed by Graham "common on the sandy shores of both Concans," and "usually employed as a succedaneum for the true squill;" by Roxburgh, Wight pl. 2063, and Drury, in waste sandy situations near the sea in other parts of the peninsula, the burnt bulb according to Ainslie applied to the soles of the feet when suffering from any burning sensation: was observed by Mason v. 491 "green flowered," and frequent "on the seashore at Monmagon" in Burmah.

Tulipa Celsiana of the East Mediterranean countries. The NAPKICCOC: ΛΕΙΡΙΟΝ of Theophrastus vi. 6. 9 to 8. 1, vernal, having a broad leaf spreading on the ground, and a leafless stem bearing a terminal flower, — may be compared: T. Celsiana is described by Gouan; was observed by Gittard along the Alpheus; by Bieberstein, in the Tauro-Caspian countries (Steud.).

Tulipa Sibthorpiana of the East Mediterranean countries. The ΛΕΙΡΙΟΝ: ΕΤΕΡΟΝ of Theophrastus vi. 6. 9 to 8. 3, flowering in autumn, — may be compared: T. Sibthorpiana was observed by Hawkins, and Sibthorp pl. 330, in the Peloponnesus and Asia Minor.

Erythronium dens canis of Europe and Northern Asia. The unnamed plant, aphrodisiac by

contact according to Theophrastus — (Plin. xxvi. 63), or "saturiōn ĕruthrōniōn" of Dioscorides, growing in mountainous situations, its seed like flax, root pleasant tasted and said to be aphrodisiac if held in the hand, is referred here by Lobel: the "saturiōn ĕruthrōniōn" or "s. ĕruthraikōn" or "mēliōn tō ĕn udasin" or "ĕntatikōn" or "priapiskōn ē mōriōn" or "saturiskōs" or "ōrhis saturōu" is identified in Syn. Diosc. with the "mōlōrtikōulōum vĕnĕris" of the Romans; "satyrii erythraicon" according to Pliny xxvi. 63 is administered to rams and goats, and by the Sarmatians to horses: E. dens canis is described by Gesner hort. f. 261, and Lobel obs. 97 (Spreng.); has not been observed in Greece; but is known to grow throughout middle Europe (Lam. fl. fr.); was observed by Gmelin i. pl. 7 in Siberia; by Siebold on Yeso, and by the Japanese called "katakuri," by the Ainos "kiktori."

Muscari racemosum of the Mediterranean countries. Called in Britain *grape-hyacinth* (Prior), in Greece "vourvos" (Sibth.); and the BOΛBINH of Theophrastus vii. 13. 9 — may be compared: M. racemosum is among the kinds found by Anguillara sempl. p. 120 eaten on Crete, Zacynthus, and Corcyra, as well as in Italy (Spreng.); was observed by Sibthorp, and Chaubard, in the Peloponnesus and on the mountains of Crete. Westward, is described by Dodoens hist. p. 217, and Dalechamp 1502 (Spreng); is termed "m. arvense juncifolium cæruleum minus" by Tournefort inst. 348; is known to occur in France and middle Europe (Jacq. austr. pl. 187, and A. Dec.), but is regarded by Watson cyb. ii. 461 as exotic in Britain.

Crocus nudiflorus of the mountains of the Mediterranean countries. The scentless KPOKOC: O: AEYKOC of Theophrastus vii. 7. 4 — may be compared: C. nudiflorus was observed by Sibthorp on mount Athos. Westward, is termed "c. autumnalis sativo similis florum capillamentis tenuissimis minus odoris flore candidissimo" by Tournefort cor. 25; and is known to grow along the Pyrenees (Ramond, Lapeyr., Brot., Engl. bot. pl. 491, and Pers.).

Crocus minimus of the mountains of the East Mediterranean countries. The KPOKOC: AKANΘΩΔHC: KAI: AOCMOC of Theophrastus vii. 7. 4 — is referred here by Fraas: C. minimus was observed by him in the middle region of the loftier mountains of Greece. Farther West, is termed "c. Imperati" by Tenore as observed in Italy; is described also by Decandolle.

Iris foetidissima of Europe and the adjoining portion of Asia. Called in Britain *gladdon* (Prior), in Italy "ricottaria" or "spatula fetida" (Lenz); in which we recognize the "glathiōlōum" or "irim agrĕstĕm" of the Romans identified through Syn. Diosc. with the ΞIPIC of Theophrastus ix. 8. 7, — or "xuris" having according to Dioscorides red seeds and the flowers purple with a dark red centre: I. foetidissima was observed by Sibthorp around Constantinople. Westward, the "xuris" or "irin agrian" or "kakōs" is identified in Syn. Diosc. with the "aprōus" of the Dacians, and the irin "sylvestrem" called "xyrin" is enumerated by Pliny xxi. 83; I. foetidissima is described by Matthioli (Spreng.); is termed "i. foetidissima seu xyris" by Tournefort inst. 360; and is known to grow in Italy, Barbary, and throughout middle Europe as far as Britain (Pers.).

Lemna trisulca of Northern and Austral Climates. An aquatic plant; and the AEMNA of Theophrastus iv. 10. 1, growing under the water of the Orchomenian Lake, — is referred here by Billerbeck, and others: L. trisulca was observed by Sibthorp, and Chaubard, from the Peloponnesus to Constantinople; is known to grow also around Caucasus and in Northern Asia (Bieb., and A. Dec.), and as far even as Bengal (Kunth). Westward, is described by Micheli pl. 11; was observed by Scopoli in Carniolia, by Haller 1901 in Switzerland; is known to grow from Italy to Lapland (Pers., Fries, and Wats.), also on the Canaries, Madeira, and the Azores (A. Dec. 1004). Farther West, is known to grow in North America as far as Lat. 58° (Hook.); was observed by Drummond at 54° on the Saskatchawan, by Short in Kentucky, by myself near Boston, by Conrad near Philadelphia, and was received by Muhlenberg from the Cherokee country on the Southern extreme of the Alleghanies. In the Southern Hemisphere, was observed by R. Brown p. 345 in Tasmania and Southeast Australia.

Clematis viticella of the Mediterranean countries. The OINANΘH: AMPIA described by Theophrastus v. 9. 6 as a woody vine climbing around trees, — may be compared: C. viticella was observed by Sibthorp in hedges around the Nicæan Lake in Bithynia. Westward, is termed "c. purpurea repens" by Tournefort inst., 294, "c. lugubris" by Salisbury (Steud.); and is known to grow in hedges in Italy and Spain (Pers.).

Anemone nemorosa of Northern climates. The ANEMΩNHC: OPEION flowering according to Theophrastus vi. 8. 1 in the early spring; — may be compared: A. nemorosa was observed by Sibthorp in woods on mount Parnassus; is known to grow also on Caucasus (Bieb.), on the Volga as far as "Lat. 53°" (Pall.), and in Siberia (Dec.). Westward, is termed "wood-crowfoot" by Parkinson (Prior), "ranunculus phragmites albus vernus" by Tournefort inst. 285; was observed by Savi on the Appenines; by Brotero, on the mountains of Portugal; and is known to grow throughout middle Europe as far as Denmark (fl. Dan. pl. 549, Curt. lond. ii. pl. 38, and Pers.). Farther West, is known to grow in North America from the Lower St. Lawrence to Lat. 40° along the Atlan-

tic (Conrad), and on the Alleghanies to Carolina (Mx.); was observed by Short in Kentucky; by Drummond, "not North of 53°" as far as the Rocky mountains; was observed West of those mountains by Douglas (Hook.).

Aquilegia vulgaris of Europe and the adjoining portion of Asia. Called in Britain *columbine* (Prior), in France "ancolie" (Nugent), in Turkish "kanthili zitzĕi" (Forsk.); and the ΠΟΘΟC, æstival according to Theophrastus vi. 7 and of two kinds, one having its flower hyacinth-like, the other white and placed on sepulchres, — is referred here by Zalikoglous lex. mod.: A. vulgaris was observed by Sibthorp in the Peloponnesus; by Forskal, in gardens at Constantinople; and is known to grow in Siberia as far as the Altaian mountains (Ledeb.). Westward, the "spectabilis pothos" is mentioned by Pliny xxi. 39: A. vulgaris is described by Columna phytob. p. 1; is termed "a. sylvestris" by Tournefort inst. 428; is known to grow on Corsica and throughout middle and Northern Europe as far as Lat. 63° 15′ in Norway (Gunner p. 80, and A. Dec.). By European colonists, was carried to Northeast America, where it continues a favourite garden flower, and according to A. Gray "is beginning to escape from cultivation in some places."

Caltha palustris of Northern climates. Called in Anglo-Saxon "mersc-mear-gealla," in current English *gool* or *golds* or *mare-blobs* or *marsh-marigold* (Prior); in which we recognize the ΕΛΕΙΟ ΧΡΥCΟC enumerated as vernal by Theophrastus vi. 8. 1, — and referred here by Dumolin: C. palustris was observed by Sibthorp, and Chaubard, in the marshes of the Peloponnesus. Westward, is described by Lyte; is termed "populago flore majore" by Tournefort inst. 273; was observed by Savi in Italy, by Brotero in Portugal, and is known to grow throughout middle and Northern Europe as far as Denmark and Iceland (fl. Dan. pl. 668, Hook., and Wats.). Eastward from Greece, is known to grow about Caucasus (Ledeb.) and throughout Siberia as far as Lake Baikal and Kamtschatka (Gmel, Pall, and A. Dec); was observed by Thunberg in Japan, in a flower-vase and called "ienko so." Farther East, is known to grow along the Columbia river and from Lat. 60° in Canada and Labrador (Hook.), 51° in Newfoundland (La Pylaie), to 39° along the Atlantic and on the Mississippi (Conrad, and Beck). The plant according to A. Gray "is used as a potherb in spring."

Brassica Cretica of the East Mediterranean shores. Called in Greece "skarōlahanōn" (Sibth.) or "mŏrōlahanōn" (Fraas); and the ΑΓΡΙΑ: ΡΑΦΑΝΟC having according to Theophrastus vii. 4. 4 to 6. 2 small smooth and round leaves, — is referred here by Fraas: B. Cretica is termed "b. cretica fruticosa folio subrotundo" by Tournefort cor. 16; was observed by Sibthorp, Grisebach, and Fraas, frequent on the sea-cliffs of Greece and the Greek islands. (See B. incana).

Hesperis acris of the Egyptian Desert. Called in Egypt "sphæri" (Forsk.), the probable origin of the Greek name "ĕspĕris" transferred to an allied species: — H. acris, unknown in Greece, was observed by Forskal p. 118, and Delile pl. 35, in the environs of Cairo frequent in the Desert and having the taste and odour of Brassica eruca.

Hesperis matronalis of middle Europe. Called in Britain *dame's violet* or *Damask violet*, in medieval Latin "viola Damascena," in France "violette de Damas" (Prior) or "julienne" (Del.); and the ΕCΠΕΡΙC of Theophrastus caus. vi. 17. 3 more odorous in the evening, — and hence the name according to Pliny xxi. 18, is referred here by writers: the "philĕspĕrōn anthōs" is mentioned by the poet Dioscorides anth. pal. vii. 31, living in Egypt; and the "viōlam matrōnālĕm" of the Romans in Syn. Diosc. iii. 128 (cod. a.) may also be compared: H. matronalis is described by Ray, and Miller; and is known to grow wild throughout middle Europe from Switzerland to Denmark (Pers., Fries, and A. Dec.). By European colonists, was carried to Northeast America, where it continues under cultivation for ornament, and according to A. Gray "begins to escape from gardens." A cultivated variety with numerous white petals "odoratissimis," is mentioned by Persoon.

Coronopus Ruellii of Europe and the adjoining portion of Asia. Called in Britain *wart cress* or *swine's cress* (Prior), in Greece "ēmĕra almurithra" or "armurithra" (Fraas), in Egypt "hab raschat" (Forsk.); and the ΚΟΡΩΝΟΠΟΥC, bitter according to Theophrastus vii. 8. 3 to caus. ii. 5. 4 and its leaves spread upon the ground, — growing according to Dioscorides in waste places and along roadsides, an edible prostrate little herb with incised leaves, is referred here by writers: C. Ruellii was observed by Sibthorp, Chaubard, and Fraas, in waste places in the Peloponnesus and Attica; by Forskal p. 117, and Delile, from Alexandria to Cairo. Westward, the "coronopus" is described by Pliny xxi. 59 to xxii. 22 as prickly with a creeping stem, and sometimes cultivated: C. Ruellii is described by Ruel, Matthioli, Dodoens, and Dalechamp (Spreng.); is termed "nasturtium sylvestre capsulis cristatis" by Tournefort inst. 214; and is known to occur in waste places from the Canary Islands to Sweden (fl. Dan. pl. 202, Pers., and Wats.). By European colonists, was carried to Northeast America, where it continues in fallow ground from Rhode Island to South Carolina (Pursh, Ell., and A. Gray).

Camelina sativa of the Uralian and Tartarean plains. Called in Britain *gold of pleasure*, even in the days of Gerarde (Prior), in Germany "leindotter" (Grieb), in Italy "camellina" or "dorella" or "miagro" (Lenz), in the Sixteenth century "pseudolinum" (Lonic. p. 154); in which we recog-

nize the "muagrōs" identified through Syn. Diosc. with the ΜΕΛΑΜΠΥΡΟΝ infesting the wheat-fields of Sicily according to Theophrastus viii. 4. 6, — mentioned also by Galen: the "muagrōs" is described by Dioscorides as two cubits high with pale yellow flowers, seeds resembling those of fenugreek but yielding fat which is smeared on twigs and burned as a lamp: C. sativa was observed by Sibthorp in cultivated ground on Cyprus; is known to grow also in the Tauro-Caspian countries, and in Siberia as far as Lake Baical (Ledeb.). Westward, the account of the "myagros" by Pliny xxvii. 81 seems chiefly taken from Dioscorides: the "dornella" is mentioned by Hildegarde ii. 158, and the "dorella" by Cæsalpinus (Spreng.): C. sativa was regularly cultivated in the middle ages, its cultivation commencing probably in Russia or Germany (A. Dec.); is described by Anguillara p. 285, and Parkinson; is termed "a. segetum foliis auriculatis acutis" by Tournefort inst. 217, "myagrum sativum" by Linnæus; was observed by Lenz in grain-fields in Italy and sometimes cultivated for its oil; is known also as a weed among flax in Spain and Western Europe (Cav. i. pl. 60, and Pers.). By European colonists, was carried to Northeast America, where it continues a weed in cultivated ground from Salem in New England (observed by myself) to North Carolina (Chapm.).

Viola tricolor of Europe and the adjoining portion of Asia. Called in Britain *flamy* (Kent fl. dom.) or *paunce* or *pansy*, in France "pensée" or formerly "menues pensées," in Italy "pensieri menuti" in Germany "unnütze sorge," in medieval Latin "viola flammea" (Prior); in which we recognize the "flammea" identified through Pliny with the ΦΛΟΓΙΝΟΝ: ΙΟΝ or ΦΛΟΞ of Theophrastus vi. 6. 2 to 8. 1, wild and cultivated, the flower scentless and coronary: — V. tricolor was observed by Sibthorp, and Chaubard, in cultivated ground from the Peloponnesus throughout the Greek islands; is known to grow also in Syria, and as far as Bagdad (Dec.). Westward, the account by Pliny xxi. 38 to 76 of the "flammea quae et phlox vocatur" seems taken from Theophrastus, his "lutea viola" curing "capitis hulcera" is also V. tricolor, to the present day according to Lindley "employed in Italy in tinea capitis:" V. tricolor is termed "jacea vel herba clavelata" in Ortus Sanitatis 49 (Brunswygk), "herba trinitatis" by Brunfels ii. pl. 69, "v. bicolor arvensis" by Tournefort inst. 421; is described also by Fuchsius 803, Dodoens, Castor Durantes, Stapel 651, and Gerarde; and in its wild form is known to grow on the mountains of Teneriffe, and in cultivated and fallow ground throughout Europe as far as Lapland and Iceland (fl. Dan. pl. 623, Pers., Hook., and Wats.). Eastward from the Euphrates, is known to grow in Siberia (Dec.); was observed by Kaempfer, and Thunberg, along roadsides in Japan and called "kinsai," or usually "komafisiko:" but possibly by European colonists was carried to Tropical Hindustan, observed by Graham "in gardens" at Bombay and no native name is given. Clearly by European colonists, was carried to Northeast America, where it continues a favourite garden flower, and in the form of "V. arvensis" has become naturalized in "dry or sandy soil New York to Kentucky and Southward" (A. Gray), in our Southern States according to Chapman in "cultivated ground."

Drypis spinosa of the Mediterranean countries. The ΔΡΥΠΙC of Theophrastus i. 10. 6, having thorns in place of leaves, — and named from wounding persons handling it, is referred here by writers: D. spinosa was observed by Sibthorp, and Fraas, on Parnassus. Westward, is described by Micheli gen. pl. 23; and is known to grow in Istria, Italy, and Mauritania (Pers.).

Silene behen of the East Mediterranean countries. An annual called in Greece "strouthōni" (Sibth.); in which we recognize the CΤΡΥΘΙΟΝ of Theophrastus vi. 4. 3 to 8. 3, prickly-leaved and flowering in summer, but its beautiful flower not fragrant: — S. behen is termed "lychnis cretica parvo flore calyce striato purpurascente" by Tournefort cor. 24; and was observed by Sibthorp, and Chaubard, from the Peloponnesus to Caria.

Dianthus fruticosus of Crete and the Greek islands. A showy species of *pink;* and the ΔΙΟC: ΑΝΘΟC of Theophrastus vi. 1. 1 to 8. 3, cultivated and coronary but the flower scentless, — may be compared: D. fruticosus is termed "caryophyllus græcus arboreus leucoii folio peramaro" by Tournefort cor. 23 and trav. i. pl. 9; and was observed by Sibthorp on Crete and Seriphus. Westward, is enumerated by Persoon as a garden flower in France. (See D. arboreus.)

Lavatera arborea of the West Mediterranean countries. Called in Greece "thēnthrōmōlōha" (Fraas); in which we recognize the ΜΑΛΑΧΗ: ΑΠΟΔΕΝΔΡΟΥΜΕΝΗ increasing in size after seven months growth according to Theophrastus i. 3. 2 to 9. 2 and used for a staff, — also the "thēnthrōmalahē" of Galen fac. simpl. vii. p. 67, and Geoponica xv. 5. 4; L. arborea was observed by Sibthorp, and Fraas, in maritime situations near Athens, also planted in gardens; by Delile, in gardens at Alexandria. Westward, an "arbor malvae" near Lixus estuary on the Atlantic in Mauritania, said to be twenty feet high with the trunk too large to be "circumplecti" clasped or embraced, is mentioned by Pliny xix. 22: L. arborea is termed "althæa maritima arborea veneta" by Tournefort inst. 97; and is known to grow along the seashore of Italy, Barbary, and Spain (Cav. v. pl. 139, and Pers.).

Acer campestre of Europe and the adjoining portion of Asia. Called in Britain *maser-tree* or

maple, in Anglo-Saxon "mapel-treow" or "mapulder," by Galfridus pr. pm. "mapulle," in Germany "massholder," in old high German "mazel-dera" (Prior), in Italy "oppio" or "loppo" or "acero" (Lenz); and the second kind of CΦΕΝΔΑΜΝΟΥ, rare according to Theophrastus iii. 11. 1 and called ΖΥΓΙΑ, its wood yellow soft and ΟΥΛΟΝ curled in fibre, — is referred here by writers: A. campestre was observed by Forskal, Sibthorp, and Fraas, from the mountains of the Peloponnesus to Constantinople; by Clot-Bey, in the gardens of Egypt. Westward, the "acer" prized for its variegated wood is mentioned by Ovid; that with spots resembling a peacock's tail produced according to Pliny xvi. 26 chiefly in Istria and Rhaetia: A. campestre is termed "a. campestre et minus" by Tournefort inst. 615; was observed by Lenz in Italy; and is known to grow wild throughout middle Europe (Pers.); drinking-bowls made of the knotty parts of its wood are called, in mediæval Latin "scyphi maserini," in old high German "masar" (Prior).

Acer platanoides of Europe and the adjoining portion of Asia. Called in Italy "acero platanoide" or "acero riccio" (Lenz); and the CΦΕΝΔΑΜΝΟC: ΑΓΡΙΑ useless for timber according to Theophrastus, — may be compared: A. platanoides was observed by Fraas in Greece; by Clot-Bey in the gardens of Egypt. Westward, "nuper vile fuistis acer" according to Ovid elog. i. 11; and the "viliore genere" called "crassivenium" is distinguished by Pliny xvi. 26: A. platanoides is known to grow wild in Italy and in the mountain forest of middle Europe (Duham. pl. 10, Pers., Lenz, and Daub.), is besides planted for ornament. By European colonists, was carried to North-east America, where it continues "occasionally planted" (A. Gray).

Staphylea pinnata of Europe and the adjoining portion of Asia. Called in Britain *bladder-nut* (Prior), in Germany "pimpernuss" (Grieb), in Italy "pistacchio falso" (Lenz); and the CΗΜΥΔΑ of Theophrastus iii. 14. 4 to v. 7. 7, having leaves like those of ΠΕΡCΙΚΗ: ΚΑΡΥΑ but a little narrower, and wood suitable only for staffs, — may be compared: S. pinnata was observed by Sibthorp, and Fraas, from mount Pindus to the environs of Smyrna. Westward, the "staphylodendron" of Pliny xvi. 27, a tree growing beyond the Alps and bearing pods that contain a nut tasting like filberts, is referred here by writers: S. pinnata is termed "staphylodendron" by Tournefort inst. 616; was observed by Scopoli in Carniolia; by Lenz, in North Italy; and is known to grow throughout middle Europe as far as Britain (Pers., and Engl. bot. pl. 1560).

Rhamnus infectorius of the Mediterranean countries. Called in Greece "lathziheri" or "apeliras" (Sibth.); and the ΦΙΛΥΡΕΑ: ΑΕΙΦΥΛΛΟC enumerated among wild trees by Theophrastus i. 9. 3, — large as the "kuprè" according to Dioscorides and growing in rugged places, its fruit "shinò"-like black sweetish and in clusters, leaves astringent and like those of the olive but broader, may be compared: the "philuréa" is mentioned also by Paulus Aegineta; and the "hudhudh" by Ebn Baitar: R. infectorius was observed by Sibthorp, Chaubard, and Fraas, frequent in rough and stony situations in Southern Greece, the unripe berries dyeing Morocco leather yellow and exported in large quantities. Westward, R. infectorius is described by Clusius i. p. 111; is termed "r. catharticus minor" by Tournefort inst. 593; was observed by Lenz in Italy; is known to grow also in Carniolia, Spain, and Southern France (Scop., and Pers.). The dried fruit according to Lindley "is purgative," and is called in commerce *French berries* or "graines d'Avignon."

Euphorbia myrsinites of the Mediterranean countries. Called in Greece "galazitha" (Sibth.); and the ΤΙΘΥΜΑΛΛΟC: ΛΕΥΚΟC called ΜΥΡΤΙΤΗC according to Theophrastus ix. 11. 9 to caus. iv. 6. 9, growing in mountainous situations, its leaves myrtle-like but prickly at the apex, suckers flowering in alternate years and fruit called ΚΑΡΥΟΝ, — mentioned also by Micion, and Cratevas (schol. Nic. ther. 617), is referred here by writers: the "tithumalos murtitès" according to Dioscorides resembles the "thaphnòèithèi" and is whitish in aspect, its leaves larger than in the myrtle with the apex pointed, is by some called "mursinitèn" or "karuitèn:" E. myrsinites was observed by Sibthorp, Chaubard, and Fraas, frequent on mountains from the Peloponnesus and Parnassus to Cyprus. Westward, the account by Pliny xxvi. 40 of the "tithymali myrsiniten" or "caryiten" seems taken from the Greek, and follows second in order as in Dioscorides: E. myrsinites is termed "tithymalus myrsinites latifolius" by Tournefort inst. 86; and is known to grow in Italy and Southern France (Sauv. monsp. 51, Pers., Spreng., and Lenz).

Mercurialis perennis of Europe and the adjoining portion of Asia. Called in Britain *dog's cole* or *dog's mercury* (Prior), in Germany "bingelkraut" (Grieb); and the ΦΥΛΛΟΝ of two kinds according to Theophrastus ix. 18. 5, the fruit of the ΑΡΡΕΝΟΓΟΝΟΥ being double, and that of the ΘΗΛΥΓΟΝΟΥ like olive budding, — mentioned also by Cratevas, and Dioscorides, is referred here by writers: M. perennis was observed by Sibthorp, Chaubard, and Fraas, in woods from the Peloponnesus to Constantinople. Westward, the account of the "phyllon" and "thelygonon" by Pliny xxvi. 91 to xxvii. 100 seems chiefly taken from the Greek: M. perennis is described in Gerarde em. 333; is termed "m. montana testiculata et spicata" by Tournefort inst. 534; was observed by Gussone near Naples, and is known to grow throughout middle Europe as far as Denmark (fl. Dan. pl. 400, and Pers.). Is "very poisonous" according to Lindley, instances "of the fatal consequences of its use" are mentioned by Sloane, and Smith.

Spartium scorpius of the Mediterranean countries. Called in Greece "aphanna" (Sibth.); and the ΣΚΟΡΠΙΟΣ, one of the two plants known to Theophrastus vi. 1. 3 to 4. 2 as having thorns in place of leaves, its flowers developing below the pointed apex, — is referred here by Linnæus: S. scorpius was observed by Sibthorp on the mountains of Greece and the Greek islands; is known to be frequent also in Asia Minor (Spreng.). Westward, the account by Pliny xxi. 54 of the "in totum spina scorpio" seems taken from Theophrastus: S. scorpius was observed by Anguillara p. 63 on Corsica (Spreng.); is described also by Lobel ii. pl. 94; is termed "genista-spartium spinosum majus primum flore luteo" by Tournefort inst. 645, "frutex totus ex spinis alternis quibus flor. insident" by Linnæus; is known to grow in Southern France and as far as Spain (Pers.).

Colutea arborescens of the Mediterranean countries. The *bladder senna* is a large loose-branched shrub called in France "baguenaudier" (Fée), in Germany "blasenbaum" (Grieb), in Greece "phōuska" (Fraas); and the ΚΟΛΥΤΕΑ of Theophrastus iii. 14. 4, a leguminous tree with willow-like foliage and small seeds in broad pods, — is referred here by Robertus Constantinus and writers generally: C. arborescens was observed by him, probably on Crete; by Sibthorp, Chaubard, and Fraas, in thickets and rugged places from the Peloponnesus to Smyrna. Westward, is termed "c. vesicaria" by Tournefort inst. 649; is known to grow from Italy to the Pyrenees, and in limestone districts as far as Ratisbon and Lorraine in middle Europe (Roth, Pers., Mohl, and A. Dec.). The leaves according to Lindley are "purgative, used for adulterating senna."

Cytisus laburnum of Switzerland. Called in English gardens *laburnum* (Prior), in France "aubour" (A. Dec.), in Italy "mazi" or "egano" or "eghelo" (Lenz), by Crescenzio "avornus" (Spreng.); and the ΚΟΛΟΥΤΕΑ around Lipara, a cultivated tree according to Theophrastus iii. 17. 2, in three years yielding a staff, and when cut off perishing without giving out suckers, its leaves like those of ΤΗΛΕΙ, pod fattening sheep, — is referred here by writers: C. laburnum was observed by Forskal in gardens at Constantinople and Smyrna. Westward, the "laburnum" is described by Pliny xvi. 31 as a tree growing in dry situations on the Alps, its wood hard and white, flower (raceme) a cubit long avoided by bees: C. laburnum is described by Haller helv. 360; is known to grow wild in Switzerland and North Italy (Jacq. austr. pl. 306, Pers., and Lenz); and is besides cultivated throughout Europe. By European colonists, was carried to Northeast America, where it continues to be planted for ornament. Its seeds according to Lindley are "highly poisonous, possessing narcotico-acrid properties."

Planera abelicea of Crete. The ΚΟΛΟΙΤΙΑΝ tree of Theophrastus iii. 17. 3, growing on mount Ida, rare and said to produce neither flowers nor fruit, its leaves rounder than those of laurel, elm-like and many-nerved beneath, — may be compared: P. abelicea is termed "abelicea di Candia" by Pona bald. pl. 112, "pseudosantalum Creticum" by C. Bauhin pin. 393; and was observed by Sibthorp on Crete.

Lupinus angustifolius of the Mediterranean countries. Called in Greece "agriō lupōuni" or "lōupini" (Sibth.), in Egypt "termis el sjæitan" Satan's lupine (Forsk.); in which we recognize the ΘΕΡΜΟΣ becoming according to Theophrastus viii. 1. 3 to 11. 8 and caus. iv. 1. 7 ΩΣΠΕΡ: ΑΓΡΙΟΣ and altogether ΑΠΕΠΤΟΝ unconcocted, — and the "thermōs agriōs" of Djoscorides: L. angustifolius was observed by Sibthorp, Chaubard, and Fraas, abounding from the Peloponnesus throughout the Greek islands; by Forskal, and Delile, a weed in Egypt among crops of cultivated lupine. Westward, the "thermōs agriōs" is identified in Syn. Diosc. with the "lōupinōum agrēstēm" of the Romans: L. angustifolius is termed "l. angustifolius cæruleus elatior" by Tournefort inst. 392; and is known to occur in grain-fields at Messana and as far as Spain (Knorr ii. pl. 50, and Pers.).

Lathyrus amphicarpos of the East Mediterranean countries. The ΑΡΑΧΙΔΝΑ producing fruit under ground according to Theophrastus i. 1. 7 to 6. 12, — is referred here by writers: L. amphicarpus was observed by Sibthorp on Rhodes and Cyprus; is known to grow also in Syria (Pers.). As cultivated in Britain, is termed "l. amphikarpos seu supra infraque terram siliquas gerens nobis" by Morison ii. 2. pl. 23. (The account of the "arachidna" by Pliny xxi. 52 seems taken from Theophrastus.)

Vicia amphicarpos of the Mediterranean countries. The ΑΡΑΚΩΔΕΣ according to Theophrastus i. 6. 12 also producing fruit on its roots as well as above, otherwise resembling the ΑΡΑΚΟ, — is referred here by Clusius, and Sprengel: V. amphicarpos was observed by Gittard on the plain of Nisi in the Peloponnesus (Chaub.). Westward, is described by Clusius exot. pl. 88; was observed by Gouan herboris. 48 in Southern France, and according to Persoon has subterranean fruit. (The account of the "aracos" by Pliny xxi. 52 seems taken from Theophrastus.)

Vicia lathyroides of Europe and the adjoining portion of Asia. Called in Britain *strangle-tare* (Prior); in which we recognize the ΟΡΟΒΑΓΧΗ overcoming ΟΡΟΒΩΝ according to Theophrastus viii. 8. 4: — V. lathyroides is termed "ervum Soloniense" by Linnæus; was observed by Sibthorp from the Peloponnesus to Asia Minor, and in cultivated ground on Cyprus. Westward, the "oro-

banche" killing "ervum" and "cicer" by tying around, is mentioned by Pliny xviii. 44. 3; V. lathyroides is termed "v. minima præcox parisiensium" by Tournefort inst. 397; and is known to occur in cultivated ground throughout middle Europe as far as Norway (fl. Dan. pl. 58, and Pers.).

Cercis siliquastrum of the wooded portion of the Mediterranean countries. Called in English gardens *Judas tree* (Prior), in Italy "albero di Giuda" or "siliquastro" (Lenz), in Greece "agria xulŏkĕratĕa" (Fraas) or "koukourovithia" or by the Turks "ergavan" (Sibth.); and the ΚΕΡΚΙC or ΚΙΚΙC enumerated among leguminous trees by Theophrastus i. 11. 2 — is referred here by writers: C. siliquastrum was observed by Sibthorp, Chaubard, and Fraas, one of the most frequent trees from the Peloponnesus to Smyrna; by Hasselquist on Lebanon; and according to Clot-Bey has recently been introduced into Egypt. Westward, is termed "siliquastrum" by Tournefort inst. 647; was observed by Lenz frequent in Italy; and is known to grow in other parts of Southern Europe (Pers., and Daub.).

Sorbus chamaemespilus of the mountains of Europe and adjoining portion of Asia. The ΑΝΘΗΔΟΝΟΕΙΔΗC according to Theophrastus iii. 12. 5 another of the three kinds of ΜΕCΠΙΛΗC distinguished by the inhabitants of Ida, — is referred here by Fraas: S. chamaemespilus was observed by Sibthorp, and Griesebach, on mount Athos. Westward, the third kind of "mespilis" is described by Pliny xv. 22 "anthedoni tamen similius quod gallicum vocant:" S. chamaemespilus is termed "cratægus folio oblongo serrato utrinque virente" by Tournefort inst. 633, "mespilus chamæmespilus" by Linnæus sp. pl. 685; and is known to grow on the mountains of middle Europe (Crantz, Jacq. austr. pl. 231, and Pers.).

Amelanchier vulgaris of the mountains of Europe and adjoining portion of Asia. The wild ϹΥΚΗ on mount Ida, described by Theophrastus iii. 17. 4 as a shrub with broad leaves in shape like those of the linden, the flower ΜΕCΠΙΛΩΔΕC, red fruit of the size of an olive but rounder and in taste also ΜΕCΠΙΛΩΔΕC, — may be compared: A. vulgaris was observed by Sibthorp on the mountains of Crete. Westward, is termed "m. folio rotundiori fructu nigro subdulci" by Tournefort inst. 642, "mespilus amelanchier" by Linnæus, "aronia rotundifolia" by Persoon; and is known to grow on limestone districts from Switzerland to the Pyrenees (Crantz, Jacq. austr. pl. 300, Pers., Mohl, and A. Dec.). *A. Cretica*, figured by Alpinus exot. pl. 2, termed "mespilus cretica folio circinato et quasi cordiformi" by Tournefort cor. 43, was also observed by Sibthorp on the mountains of Crete, but is regarded by him as possibly not distinct.

Cratægus pyracantha of the Mediterranean countries. Called in France "buisson ardent" (Pers.), in Italy "piracanto" (Lenz); in which we recognize the "purinan" or "purakanthēn" identified through Syn. Diosc. with the ΟΞΥΑΚΑΝΘΟC: ΑΕΙΦΥΛΛΟΝ growing according to Theophrastus i. 9. 3 to vi. 8. 3 both on mountains and plains, and ripening fruit late in the autumn: — the "purakantha" is mentioned by Alciphron fragm. 6; the "oxuakantha" is described by Dioscorides as resembling the "abrathi" but smaller and very spiny with red fruit like myrtle berries: C. pyracantha was observed by Forskal, and Sibthorp, frequent in the woods of Northern Greece as far as Constantinople. Westward, a drink made of berries of "pyracanthae" was employed in the days of Pliny xxiv. 70 against bites of serpents: C. pyracantha is described by Matthioli, and Dodoens (Spreng.); is termed "m. aculeata amygdali folio" by Tournefort inst. 642; was observed by Lenz wild in Italy; and according to Persoon occurs in hedges in Southern France, "sempervirens" and the globose berries "autumno amoene coccinei."

Pyrus cuneifolia of the mountains of the East Mediterranean countries. The ΚΗΛΑCΤΡΟΝ of Theophrastus i. 3. 6 to v. 7. 7, an evergreen tree that does not admit of cultivation, growing in the highest and coldest situations as well as on the plains, its wood white, — may be compared: P. cuneifolia was observed by Chaubard, one of the most frequent trees in the subalpine region of Koubeh, its wood suitable for statues; is described by Gussone, as observed by him as far West as Sicily.

Cerasus mahaleb of Europe and the adjoining portion of Asia. Called in France "cerisiers de Sainte-Lucie" (A. Dec.); and the ΑΑΚΑΡΗ growing according to Theophrastus iii. 3. 1 and 3 to 6. 1 both on mountains and plains, deciduous-leaved, and multiplying with the greatest facility, — may be compared: the "mahaleb" is mentioned by Arab writers (Spreng.): C. mahaleb was observed by Sibthorp, Chaubard, and Fraas, a small tree frequent from the Peloponnesus to Constantinople. Westward, remnants of the fruit have been found in debris of the early lake-villages of Switzerland (Heer); the tree is termed "cerasus sylvestris amara mahaleb putata" by Tournefort inst. 627; and is known to grow as far as France and middle Europe (Jacq. austr. pl. 227, Lam. fl. fr., and Pers.).

Prunus prostrata of the mountains of the East Mediterranean countries. A depressed subalpine tree or shrub; and the ΔΙΟCΠΥΡΟ of Theophrastus iii. 13. 3, having fruit similar in form to that of ΚΕΡΑCΟC but the nucleus harder, — enumerated among esculents by Galen (Orib. iii. 14), may be compared: P. prostrata is termed "p. cretica montana minima humifusa flore suave rubente" by Tournefort cor. 43; was observed by him, Sibthorp, and Fraas, on the subalpine summits of the

loftier mountains of Crete and Greece, the fruit eaten and red when ripe (in the unripe state figured by Sibthorp 478 not unlike a plump grain of wheat); was observed also by Labillardière pl. 6 on Lebanon (Pers.). "Amygdalus incana," growing on Caucasus (Pall. i. pl. 7), is regarded by Poiret as identical (Steud.).

Rubus cæsius of Europe and Northern Asia. Called in Britain *dew-berry* from the Anglo-Saxon "duua" dove, in Germany "tauben-beere," in Norway "col-bar." (Fraas); and the ΧΑΜΑΙΒΑΤΟΝ of Theophrastus iii. 18. 4, extending along the ground and rooting at intervals, — mentioned also in the addition to Dioscorides i. 180, is referred here by Sprengel: R. cæsius was observed by Sibthorp, and Fraas, on the mountains of Greece and the Bithynian Olympus. Westward, is termed "r. repens fructu cæsio" by Tournefort inst. 614; and is known to grow throughout middle and Northern Europe (fl. Dan. pl. 1213, and Pers.).

Potentilla speciosa of the mountains of Greece and the Greek islands. An odorous kind of ΟΙΝΑΝΘΗ growing on the mountains of Cyprus is distinguished by Theophrastus odor. 6: — P. speciosa is termed "fragaria cretica saxatilis fruticosa folio subtus argenteo" by Tournefort cor. 21, and was observed by Sibthorp on Parnassus and the mountains of Crete.

Chamaenerium angustifolium of Europe and Northern Asia. Called in Britain *willow-herb*, in Germany "weidenroschen" (Grieb), in Italy "camenerio" or "sfenice" or "epilobio" (Lenz); and the ΟΝΟΘΗΡΑC of Theophrastus ix. 19. 1, a large shrub growing on mountains, its leaves like those of the almond, flower red as in the rose, dried root smelling of wine and mixed in wine to promote hilarity, — even according to Cratevas mitigating the ferocity of animals (Plin. xxiv. 102), is referred here by writers: this power of taming animals is attributed by Dioscorides to the "ōnagra," identified in the added Synonyms with the "ōnōurin" or "ōnōthuran:" C. angustifolium was observed by Sibthorp in shady situations on the Bithynian Olympus; is known to grow throughout Northern Asia, and its pith is mixed in a spirituous liquor prepared by the natives of East Siberia and Kamtschatka (Spreng.). Westward, the account by Pliny xxvi. 69 to 87 of the "oenotheras" or "onuris" seems taken from the Greek: C. angustifolium is described by Cæsalpinus vi. 70; is termed "chamænerium latifolium vulgare" by Tournefort inst. 302; was observed by Lenz in Italy; and is known to grow from Switzerland as far as Sweden, where according to Linnæus the young shoots are eaten (fl. Dan. pl. 289, All., and Pers). "C. angustissimum," termed "ch. angustifolium alpinum flore purpureo" by Tournefort inst. 302, known to grow in Switzerland, and observed by Sibthorp on mount Athos, is regarded by Persoon as not distinct.

Myrrhis bunium of middle Europe. Called in Britain *earth-nut* or *ground-nut* from its nutty esculent tubers (Prior); and the ΜΥΡΡΙC of Theophrastus causs. vi. 13 ΚΑΧΑΝΗΡΟΝ: ΕΥCΤΟΜΟΝ: ΚΑΙ: ΕΥΟCΜΟΝ — (Spreng.), having according to Dioscorides the stem and leaves of "kŏnĕiŏ" with a fragrant oblong roundish root grateful for food, — and identified in the added Synonyms with the "murran" or "kōnilēn," is referred by Anguillara 284 to a cicuta-like plant with hairy stem and leaves, anetho-like yellow umbels, seeds of cumini, and a turnip-shaped fragrant root tender and well-flavoured, observed by him in Greece and Slavonia (Spreng.). Westward, the "myrrhis" or "myrrham" or "smyrrhizam" is mentioned by Pliny xxiv. 97, his account seeming chiefly taken from the Greek: M. bunium is termed "bunium majus" by Gouan ill. p. 10, "b. flexuosum" by Withering; was observed by Persoon frequent near "Mont d'or in Auvergne;" and is known to grow as far as Britain (Huds., and Curt. lond. pl.).

Cachrys alata of the region around Caucasus. The ΜΑΓΥΔΑΡΙC seed, called ΦΥΛΛΟΝ according to Theophrastus vi. 3. 4, — is referred here by Sprengel: C alata was observed by Tournefort trav. ii. pl. 121 near Erzeroum, by Bieberstein on Eastern Caucasus.

Thapsia villosa of the Mediterranean countries. Called in Greece "ōmōiōplĕurōn" (Sibth.); in which we recognize the ΜΑΓΥΔΑΡΙC ΕΤΕΡΟΝ of Theophrastus vi. 3. 7, distinguished at once by experts from the CΙΛΦΙΟΥ, less acrid and devoid of juice, growing not in Cyrene but in Syria, and it is said also on Parnassus: — T. villosa was observed by Sibthorp on Patmos and Cyprus. Westward, is described by Dodoens, Lobel (Spreng.), and Clusius hist. ii. pl. 192; is termed "th. latifolia villosa" by Tournefort inst. 322, "t. decussata" by Lagasca; is known to grow in Barbary (Lindl.), Spain, Portugal, and as far as Southern France (Morison ix. pl. 18, and Pers.). "The roots are acrid and corrosive," have been "reputed purgative in a high degree," but this seems contradicted by recent experiments (Fée, and Lindl.).

Ferula nodiflora of the Mediterranean countries. The ΝΑΡΘΗΚΙΑ of Theophrastus vi. 1. 4 to 2. 8, differing from the ΝΑΡΘΗΞ chiefly in being smaller, — is referred here by writers: F. nodiflora was observed by Sibthorp on Cyprus; is known to grow also in Asia Minor and as far as Caucasus (Bieb., and Spreng.). Westward, the "narthecyan" is distinguished by Pliny as always depressed: F. nodiflora is termed "f. minor ad singulos nodos umbellifera" by Tournefort inst. 321; was observed by Lenz in Italy, by Desfontaines pl. 253 in Algeria; and is known to grow in Sicily (Steud., and Spreng.).

Oenanthe fistulosa of Europe and the adjoining portion of Asia. Called in Britain *water-dropwort* (Prior); and the root growing according to Theophrastus ix. 13. 4 at the mines in Thrace, pleasant to the taste but if eaten inducing sleep-like easy death, — may be compared: Oe. fistulosa is termed "oe. aquatica" by Tournefort inst. 313; is known to grow from Denmark throughout middle Europe (Moris. ix. pl. 7, fl. Dan. pl. 846, and Engl. bot. pl. 363); was observed by Sibthorp in the environs of Constantinople.

Peucedanum oreoselinum of hilly situations in middle Europe and as far as Caucasus. Called in the drug-shops "herba oreoselini" (Lindl.), and the ΟΡΕΟΣΕΛΙΝΟΝ of Theophrastus vii. 64, having leaves like ΚΩΝΕΙΩ, and given in female complaints, — is referred here by writers: P. oreoselinum is described by Dodoens p. 696 (Spreng.); is known to grow on the hills of Southern France (Lapeyr., Delarbre auverg. i. p. 428, and Pers.); and Eastward as far as Austria and Caucasus (Jacq. austr. pl. 68, and Bieb.). The leaves and stem according to Lindley "are bitter and aromatic, as is the fruit but in a higher degree: they were used as powerful stimulants of the intestinal canal, and are still esteemed in some countries."

Ammi visnaga of the Mediterranean countries. Called in Southern France "herbe aux curedents" (Pers.), in Greece "phŏlĕa" (Fraas); and the ΣΤΑΦΥΛΙΝΟΣ ΑΓΡΙΟΣ (in approved ms. "raphanŏn agrian") of Theophrastus ix. 15. 5, called by some physicians ΚΕΡΑΙΝ, — is referred here by Sprengel: the "kĕraskōmēn" of Syn. Diosc iii. 52 may also be compared: A. visnaga was observed by Forskal, Sibthorp, Chaubard, and Fraas, frequent from the Peloponnesus to Smyrna; by Hasselquist on Lebanon; by Alpinus iv. 14, and Delile, in Lower Egypt, the spoke-like pedicels of the umbel used for tooth-picks, and the seeds employed medicinally. Westward, is described by Lobel pl. 716; is termed "foeniculum annuum umbella contracta oblonga" by Tournefort inst. 311; was observed by Desfontaines i. 245 in Barbary, and is known to grow in Southern France (Pers.).

Valeriana Celtica of Switzerland and the Eastern Alps. Called in Italy "nardo celtico" or "spica celtica" (Lenz); and the ΠΙΖΙΑ of Thrace, having according to Theophrastus ix. 7. 4 a nard-like odour, — may be compared: the "kĕltikē narthōs" is mentioned by Dioscorides as growing in Istria; and the imported root was known to Avicenna (Spreng.): V. Celtica is known to grow on the Carinthian and Styrian Alps, and according to Wulffenius, and Sprengel, its roots in large quantities are exported from Trieste, Eastward to mix in ointments. Farther West, "narthōu" brought by a Gaul, is prescribed by Andromachus ther.; "nardum gallicum" is mentioned by Pliny xiii. 2, and "celtica spica" by Macer Floridus 75: V. Celtica was observed by Haller 209 in Switzerland (Pers.), and by Lenz in North Italy. (See V. saliunca.)

Valeriana saxatilis of Switzerland and the Eastern Alps. The ΕΤΕΡ: ΑΤΤΑ having according to Theophrastus but slight fragrance, — may be compared with the "tragŏn" gathered according to Dioscorides indiscriminately with the preceding for adulteration, and referred here conjecturally by Sprengel: the "hirculus" of Pliny xii. 26 corresponds: V. saxatilis is described by Clusius hist. i. 56, and Plukenet alm. pl. 232, and is known to grow on the Eastern Alps (Jacq. austr. iii. pl. 267).

Arnica scorpioides of the mountains of middle and Southern Europe. The ΣΚΟΡΠΙΟΥ whose root according to Theophrastus ix. 13. 6 resembles a scorpion, and is useful against scorpion stings, — may be compared: A. scorpioides was observed by Sibthorp on mount Parnassus. Westward, is described by Matthioli p. 762 (Spreng.), and Lobel pl. 649; is termed "doronicum radice scorpii brachiata" by Tournefort inst. 487, "aster scorpioides" by Scopoli; and is known to grow on the subalpine portion of the mountains of middle Europe (Jacq. austr. pl. 349, and Pers.).

Artemisia Pontica of Europe and the adjoining portion of Asia. Called in Yemen "rand" or "bætran" or "ghobæjre" (Forsk.); and the ΑΨΙΝΘΙΟΝ of Pontus on which sheep fatten according to Theophrastus ix. 17. 4; — is referred here by Linnæus and others: the kind growing in Pontus is mentioned also by Dioscorides, Galen meth. med. xi. 16; and "absinthium ponticum," by Cato 159, Columella xii. 35, and Pliny xi. 75: "wormwood" in the days of Duarte Barbosa was exported in great quantities from Xeher on the Southern coast of Arabia; and A. Pontica was observed by Forskal under cultivation on the plains and mountains of Yemen. Farther North, is described by Fuchsius (Spreng.); is termed "a. Gmelini" by Stechmann (Steud.); and is known to grow in dry mountainous situations from Italy, Switzerland, and Germany (Jacq. austr. pl. 99, and Pers.) as far as middle Asia, in flavour differing according to Sprengel in being slightly aromatic.

Artemisia abrotanum of the Tauro-Caspian Countries. Called in English gardens *southernwood* or *old-man*, in Anglo-Saxon "sæthrene-wudu" or "suthernewude" (Prior), in France "auronne des jardins" (Pers.), in Italy "abrotano" (Lenz), in Greece "pikrōthanōs" (Fraas), in Egypt "semsæk" or "msæka" (Forsk.) or "meskeh" (Del.), by the prophets "nĕura phōinikōs" or "kunaghitēn" (Syn. Diosc.); in which we recognize the ΑΒΡΟΤΟΝΟΝ of Theophrastus i. 9. 4 to caus. vi. 16. 7, cultivated and coronary with persistent foliage: — the "avrōtōnōn arrĕn" is described by Dioscorides as growing in Cappadocia, Asiatic Galatia, and near Hierapolis in Syria, branchy with slender twigs like "apsinthiōn:" A. abrotanum is known to grow wild in Asia Minor

(Cæsalp. xii. 6); was observed by Fraas under cultivation in Greece; by Forskal, and Delile, in the gardens of Egypt. Westward, the "abrotonum" is mentioned by Lucretius vi. 123, Horace, Lucan; and as "subiiciatur pulvino," by Pliny xxi. 92, and Macer Floridus: A. abrotanum is described by Bauhin, and Morison vi. pl. 2; and is well known in gardens, from Italy throughout middle Europe (Lenz, and Fraas). Eastward from Syria, was observed by Graham "in gardens" at Bombay, but no native name is given. By European colonists, was carried to Northeast America, where it continues in gardens. Is enumerated by Lindley as "a powerful anthelmintic." (See Santolina chamæcyparissus).

Atractylis cancellata of the Mediterranean countries. The ΤΕΤΡΑΛΙΞ springing up in summer, thorny-leaved, and enumerated among thistles by Theophrastus vi. 4. 4, — may be compared: A. cancellata was observed by Sibthorp, and Chaubard, from the Peloponnesus and Crete to Rhodes and Cyprus. Westward, the account of the "tetralix" by Pliny xxi. 56 seems taken from Theophrastus: A. cancellata is described by Morison vii. pl. 39; is termed "cnicus exiguus capite cancellato semine tomentoso" by Tournefort inst. 451, "circellium" by Lamarck ill. pl. 662; was observed by Brotero in Portugal; is known to grow also in Spain and Barbary, its cancellated involucre imprisoning flies (Pers.).

Carthamus dentatus of the East Mediterranean countries. The ΕΤΕΡΑ: ΑΓΡΙΑC: ΚΝΗΚΟΥ of Theophrastus vi. 4. 5, hairy with stems COΓΚΩΔΕΙC Sonchus-like and in a manner ΕΠΗΓΕΙΟΚΑΥΛΟC from weakness resting on cultivated land, — may be compared: C. dentatus is termed "cnicus atractylidis folio et facie incanus patulus flore purpurascente" by Tournefort cor. 33; was observed by Forskal, and Sibthorp, somewhat rare on the Greek islands and in Asia Minor. Westward, the account by Pliny xxi. 53 of the "cnicon silvestris altera," more hairy with "torosiore caule," seems taken from Theophrastus; but C. dentatus was observed by Forskal p. 217 frequent in waste places on Malta, a foot high branching above "raro infra," the flowers "flavi."

Carlina lanata of the Mediterranean countries. Called in Greece "kŏkkinagathō (Sibth.); and the ΑΚΟΡΝΑ of Theophrastus vi. 4. 3 to 6, having almost the aspect of ΚΝΗΚΩ: ΗΜΕΡΩ but in colour ΕΠΙΞΑΝΘΟΝ (translated "rufo" by Pliny) and its juice fatty, — may be compared: C. lanata was observed by Sibthorp, and Chaubard, frequent from the Peloponnesus throughout the Greek islands; by Delile, on the Mediterranean border of Egypt. Westward, the "acorna" is enumerated among pubescent thistles by Pliny xxi. 56: C. lanata seems described by Anguillara as observed by him in Italy (Spreng.); is termed "c. flore purpuro-rubente patulo" by Tournefort inst. 500; was observed by Garidel pl. 21 in Southern France, and is known to grow in Italy and Barbary (Pers.).

Carlina acanthifolia of the Mediterranean countries. The ΛΕΥΚΑΚΑΝΘΑ enumerated among thorny-leaved plants by Theophrastus vi. 4. 3, — mentioned also by Hicesius, by Dioscorides as having a "kŭpĕirŏ"-like bitter root, chewed to alleviate toothache, may be compared: C. acanthifolia was observed by Gittard (Chaub.) about Arcadia in the Peloponnesus. Westward, the "leucacantha" or "pōlugōnatōn" or "phullōn" or "ishiatha" is identified in Syn. Diosc. with the "spina alva" of the Tuscans, and "gniakarthōus" of the Romans; but the account of the "leucacanthos" by Pliny xxi. 56 to xxii. 18 seems taken from the Greek: C. acanthifolia is termed "c. chardoussae" by Villars; was observed by Hacquet pl. 1 in Carniolia; by Allioni pl. 51, in Piedmont; and is known to grow on the Pyrenees (Pers.).

Carduus pycnocephalus of the Mediterranean countries. The ΑΚΑΝΟC of Theophrastus i. 10. 6 to vi. 4. 9, having many stems and branching, and the only species of its kind, — may be compared: C. pycnocephalus was observed by Chaubard, in grassy places in the Peloponnesus. Westward, the "acanon" by some classed with the "eryngio" is described by Pliny xxii. 10 as a low spreading herb with broader spines, applied externally with wonderful effect in stanching blood: C. pycnocephalus is described by Barrelier pl. 417; and is known to grow in various parts of Southern Europe, the calyx-scales deciduous (Pers.).

Cirsium cynaroides of the East Mediterranean countries. A thistle with glistening leaves; and the ΧΑΛΚΕΙΟC of Theophrastus vi. 4. 3, — enumerated among pubescent kinds by Pliny xxi. 56, identified by Skarlatos with the "gaithōuragkathōn," may be compared: C. cynaroides is termed "carduus creticus foliis lanceolatis splendentibus subtus incanis flore purpurascente" by Tournefort cor. 31; and was observed by Sibthorp, and Chaubard, from the Peloponnesus to the vicinity of Constantinople.

Cirsium palustre of Europe and the adjoining portion of Asia. The thorny-leaved ΛΕΙΜΩΝΙΑ of Theophrastus vi. 4. 3, — is referred here conjecturally by Sprengel: C. palustre was observed by Sibthorp on mount Athos. Westward, the "limoniam" is identified by Pliny xxi. 99 to xxii. 43 with the "scolymon," and the "scolymon" with the "carduus alter silvestris" single-stemmed and having a purple flower: the "wulfes teasl" of the Anglo-Saxon transl. Diosc. 156, as figured in manuscript V, is referred here by Harley and Cockayne: C. palustre is described by Morison vii. pl. 32; is termed "cirsium pratense polycephalon vulgare" by Tournefort inst. 448; and is known to grow

in meads and swamps throughout middle Europe as far as Britain (Pers., and Curt. lond. vi. pl. 56).

Cirsium rivulare of the East Mediterranean countries. A thistle called in Greece "nĕrōagkathi" (Sibth.); and the ΑΚΑΝΘΑ: ΚΕΑΝΩΝΟC extending itself by sending up shoots from its root, mentioned by Theophrastus iv. 10. 6 among plants growing around the Orchomenian lake, — may be compared: C. rivulare was observed by Sibthorp frequent in watery situations in the Peloponnesus. Westward, is described by Pluckenet phyt. pl. 154; was observed by Jacquin austr. pl. 91 in Pannonia; by Allioni, and Villars, in Piedmont and Southern France (Pers., and Steud.).

Cirsium arvense of Europe and Northern Asia. Called in Sweden "korntistel" or "akertistel" or "gortistel" or "skrof-tistel" (Linn.), in Greece "nĕrōagkathi" (Sibth.); and the "akantha kĕanŏnŏs" — is referred here by Columna: the "segnisque horreret in arvis carduus" of Virgil seems also referred here by C. Bauhin: C. arvense is termed "ceonanthos Theophrasti" by Columna ecphr. pl. 45, "carduus in avena proveniens" by C. Bauhin pin. 377, "cirsium arvense sonchi folio radice repente flore purpurascente" by Tournefort inst. 448, "serratula arvensis" by Linnæus, and is known to grow from Lapland to the Mediterranean (Curt. lond. vi. pl. 57, Pers., and Wats.): was observed by Linnæus in Sweden; by Scopoli, in Carniolia; by Sibthorp, on mount Athos; by Bieberstein, along the Taurian mountains; and by Pallas, as far as 49° on the Yaic. Westward, by Hooker on Iceland (probably, as farther South, brought by European colonists); is known to occur on Newfoundland and throughout Canada as far as the Saskatchewan (Hook., and A. Dec.), and spreading thence into our Northern States has received the name of *Canada thistle;* was observed by myself abounding along the Lower St Lawrence, and a frequent weed as far as the outskirts of Philadelphia, but has disappeared from the last-named locality, and I have not heard of its occurring farther South.

Cirsium tuberosum of middle Europe. The ΑΚΑΝΘΑ: ΒΑCΤΑΚΗ enumerated by Theophrastus caus. i. 10. 5 as ΡΙΖΟΚΕΦΑΛΑ tuberous-rooted, — may be compared: C. tuberosum has not been observed by modern travellers in Greece; but was found by Anguillara 147 in Tuscany; is described also by Lobel pl. 10; is termed "carduus pratensis asphodeli radice fol. tenuiter incisis" by C. Bauhin pin. 377; and is known to grow in Germany and France.

Cirsium Syriacum of the Mediterranean countries. Called in Greece "agriōagkathi" or "kōuphagkathō" (Sibth.), in Egypt "chouk" thorn (Del) or "lælah" (Forsk.); and possibly the "agriagkathōn" identified by Skarlatos with the ΠΟΛΥΑΚΑΝΘΟC of Theophrastus vi. 4. 3: — C. Syriacum was observed by Forskal, Sibthorp, and Chaubard, frequent in grain-fields from the Peloponnesus throughout the Greek islands to Cyprus; by Forskal, and Delile, about Cairo; is known to grow also in Syria (Pers.). Westward, is termed "c. albis maculis notatus flore purpureo" by Tournefort inst. 450; was observed by Forskal on Malta; and according to Persoon grows also in Barbary and Spain. (See C. acarna).

Echinops Graecus of the East Mediterranean countries. A species of *globe thistle* called in Greece "kĕphalagkatha" or "hōnthrōkĕphala" (Fraas); and the ΡΥΤΡΟC of Theophrastus vi. 4. 4, prickly-leaved and branching towards the summit, — is referred here by Fraas: E. Graecus is termed "echinopus graecus tenuissime divisus et lanuginosus capite minore cæruleo" by Tournefort cor. 34, "e. lanuginosus" by Lamarck enc.; was observed by Sibthorp, and Fraas, frequent on barren hills in Attica.

Stæhelina dubia of the Mediterranean countries. The ΟΝΟΠΥΞΟC enumerated among thistle-headed thorny-leaved plants by Theophrastus vi. 4. 3, — may be compared: S. dubia was observed by Gittard in the Peloponnesus (Chaub.). Westward, the account of the "onopyxos" by Pliny xxii. 56 seems taken from Theophrastus: S. dubia is described by Barrelier pl. 406; and is known to grow in Italy, Southern France, and Spain (Pers.).

Centaurea centauroides of the East Mediterranean countries. A yellow-flowered species called in Greece "saitaggathō" (Forsk.); and the ΚΕΝΤΑΥΡΙΑΙ having red juice according to Theophrastus ix. 1. 1, called "triorchis" from being defended by the buzzard — (quoted by Pliny xxv. 32), and difficult to cut without wounding one's self, is referred here conjecturally by Sprengel: C. centauroides is described by Columna ecph. pl. 35; is termed "carduus centaurii majoris facie flore luteo capitulo longis aculeis munitis" by Tournefort cor. 31; and was observed by Forskal, and Sibthorp, from the Peloponnesus to Constantinople.

Centaurea spinosa of the East Mediterranean countries. Full of spinescent branches, and called in Greece "iala stuvia," or by the Turks "djevann" (Forsk.); and the ΠΑΝΤΑΔΟΥCΑ enumerated by Theophrastus vi. 5. 1 among plants having spines separate from the leaves, — may be compared: C. spinosa is described by Alpinus exot. pl. 162; is termed "jacea cretica aculeata incana" by Tournefort inst. 445; was observed by Forskal p. 217, Sibthorp, and Chaubard, in the sand of the seashore and other arid situations from Crete and Athens to Tenedos and Asia Minor, and on account of its defensive spines placed in garden-hedges.

Tragopogon crocifolius of the Mediterranean countries. The ΤΡΑΓΟΠΩΓΩΝ by some called ΚΟΜΗΝ, having according to Theophrastus vii. 7. 1 a long sweet root, short stem, crocus-like leaves, and a large calyx filled with hoary pappus, — an account repeated by Dioscorides, is referred here by Sprengel: the "tragōpŏgŏn" is enumerated by Nicander fr. as coronary; and the "kome" of Gafeki, Rhazes, and Ebn Baitar, is referred here by Sontheimer: T. crocifolius was observed by Sibthorp, Chaubard, and Fraas, from the Peloponnesus to Cyprus. Westward, the "tragopogon foliis croco simillimis" enumerated by Pliny xxi. 52 among the esculent plants of Egypt, seems the same described in xxvii. 117 as growing in rugged places and "sine usu" useless: T. crocifolius is described by Columna ecphr. i. pl. 230; is termed "t. purpuro-cæruleum crocifolium" by Tournefort inst. 477; was observed by Lenz in Italy; is known to grow in Southern France (Pers.), and according to Sprengel the root is edible. (See T. porrifolius).

Rhagadiolus stellatus of the Mediterranean countries. Called in Italy "ragaggiolo" (Caesalp.), in Greece "sphalaggōhōrtōn" (Sibth.); in which we recognize the CΠΑΑΑΞ of Theophrastus i. 6. 11: — R. stellatus was observed by Sibthorp, and Chaubard, from Crete and the Peloponnesus to Cyprus. Westward, the "aspalax" is enumerated by Pliny xix. 31 among plants growing wild and having roots more numerous than the leaves: R. stellatus is described by Caesalpinus xiii. 10; is termed "rh. alter" by Tournefort inst. 480; and is known to grow in Italy and Southern France (Pers.). "R. edulis," termed "rh. lampsanæ foliis" by Tournefort cor. 36, observed by Sibthorp on Cyprus, and known to grow from Carniolia to Portugal (Pers.), is regarded by Gerard, and Bory, as not distinct.

Prenanthes chondrilloides of the East Mediterranean countries and mountains of Yemen. Called in Yemen "kat er ræjan" (Forsk.); and the ΥΠΟΧΟΙΡΙϹ of Theophrastus vii. 7. 1 to 11. 4, a spontaneously-growing potherb, smooth, sweet, and ΗΜΕΡΩΤΕΡΑ having the aspect of cultivation, — may be compared: P. chondrilloides has not been observed in Greece by modern travellers; but is known to grow as far as Carniolia and Italy (Arduin. ii. pl. 7, Scop., and Pers.). Farther South, the "hypochoeris" is enumerated by Pliny xxi. 52 among the esculent plants of Egypt: P. chondrilloides was observed by Forskal p. 144 on mountains about Kurma in Yemen, and eaten crude.

Prenanthes muralis of Europe and the adjoining portion of Asia. Called in Britain *wall-lettuce* (Prior), in Greece "thrithax" (Sibth.); and the ΘΡΙΔΑΚΙΝΗϹ: ΠΙΚΡΑϹ of Theophrastus ix. 11. 11 — may be compared: P. muralis was observed by Sibthorp, and Chaubard, frequent in shaded stony situations from the Peloponnesus to mount Athos and the Bithynian Olympus. Westward, the "hare's lettuce" of the Anglo-Saxon transl. Apuleius 114, distinguished from the "sow thystyll" in gloss. Sloane 135, is referred here by Cockayne: P. muralis is termed "chondrilla sonchi folio flore luteo-pallescente" by Tournefort inst. 475; and is known to grow along walls and in shaded places throughout middle Europe as far as Denmark (fl. Dan. pl. 509, and Pers.).

Hieracium bulbosum of the Mediterranean countries. Called in Greece "hĕlŏnōhōrtōn" (Sibth.); and the ΠΕΡΔΙΚΙΟΝ of Theophrastus i. 6. 11, pulled up by partridges and having large fleshy roots more numerous than the leaves, — may be compared: H. bulbosum was observed by Sibthorp in the Peloponnesus and on Zacynthus; by Delile, near Alexandria in Egypt. Westward, is termed "dens leonis tuberosa radice" by Tournefort inst. 468; and is known to grow in Barbary, Italy, and as far as Montpellier. (Pers.).

Lapsana communis of Europe and the adjoining portion of Asia. Called in Britain *nipple-wort* from its use in cases of sore nipple (Prior); and the ΚΡΗΠΙϹ of Theophrastus vii. 8. 3, having stem leaves only, — may be compared: L. communis was observed by Sibthorp, and Chaubard, from the Peloponnesus to Asia Minor. Westward, the account of the "crepis" by Pliny xxi. 59 seems taken from Theophrastus: L. communis is described by Tournefort inst. 479; was observed by Scopoli 988 in Carniolia; and is known to occur in cultivated ground as far as Denmark (fl. Dan. pl. 500, Lam. fl. fr., and Pers.). By European colonists, was carried to Northeast America, observed by myself in cultivated ground near Quebec, and "in 1843" made its appearance as far South as Boston (Torr. and Gray, and A. Dec.).

Hyoseris lucida of the East Mediterranean countries. The ΑΠΑΠΗ enumerated among potherbs by Theophrastus vi. 4. 8 to vii. 11. 4, its leaves spreading on the ground, flower yellow and in growing old ΕΚΠΑΠΠΟΥΤΑΙ, flowering with the first showers after the equinox and new flowers successively making their appearance throughout the winter and spring until the ensuing summer, — may be compared: the account of the "aequinoctio nascens aphace" by Pliny xxi. 52 seems taken from Theophrastus, with the addition that it is one of the esculent plants of Egypt: the Hyoseris tribe according to Persoon have "sem. marginalia saepius cal. squamis involuta pappo subobsoleto:" H. lucida is described by Linnæus; is termed "lapsana taraxacoides" by Forskal p. 145; was observed by him, and Delile, near Alexandria; and by Bory and Chaubard in the Peloponnesus.

Apargia hirta of Europe and the adjoining portion of Asia. The ΑΠΑΡΓΙΑ enumerated by Theophrastus vii. 8. 3 among plants having radical leaves only, — may be compared. A. hirta was

observed by Sibthorp, and Chaubard, throughout the lower portion of the Peloponnesus. Westward, is termed "dens leonis foliis hirsutis et asperis saxatilis" by Tournefort inst. 468, "leontodon hirtum" by Linnæus; and is known to grow from Italy throughout middle Europe as far as Britain (Scop., Vill., Hoffm., Curt. lond. vi. pl. 59, and Pers.).

Fraxinus excelsior of Northern Europe and as far as the Oural and Caucasus. Called in Britain *ash*, in Anglo-Saxon "æsc," in Denmark and Sweden "ask," in ancient Danish "askr," in Holland and Germany "esche," in old high German "asc," in France "fresne" (Prior), in Italy "frassine" or "frassino" (Lenz); in which we recognize the larger "fraxinum" of the Greeks identified by Pliny with the ΒΟΥΜΕΛΙΟC, growing according to Theophrastus iii. 11. 4 to iv. 8. 2 in Macedonia, and even in Egypt: — F. excelsior is known to grow wild in the Crimea and Caucasus, but seems unknown beyond the Oural (Bieb., and A. Dec.); was observed by Clot-Bey in the gardens of Egypt. Westward, the "fraxinus" is mentioned by Virgil, Ovid, and Columella; by Pliny xvi. 24 to xvii. 15 as planted in Italy: F. excelsior was observed by Lenz on the Italian slope of the Alps; and is known to grow wild as far as Lat. 63° in Norway (Scop., Lam. fl. fr., Pers., and A. Dec.), its tough wood used in former times for spear-shafts, also for building boats, and in all times "preferred for axe handles" and axles (Prior).

Syringa vulgaris of Eastern Europe. A shrub called in English gardens *lilac*, a Persian name (Prior, see Ligustrum vulgare); and the ϹΠΕΙΡΑΙΑ flowering from the apex according to Theophrastus i. 14. 2 to vi. 1. 4, — and enumerated by Pliny xxi. 29 among coronary plants, may be compared: the "blue-flowered jasmine" of Ishak ben Amran (Ebn Serap. 176), is referred here by Parkinson: S. vulgaris was observed by Sibthorp wild on mount Haemus, but not within the limits of Greece (Smith in Rees cycl.); by Forskal, in the gardens of Constantinople; and by Alpinus, in Egypt (Parkinson). Westward, was brought according to Matthioli from Constantinople to Italy; is termed "lilac vulgaris" by Lamarck ill. pl. 1; and has become frequent, cultivated and naturalized, in middle Europe (Pers.). By European colonists, was carried to Northeast America, where it continues in gardens in our Northern and Middle States, but beyond Charleston I was assured does not succeed (in conformity with its rareness in the same Latitude in Egypt). The unripe fruit according to Lindley "is singularly bitter without any acrimony," and an extract is regarded by Curveiller as "a remarkably good tonic and febrifuge."

Phillyrea angustifolia of the mountains of the Mediterranean countries. The ΑΦΑΡΚΗ of Theophrastus i. 9. 3 to v. 7. 7, evergreen, growing only on mountains, and its wood suitable for stakes or props and for burning, — is referred here by some writers: P. angustifolia was observed by Gittard in the Peloponnesus. Westward, is described by Camerarius pl. 90; is known to grow in Italy, Spain, and on the Atlas mountains (Pers.).

Vaccinium myrtillus of Europe and Northern Asia. Called in Britain *bilberry* or *bulberry* or *huckleberry* or *hurtle-berry* or *whortleberry*, in Danish "böllebar" (Prior), in Germany "heidelbeere" (Grieb), in France "vaciet" (Nugent), in Italy "baccole" or "mirtillo" (Lenz); and the ΑΜΠΕΛΟC: ΤΗϹ ΙΔΗC according to Theophrastus iii. 17. 6 a slender-branched shrub with lateral sweet black berries as large as a ΚΥΑΜΟC, the leaves small rounded and not fissured, — is referred here by writers: V. myrtillus was observed by Sibthorp on the Bithynian Olympus; is known to grow also on the Taurian mountains and in Siberia (Bieb., and Wats.). Westward, is termed "vitis idæa foliis oblongis crenatis fructu nigricante" by Tournefort inst. 608; was observed by Lenz on the mountains of Italy; is known to grow also on the mountains of middle Europe, and in Northern Europe as far as Lapland and Iceland (Hook., and Wats.).

Villarsia nymphoides of Europe and Northern Asia. Called in Britain *fringed water-lily* (Prior); and the ΜΗΝΑΝΘΟC of Theophrastus iv. 10. 1, growing around the Orchomenian lake, — is referred here by writers: V. nymphoides was observed by Sibthorp in the waters of Greece as far as Constantinople: and is known to grow from Eastern Russia to Lake Baikal (Ledeb.). Westward, from the current name of an allied plant (Cockayne), the parti-coloured "ram geallan" of the Anglo-Saxon leechbook i. 51 seems to belong here: V. nymphæoides is termed "nymphoides aquis innatans" by Tournefort inst. 153; and is known to grow from Italy and the Pyrenees as far as Denmark (fl. Dan. pl. 339, and A. Dec.). Its floating leaves according to Lindley "are mottled above, purplish beneath," and its stems continue in medicinal use as "bitter, tonic, and febrifugal."

Convolvulus althæoides of open situations in the Mediterranean countries. Called in Spain "campanilla," in Portugal "verdezilla" (Lob.), in Greece "tōu kalōgĕrōu tō hōrtōn" (Sibth.); and the ΙΑϹΙΩΝΗC of Theophrastus i. 13. 2 to caus. ii. 18. 3, creeping on the ground when no other plant is near and its lily-like flower monopetalous with only angular indications of separation at the summit, — may be compared: C. althæoides was observed by Delile on the Mediterranean border of Egypt; by Forskal, Sibthorp, Chaubard, Fraas, and Aucher, frequent on barren hills from Crete and the Peloponnesus to the Marmora shore and Asia Minor; but according to A. Decandolle is not known farther East. Westward, the "iasione in terra repens" of Pliny xxi. 65 to xxii. 39 is edible,

and is sometimes called "concilium," its leaf being so implicated as to seem several; C. althæoides is termed "c. peregrinus" by Clusius (Lobel hist. 340), "c. argenteus elegantissimus foliis tenuiter incisis" by Tournefort inst. 85; was observed by Tenore in Italy (Steud.), by myself on Malta; and is known to grow near Mogador in Morocco, and on the Canary Islands (A. Dec.). Probably by European colonists was carried to Madeira; and to North America, observed by Nuttall along the Red and Arkansas rivers. Its roots according to L. Deslongchamps "contain a purgative resin" (Lindl.).

Heliotropium supinum of the Mediterranean countries. The ΗΛΙΟΤΡΟΠΙΟΝ of Theophrastus vii. 3. 1 to 8. 1 and 15. 1, ΕΠΙΓΕΙΟΚΑΥΛΑ prostrate, having persistent leaves, and at the time of the solstice flowering from below upwards, — may be compared: the "ĕĕlĭōiō trōpais ĕrnōs" is mentioned by Nicander ther. 677 to 885; and the "ēliōtrōpiōn mikrōn" of Dioscorides, having round fruit, and called "skŏrpiōurōn" in the added Synonyms, is referred here by Fraas: H. supinum was observed by Tournefort trav. i. pl. 85, Sibthorp, Chaubard, and Fraas, frequent in moist places especially maritime from the Peloponnesus throughout the Greek islands; by Forskal p. 39, and Delile, from Alexandria to Cairo. Westward, is termed "h. minus supinum" by Tournefort inst. 139; and is known to grow in Barbary, near Salmantica, and on the Mediterranean shore of France (Pers.).

Cerinthe aspera of the Mediterranean countries. Called in Greece "nĕrōlahana" or "nĕrōulakia" (Fraas) or "skalizōnaki" or "palathrakōulia" (Sibth.); and the ΚΗΡΙΝΘΟΝ of Theophrastus vi. 7 — is referred here by writers: C. aspera was observed by Sibthorp, Chaubard, and Fraas, frequent from the Peloponnesus to mount Athos. Westward, the "cerintha" is mentioned by Virgil georg. iv. 63; by Pliny xxi. 41 as "folio candido incurvo cubitalis capite concavo mellis succum habente:" C. aspera is termed "c. quorundam major spinoso folio flavo flore" by Tournefort inst. 80; was observed by Hogg on Sicily; and is known to grow in various parts of Southern Europe (Pers.).

Cerinthe minor of the East Mediterranean countries. Included perhaps in the "kerinthōn," mentioned as vernal by Theophrastus, — according to Fraas: C. minor was observed by Forskal, Sibthorp, and Fraas, in cultivated ground from the Peloponnesus to Constantinople, and especially in vineyards in the spring. Westward, the "cerintha" of Virgil, and Pliny, is referred here by Lenz: C. minor is termed "c. quorundam minor flavo flore" by Tournefort inst. 80; was observed by Lenz in Italy; and is known to grow in Styria, Austria, and as far North as Jena (Jacq. austr. pl. 124, and Pers.).

Lycium Barbarum of Barbary. A weak-stemmed shrub with long trailing branches slightly thorny; and the ΡΑΜΝΟC; ΜΕΛΑC agreeing with the other kind according to Theophrastus iii. 18. 2 in having thorns, but differing in the fruit, — may be compared: the "ramnōs tritē mĕlantĕra" is described by Dioscorides as having twigs five cubits long, and follicle-shaped fruit: L. Barbarum was observed by Sibthorp on the island of Naxos. Westward, a "silvestre nigrius" kind of "rhamnos" bearing "veluti folliculos," is mentioned by Pliny xxiv. 76: L. Barbarum is described Sloan. afric. pl. 349 (Pers.); was observed by Shaw trav. ii. in Barbary; and is well known in the gardens of Europe. By European colonists, was carried to Northeast America, where it continues to be planted for trellis work, but according to A. Gray, is as "yet hardly spontaneous." (See L. Europæum and L. Afrum).

Orobanche cruenta of the East Mediterranean countries. The ΑΙΜΟΔΩΡΟΝ of Theophrastus viii. 8. 5 to caus. v. 15. 5, having a short simple stem and destroying fenugreek by growing on the roots, — is referred here by Fraas: O. cruenta was observed by Sprunner near Nauplia on Lagoecia cuminoides; and by Fraas on fenugreek near Haliartus. Westward, is described by Bertoloni; and is known to grow as far as North Italy (Pollini, and Lenz).

Melissa officinalis of the Mediterranean countries. Called in Britain *garden balm*, in France "melisse" (Nugent), in Italy "melissa" or "cedronella" (Lenz), in Greece "mĕlissōvōtanōn" or "mĕlissōhōrtōn" (Sibth.); in which we recognize the ΜΕΛΙCCΟΦΥΛΛΟΝ of Theophrastus vi. 1. 4, — named according to Dioscorides from bees delighting in it, also the "mĕlitēia" termed fragrant by Theocritus iv. 25, "mĕliphullōn" and "mĕlissōphutōn" of Nicander ther. 554 to 677, "mĕlitaina" of Hesychius, and "mĕlittĕŏn" of the Geoponica xv. 5. 4: the "badrandschabuje," a Persian name according to Ebn Baitar, is referred here by Sontheimer: M. officinalis was observed by Forskal in gardens at Constantinople, and by him, Sibthorp, Chaubard, and Fraas, wild in the environs and in mountain woods as far as Parnassus and the Peloponnesus; by Hasselquist in Palestine, as well as near Damietta; and "spiritus melissæ" is enumerated by Forskal mat. med. as used medicinally in Egypt. Westward, the "mĕlissōphullōn" is identified in Syn. Diosc. with the "mĕrisĕĭmōriōn" of the Gauls, and "kitragŏ" or "apiastrōum" of the Romans; by Pliny xxi. 29 and 86 with the "apiastrum" rubbed on hives to keep the bees from deserting; the "apiastrum" is mentioned also by Varro iii. 16, and Columella, and the "melisphyllum" by Virgil geor. iv. 64: M. officinalis is termed "m. hortensis" by Tournefort inst. 193; is known to grow wild in Italy (Lenz), is besides cultivated

and naturalized throughout middle Europe as far as Britain (Pers., Wats., and A. Dec.). By European colonists, was carried to Northeast America, where according to A. Gray it has "sparingly escaped from gardens;" to the island of Juan Fernandez, observed by Bertero abundantly naturalized. The plant according to Lindley is "aromatic and slightly bitter," and is used "in the form of tea as a grateful fever drink."

Melissa altissima, frequent in the lower country as far as Crete, and regarded by Fraas and others as distinct from the preceding; is admitted to be included in the accounts of the "mĕlissŏphullŏn" by Greek writers.

Salvia sylvestris of Eastern Europe and the adjoining portion of Asia. The ΣΦΑΚΕΛΟΣ herb of Theophrastus, its leaf "squalens" — (Dod. pempt. ii. 4. 23), may be compared: S. sylvestris is termed "sclarea folio salviæ major vel maculata" by Tournefort inst. 179; S. sylvestris is known to grow in Bohemia (Crantz, Jacq. austr. pl. 212, and Pers.); was observed by Scopoli ed. 2. n. 32 in Carniolia; and by Sibthorp, in the environs of Constantinople.

Teucrium chamædrys of Europe and the adjoining portion of Asia. Called in Britain *germander*, in France "gamandrée" (Prior), in Greece "hamaithrua" (Sibth.); in which we recognize the ΧΑΜΑΙΔΡΥΣ used medicinally according to Theophrastus ix. 9. 5, — growing according to Dioscorides in rough stony places and having small purplish flowers: T. chamædrys was observed by Sibthorp, and Chaubard, in dry stony places from the Peloponnesus throughout the Greek islands; and dried "chamædrys" is enumerated by Alpinus, and Forskal mat. med., as used medicinally in Egypt. Westward, the "hamaithrus" by some called "tĕukriŏn" is identified in Syn. Diosc. with the "tripsagŏ minŏr" of the Romans: the "trixago" or "trisago" is mentioned by Celsus, Scribonius Largus, and is identified by Pliny xxiv. 80 with the "chamaeropem" or "chamaedrys, but his account seems chiefly taken from Dioscorides: T. chamædrys is described by Fuchsius, Tragus, Matthioli, Lobel, and Dodoens; is termed "chamædrys major et minor repens" by Tournefort inst. 204, "t. officinale" by Lamarck fl. fr.; is known to grow throughout middle Europe as far as Normandy (Pers., and A. Dec.); but in Britain in the days of Ray occurred only on the walls of a castle, and is regarded by Watson as exotic and hardly naturalized.

Teucrium flavum of Europe and the adjoining portion of Asia. Called in Italy "teucrio" (Targ.), in Greece "hamaithrua" (Sibth.), and possibly included in the "hamaithrus" of Theophrastus: — the "hamaithrun" identified in Syn. Diosc. iii. 101 with the "tĕukriŏn" of Dioscorides abounding in Cilicia, is referred here by writers: T. flavum was observed by Sibthorp, Chaubard, and Fraas, frequent from Crete and the Peloponnesus throughout the Greek islands. Westward, the account by Pliny xxv. 20 of the "teucrion" having "ramis hyssopi" seems in part taken from Dioscorides: T. flavum is described by Fuchsius, Matthioli, Anguillara, Dodoens, and Clusius; is termed "chamædrys frutescens teucrium vulgo" by Tournefort inst. 205; and is known to grow in Italy and as far as middle Europe (Pers., and Lenz).

Teucrium lucidum, termed "chamædrys alpina frutescens folio splendente" by Tournefort inst. 205, observed by Sibthorp, Chaubard, and Fraas, from Cyprus to the Peloponnesus, and known to grow in Italy (Pers., and Lenz), is regarded by Chaubard as not distinct.

Origanum Sipyleum of the East Mediterranean countries. The ΜΑΡΟΝ perfume lasting two years according to Theophrastus odor. 34, — seems the product of the "marŏn" of Dioscorides, growing mostly about Magnesia and Tralles and having odorous flowers resembling those of "ŏrigănŏ," its medicinal properties as in "sisumvriŏ," and referred here by Sibthorp, and Fraas: the "marŏn" is identified in Syn. Diosc. with the "origanitha" or "isŏvruŏn;" and Lydian "marŏn" is mentioned by Pliny xii. 53: O. Sipyleum is described by Morison iii. pl. 4; is termed "o. montis Sipyli" by Tournefort inst. 199; was observed by Sibthorp near Smyrna and on mount Sipylo in Phrygia, but in Greece confined to the Euboean Delphi, a fact confirmed by Fraas. (See Teucrium marum).

Origanum maru of Crete and Cyzicus. The ΟΡΙΓΑΝΟΥ: ΜΕΛΑΙΝΑ: ΑΚΑΡΠΟΣ of Theophrastus vi. 2. 3 — is referred conjecturally by Sprengel to the variety becoming seedless under cultivation: O. maru is termed "maru creticum" by Alpinus exot. pl. 288, "majorana cretica rotundifolia lavandulæ odore capitulis minoribus incanis flore purpurascente" by Tournefort cor. 13; was observed by Sibthorp on the mountains of Crete; is known to grow wild also on Cyzicus (Spreng.). Westward, the "amaracum mollem" of Virgil aen. i. 698 is referred here by Sprengel: "O. majoranoides," perennial and well known in European gardens (Pers.), is regarded as not distinct.

Daphne jasminea of the East Mediterranean countries. The ΚΝΕΩΡΟΣ: ΛΕΥΚΟΣ of Theophrastus vi. 2. 2, fragrant and more depressed with oblong coriaceous leaves resembling those of the olive, and flowering after the autumnal equinox, — may be compared: the "cneori candidi" is further mentioned as coronary by Pliny xxi. 30: D. jasminea, said to be fragrant, was observed by Sibthorp, and Fraas, on the subalpine portion of the mountains of Southern Greece. "D. oleoides," described by Alpinus exot. pl. 43, termed "thymelæa cretica oleæ folio utrinque glabro" by Tourne-

fort cor. 41, observed by Sibthorp, and Fraas, on the subalpine portion of mountains from Crete to the Peloponnesus and Bithynian Olympus, known to grow also on Caucasus (Pall.), and Westward on the mountains of Corsica and Sardinia (Spreng.), is regarded by Fraas as not distinct. (See D. sericea.)

Daphne tartonraira of the Mediterranean countries. The ΚΝΕΩΡΟC: ΜΕΛΑC of Theophrastus i. 10. 4 to vi. 2. 2, scentless, having fleshy leaves like tamarisk cypress and ΜΗΛΕΑ quince, and flowering after the autumnal equinox, — may be compared: the "cneori nigri" is also enumerated as coronary by Pliny xxi. 30: D. tartonraira was observed by Sibthorp, and Chaubard, from the Peloponnesus to the Black Sea, flowering according to Fraas at the time of autumnal equinox. Westward, is described by Dalechamp p. 1669 (Spreng.); is termed "tarton-raire galloprovinciæ monspeliensium" by Lobel pl. 371, "thymelæa foliis candicantibus sericī instar mollibus" by Tournefort inst. 595; is known to grow in Italy and Southern France (All. Lam. fl. fr., Pers., and Lenz), where according to Smith fl. gr. pl. 354 it is much used medicinally.

Passerina dioica of the Mediterranean countries. Called in Greece "ēmĕrŏ thĕrōkallō" (Sibth.); in which we recognize the ΗΜΕΡΟΚΑΛΛΕC enumerated by Theophrastus vi. 1. 1 to 6. 11 among small-leaved woody plants, cultivated and coronary: — P. dioica was observed by Sibthorp, and Chaubard, on the mountains of the Peloponnesus and Attica, furnishing a yellow dye. Westward, is termed "daphne dioica" in Linn. suppl. 223, "thymelaea dioica" by Allioni; and is known to grow on the Pyrenees (Lapeyr., and Pers.).

Plantago (*Psyllium*) *cynops* of Europe and the adjoining portion of Asia. The ΚΥΝΩΠΟC springing up with the first showers after the equinox, or ΑΧΥΝΩΨ having a spike, of Theophrastus vii. 7. 3 to 11. 1, — is referred here by Linnæus: P. cynops, distinguished by its round leafy bracts, was observed by Sibthorp in Bithynia. Westward, the "cynops" having a spike, is enumerated by Pliny xxi. 61 as distinct from the "cynoides" or "psyllion:" P. cynops is described by Bauhin hist. iii. 513 (J. E. Smith); is termed "psyllium majus supinum" by Tournefort inst. 128, "p. genevensis" by Poiret; and is known to grow in Italy and Southern France (Lam. fl. fr., and Pers.).

Rumex (*Emex*) *spinosus* of the Mediterranean countries. Called in Greece "agriō sĕuklōn" (Sibth.), in Egypt "figl el djebbel" Desert radish, or "sagarat el aguz" (Forsk.); and the ΛΑΠΑΘΟΝ: ΑΓΡΙΟΝ of Theophrastus vii. 2. 7, having a shorter and less enduring root, numerous stems and branches, and in its whole aspect resembling ΤΕΥΤΛΙΟΥ, — may be compared: the "lĕimŏniōn" is described by Dioscorides as growing in meads and moist places, its leaves like those of "sĕutlŏ," stem equal as in "krinōu." and slender straight full of red astringent fruit; is identified in the added Synonyms with the "nĕurōĕithĕs" or "napĕiōn ōninnōu," with the "mĕnthrōuta" of the Mysians, "mĕōutha" or "ĕllĕvōrōsēmata" or "skullīōn" or "lukōsĕmphullōn" of the Syrians, and "lukōu karthia" of the prophets: the "lapathōn ē agriōn tĕutlōn" is also mentioned by Galen alim. fac. ii. 47: R. spinosus is termed "beta cretica semine aculeato" by Bauhin prodr. pl. 57; was observed by Sibthorp, and Bory, in Attica and the Peloponnesus; by Forskal p. 75, and Delile, in Egypt from Alexandria to Cairo. Westward, the "lĕimŏniōn" is further identified in Syn. Diosc. with the "thakina" of the Dacians, "iōumvarōum" of the Gauls, and "ōuĕratrōum nigrōum" or "tintinnavōulōum tĕrrai" of the Romans; but the account by Pliny xx. 28 of the "limonion" or "neuroides" or "beta silvestris" seems chiefly taken from the Greek: R. spinosus was observed by Schousboe in moist places in Morocco as far as Tangier on the Atlantic (Pers., and Necker).

Rumex (*Acetosa*) *acetosa* of Europe and the adjoining portion of Asia. Called in Britain *sorrel* (Prior), in France "surelle" or "oseille" (Nugent), in Germany "sauerampfer" (Grieb), in Italy "acetina" or "acetosa" or "ossalida" (Lenz), in Greece "xunēthra" (Fraas) or "zinitra" or "ōxulithi" (Sibth.); in which we recognize the "oxalidem" identified through Pliny with the ΛΑΠΑΘΟΝ: ΑΓΡΙΟΝ of Theophrastus vii. 6. 1, better flavoured than the ΗΜΕΡΟΥ kind but more acid: — the "ōxalis" is mentioned by Nicander ther. 840; by Dioscorides ii. 140 as not large and having acrid red fruit, and called by some "anaxuritha" or "lapathōn:" R. acetosa was observed by Sibthorp, and Fraas, from the Peloponnesus to Constantinople; is known to grow also along the Taurian mountains; and seeds of "acetosa obtusifolia" were found by Forskal mat. med. employed medicinally in Egypt: the living R. acetosa was seen by him in gardens at Constantinople, and according to Clot-Bey has recently been introduced into the gardens of Egypt. Westward, the "oxalidem" or "lapathum silvestre" is further identified by Pliny xx. 85 with the "rumicem" or "lapathum cantherinum" of the Romans, having pointed leaves and "radice minima" the root not swollen; the "rumex" is mentioned by Plautus pseudol. iii. 2. 26, Apicius i. 1, and Apulejus d. h. 13: R. acetosa is termed "a. pratensis" by Tournefort inst. 502; was observed by Pollini wild in Italy; is known to grow throughout middle and Northern Europe as far as Lapland and Iceland (Hook., Pers., Wats., and A. Dec.), is besides regularly cultivated. By European colonists, was carried to Northeast America before 1669 (Jossel.), but has disappeared; was also carried to Alaska (Wats.). "An agreeably acid plant" according to Lindley, "refrigerant and diuretic," its root "long and tapering, astringent, somewhat woody."

Rumex (Acetosa) acetosella of Northern climates. Called in Britain *sheep's sorrel* (Prior), in Italy "acetosella" or "acetosa minore" or "ossalide minore" (Lenz), in Greece "oxulithi" (Sibth.); and possibly included in the "lapathōn agriōn" of Theophrastus, — and "oxalis" of Nicander: the "lapathōn agriŏn mikrōn" is described by Dioscorides as humble and having leaves like those of "oxalitha:" R. acetosella was observed by Sibthorp, Chaubard, and Fraas, frequent from the Peloponnesus throughout the Greek islands to the Bithynian Olympus; by Hasselquist, at Damietta in Egypt; is known to grow also in Siberia (Wats.). Westward, is described by Dodoens pl. 639; is termed "acetosa arvensis lanceolata" by Tournefort inst. 503; was observed by Pollini in Italy, by Forskal near Marseilles; and is known to grow in siliceous soil throughout middle and Northern Europe as far as Lapland (Pers., Wats., and A. Dec.). Farther West, is known to grow on Iceland and Greenland; was observed by Higgeson, one of the first settlers, around Salem in New England; by Nuttall, "indubitably native" along the Arkansas river; but throughout our Atlantic States has greatly multiplied in sterile soil wherever the forest has been removed. Clearly by European colonists, was carried to Austral Africa (Drège and Mey.); to the Falkland Islands, observed around dwellings there by J. D. Hooker ii. 341.

Beta maritima of the shores of the Mediterranean and adjoining portion of the Atlantic. Called in Britain *sea beet* (Prior), in Greece "agria sĕskōula" (Fraas); and the ΤΕΥΤΛΙC of Theophrastus vii. 7. 2, a potherb requiring cooking, — is referred here by Fraas: B. maritima was observed by Sibthorp, and Fraas, in salt marshes and on muddy shores from the Peloponnesus to the Black Sea; by Delile, from the Mediterranean shore as far as Cairo. Westward, is termed "b. sylvestris maritima" by Tournefort inst. 502; "b. decumbens" by Moench; and is known to grow along the seashore as far as Britain (Mill.), decumbent according to Persoon with triangular leaves. (See B. vulgaris).

Ficus sur of the mountains of Yemen. Called there "sur" (Forsk.); and the tree called in Crete ΚΥΠΡΙΑC; CΥΚΗC, resembling according to Theophrastus iv. 2. 3 the sycamore and in like manner bearing fruit on its trunk and old branches, this fruit resembling a fig and edible, as large as a ΚΟΚΚΥΜΗΛΟΝ, — translated "sorbi" by Pliny xiii. 15, is referred here by Sprengel: F. sur was observed by Forskal p. 180 near Djobbæ, a tree "sycomoro similis," fruit crowded "prope truncum," as large as a pigeon's egg and edible.

Herniaria glabra of Europe and the adjoining portion of Asia. Called in Britain *rupture wort* (Prior), in Italy "millegrana," in Greece "aspĕthila" (Anguill.); and the ΕΛΛΕΒΟΡΙΝΗC of Theophrastus ix. 10. 2, a little herb whose seed is taken with hellebore to promote vomiting, — is identified through Syn. Diosc. with the "ĕpipaktis" of Dioscorides, referred here by Anguillara (Spreng.): the "ĕpipaktis" is described by Dioscorides as a diminutive shrub with most diminutive leaves, drank in deadly affections and against diseases of the liver, is further identified in the added Synonyms with the "vōriōn:" H. glabra was observed by Anguillara p. 282 in Macedonia and Greece, employed in conformity with the account of Dioscorides (Spreng.); by Sibthorp, and Chaubard, frequent from the Peloponnesus throughout the Greek islands. Westward, the account by Pliny xxvii. 52 of the "epipactis" or "elleborine" seems taken from Dioscorides; H. glabra was observed by Anguillara in Illyria and Italy; is described also by Tragus f. 200, and Tournefort inst. 507; is termed "h. fruticosa" by Gouan (Steud.); and is known to grow throughout middle Europe as far as Denmark (ft. Dan. pl. 529, and Pers.).

Herniaria fruticosa of the Mediterranean countries. Possibly included with the preceding: — observed by Delile near Alexandria on the Mediterranean border of Egypt. Westward, described by Lobel pl. 85; and known to grow in Spain and Southern France (Pers.).

Ulmus campestris of Northern Europe and the adjoining portion of Asia. Called in Britain *wych-elm* (from being used to make the chests called in Anglo-Saxon "hwæcce," by Chaucer "wiche," by Caxton "whutche," and in French "huche," the word *elm* occurring in Anglo Saxon and with very little change throughout the Germanic languages, "almr" in Icelandic, "alm" or "ælm" or "elm" in Danish, "olm" in Dutch, "olm" or "ilme" or "ulme" in different German dialects (Prior), at Constantinople "gaurō" (Forsk.), and the ΟΡΕΟΠΤΕΑΕΑ of Theophrastus iii. 14. 1, a lofty tree growing on mount Ida, — may be compared: U. campestris was observed by Forskal near Constantinople. Westward, the "atinia" identified by Columella with the Gallic elm, or "atinias gallicas" named according to Pliny xvi. 29 to xvii. 15 from their lofty stature, are referred here by Daubeny: U. campestris is known to grow wild throughout middle and Northern Europe (Engl. bot. pl. 1886, A. Dec., and Lindl.). By European colonists was carried to Northeast America, where it continues to be planted for ornament.

Salix helix of Europe and the adjoining portion of Asia. Willows never becoming trees are mentioned by Theophrastus iii. 13. 7, and the ΕΛΙΚΗΝ of the Arcadians — is referred here by writers: the "helicem" according to Pliny xvi. 69 is the humblest of three kinds of willow known in Asia Minor: S. helix was observed by Sibthorp, and Fraas, in the marshes of Greece. West-

ward, the "amara" kind of Virgil ecl. i. 79, may be compared: S. helix is termed "s. humilis capitulo squamoso" by Tournefort inst. 591, "s. monandra" by Hoffmann; was observed by Pollini in Italy; and is known to grow throughout middle Europe (Engl. bot. pl. 1343, and Pers.). "S. purpurea," termed "s. vulgaris nigricans folio non serrato" by Tournefort inst. 590, also seen by Sibthorp in the marshes of Greece, and known to grow as far as Lapland and Iceland (Hook., and Wats.), its bark according to Lindley "the most bitter" of all, is regarded as not distinct: by European colonists according to Carey, was introduced into the "low grounds" of Canada and our Northern States.

Pinus peuce of the mountains of Northern Greece. The ΠΕΥΚΗ: ΙΔΑΙΑ of Theophrastus iii. 9. 1, taller and straighter than the ΠΑΡΑΛΙΑ kind, with thicker leaves and the cone longer and less dehiscent, — or the "excelsa" kind of Latin writers, is referred here by J. D. Hooker linn. j. viii. 31: P. peuce was observed by Griesbach on mount Peristeri in Macedonia (Daub.); the alleged "P. sylvestris" seen by Sibthorp on the Bithynian Olympus, may also be compared.

Abies excelsa of Northern Europe and Asia and mountains farther South. Called in Britain *spruce* or *spruce-fir* (Prior), in Italy "pezzo" or "abeto rosso" or "abeto di Germania" (Lenz); and the ΕΛΑΤΗ: ΘΗΛΕΙΑ of Macedonia, distinguished by Theophrastus iii. 9. 6, — is referred here by Fraas: A. excelsa was observed by him in Greece, but not South of mount Pindus. Westward, the "abies" is mentioned by Plautus, Virgil, Propertius, the timber according to Pliny xvi. 38 and 76 in great request for spars and masts, and the foliage pectinated like that of "picea;" was observed by Caesar v. 12 in Gaul; and the "abies gallica" is expressly mentioned by Palladius nov. xv. 11: piles or posts of A. excelsa occur in the early lake-villages of Switzerland (Troyon), and the tree is known to grow on the Alps and Appenines, the Pyrenees, Carpathians, and throughout Northern Europe as far as Lat. 68°.15, but in Britain occurs only planted for ornament (Pers, Buch, A. Dec., Daub. and Lenz). By European colonists, was carried to Northeast America, where it continues under cultivation.

Asplenium ruta-muraria of Northern Climates. A fern called in Britain *wall-rue* (Prior); and the ΠΗΓΑΝΙΩΝ enumerated by Theophrastus i. 10. 4 among plants whose leaves are fleshy but not thickened, — may be compared: A. ruta-muraria was observed by Sibthorp in rock-clefts from mount Parnassus to Constantinople. Westward, the "rutula" is mentioned by Cicero (Ainsw.): A. ruta-muraria is described by Matthioli 734, and Lobel adv. 362. (Spreng.); is termed "ruta muraria" by Tournefort inst. 541; and is known to grow throughout middle and Northern Europe (Engl. bot. pl. 150). Farther West, is known to grow on "limestone cliffs, Vermont to Michigan, Virginia, and southward along the mountains" (A. Gray, and Chapm.); was however observed by Conrad near Philadelphia, and by Nuttall along the Arkansas.

Asplenium adiantum-nigrum of Europe and the adjoining portion of Asia. Called in Greece "skōrpithi" (Sibth.) or "skrōpithi" or "skrōpithōhōrtōn" (Fraas), and the ΔΡΥΟΠΤΕΡΙΣ of Theophrastus, — growing according to Dioscorides on the moss-clad portion of old oaks and resembling the "pterithi" but much smaller, roots hairy at the junction, and employed for extirpating hair, is referred here by Sibthorp, and Fraas: A. adiantum-nigrum was observed by them in Greece, not infrequent in shady places and on mounds, sometimes on old oaks as described by Dioscorides. Westward, the "thruōptēris" or "ptēriōn" or "numphaia ptēris" is identified in the Syn. Diosc. with the "philiklam" of the Romans: the "dryopteris" is mentioned by Pliny xxvii. 48, the bruised root constituting "psilothrum" (depilatory ointment), but his account of the plant seems taken from Dioscorides: A. adiantum-nigrum is termed "filicula quæ adiantum nigrum officinarum" by Tournefort inst. 542; and is known to grow in middle Europe as far as Britain (Engl. bot. pl. 1950).

Usnea florida of Northern Climates. The ΦΑΚΟΝ described by Theophrastus iii. 8 as growing in rags pendent and hoary on the branches of oaks, — is referred here by Fraas: U. florida was observed by Sibthorp on trees around Athens and in Bœotia. Farther South, the "oschnah" is mentioned by Avicenna as growing even on the walnut (Spreng.); and the "aschnah" is also mentioned by Ebn Baitar. Westward, U. florida is described by Tournefort inst. 550; is termed "u. vulgatissima tenuior et brevior cum orbiculis" by Dillenius 69. pl. 13. f. 13; and is known to grow throughout the wooded portion of Europe (Engl. bot. pl. 872). Farther West, a species regarded as identical is frequent on forest-trees in North America.

Usnea barbata of Europe and the adjoining portion of Asia. Perhaps included in the "phaskōn" of Theophrastus: — U. barbata was observed by Sibthorp, and Bory, in the woods of Greece and on the Bithynian Olympus, and called "anēraithōhōrtōn." Westward, is termed "u. barbata loris tenuibus fibrosis" by Dillenius 63. pl. 12. f. 6; is known to grow throughout the wooded portion of Europe (Engl. bot. pl. 258); and according to Sprengel, in common with the preceding species becomes more fragrant when growing on trees of the pine tribe.

Alectoria jubata of Europe and the adjoining portion of Asia. The ΦΑΚΟΝ growing according to Theophrastus iii. 8 on the ΑΛΙΦΑΟΙΟΣ but shorter and blackish, — may be compared: A.

jubata is termed "usnea jubata nigricans" by Dillenius pl. 12; and was observed by Sibthorp in woods on the Bithynian Olympus, and var. "rigida" on mount Athos and in Boeotia.

Lycoperdon epidendrum of Europe. The ΠΕΖΙC of Theophrastus i. 6, — or "pezicae" of the Greeks described by Pliny as a kind of fungus having neither root nor stem, may be compared: L. epidendrum was observed by Sibthorp in the Peloponnesus; is known to grow also in France and Britain (Bulliard herb. fr. i. pl. 503, and Sibth. oxon. 400).

Ploçanium coccineum of shoal water in the Mediterranean and adjoining portion of the Atlantic. The sea ΦΥΚΟC described by Theophrastus iv. 6 as drifted by the North wind against Crete, more beautiful in colour than sea-purple, and used for dyeing fillets and garments, — is referred here by Sprengel: the "phōinissōn alōs phukōs" mentioned by Nicander as an antidote against serpents, is identified by Dioscorides with the "phukōs thalassiōn upōmēkĕs kai phōinissōn;" the third kind used for dyeing garments in Crete, is described by Pliny xxvi. 66 as "crispis foliis;" and P. coccineum was observed in the Propontis by Sibthorp. And farther North, P. coccineum is known to grow around Britain (Huds. 586, Turner i. pl. 59, and Engl. bot. pl. 1242).

Laurencia botryoides of the Mediterranean, Red Sea, and Indian Ocean. The AMΠΕΛOC: ΠONTIA of Theophrastus iv. 7 — is referred here by Billerbeck: L. botryoides was observed by Forskal p. 192 in the harbour of Constantinople; by Virlet, in the gulf of Saros; and by Bory, on rocks on the coast of Greece. Farther South, was observed by Forskal in the Red Sea near Mocha; and is known to grow around the Kint islets on the coast of Australia (Bory).

Cystoseira selaginoides of the Mediterranean, and the Atlantic coast of Europe. The ΕΛΑΤΗ: ΠONTIA of Theophrastus iv. 7, — may be compared: the sea "abies" is mentioned by Pliny xiii. 25; the "ĕnalōn murikēn," by Aelian xiv. 24; the "myrica marina," by Clusius; C. selaginoides was observed by Sibthorp, and Bory, around the coast of the Peloponnesus; and is known to grow as far North as Britain (Billarb., and Engl. bot. pl. 1968).

Aleyonidium nemalion of the Adriatic, and coasts of the Peloponnesus. The CYKH: ΠONTIA of Theophrastus iv. 7, — is referred by Billerbeck to Fucus turbinatus. A. nemalion was discovered by Bertoloni in the Adriatic; and was observed by Bory at the Southern extreme of the Peloponnesus.

Laminaria saccharina of the European coast along the Atlantic. Called in Britain *honey-ware*, from "war" the Anglo-Saxon name for "seaweed" (Prior): the ΠPACON growing according to Theophrastus iv. 6 outside of the entrance to the Mediterranean and very large, more than a palm wide, — is referred here by Fraas, and Lenz: L. saccharina has its surface coated with a layer of sugar, much used according to Duchesne p. 364 by the Icelanders.

"305 B. C." (Sm. b. d.), Rhodes besieged by Demetrius: — who in the following year made peace with the Rhodians and returned to Athens.

Echium vulgare of Europe and the adjoining portion of Asia. Called in Britain *viper's bugloss* (Prior), and the "ĕhis" herb with which Alcibius bitten by a viper was healed — (Demetrius Chlorus, and schol. Nicand. ther. 541), may be compared: the "ĕhiĕiōn ĕtĕrŏn" is described by Numenius as the useful kind, having a stem with elevated leaves and branches (schol. Nicand. ther. 637); the "Alkiviŏu ĕhiōs" is commended by Nicander; E. vulgare was observed by Sibthorp, Chaubard, and Fraas, growing around Constantinople and in the Peloponnesus. Westward, is said to have been introduced into Britain by the Romans (F. Adams transl. P. Aeg.); is described by Tournefort inst. 135, and Blackwell pl. 299; and is known to grow in waste ground throughout middle Europe as far as Denmark (Pers.). By European colonists, was carried to Northeast America, where it has become a weed in waste ground, observed by A. Gray especially abounding along the Shenandoah.

Lycopsis echioides of the East Mediterranean and Tauro-Caspian countries. — Two kinds of "ĕhiĕiōn" are distinguished by Nicander, and the "mikrōn ĕhiĕiōn" is described by Numenius as having prickly leaves and a small root (schol Nicand. ther. 637): the "ĕhiŏn" or "thŏritha" or "alkiviathiōn" is described by Dioscorides as having elongate rough leaves resembling those of "aghōusēs," several stems, purplish flowers, and fruit like the head of a viper; the "echis" or "doris" or "pseudanchusa," distinguished from the "anchusa" by the root not giving out red juice, was employed by the Magians against "tertianis" intermittent fever, a leaf collected with the left hand being applied externally (Plin. xxii. 24): L. echioides "calycibus fructiferis inflatis pendulis" was observed by Sibthorp, and Chaubard, in unwooded situations in Greece and Cyprus; and is known to grow also in Armenia (Buxb. cent. i. pl. 1, Pers., and Bieb.). Westward, the "ĕhiōn" is identified by Dioscorides with the "alkiviakŏum" of the Romans: the "alcibion herba" was known to Pliny xxvii. 22 only from its medicinal use; but L. echioides has been observed in France (Dec. fl. fr., and Bory).

"304 B. C." (Sm. b. d.), P. Sulpicius Saverrio and P. Sempronius Sophus consuls, after a victorious campaign by the Romans against their neighbours the Samnites, peace concluded and the Second Samnite war terminated.

Not later than "303 B. C." (Clinton iii. p. 482, see also C. Mull. fragm. Meg. p. 398), Megasthenes sent as ambassador to king Sandrocottus or Chandragupta at Palimbothra on the Ganges — (regarded as identical with Pataliputtra).

The art of *writing*, according to Megasthenes, was unknown among the Indians; a statement denied by others. He also found the ideas of the "Brahmanes" or Bramins agreeing in many respects with those of the Greeks; as in regard to the origin of the world, its spherical shape, and the omnipresence of its author and governor "theŏs" (Strab. xv. 1. 53, 59, and 67); but "like Plato," maintaining the "immortality of the soul and judgment after death."

"Serpents large enough to swallow deer and bullocks," are mentioned by Megasthenes, — and some years later, by Deimachus (Strab. ii. 1. 9, Plin. viii. 14. 1, and Aelian xvi. 22); evidently species of *Python* or Indian boa.

Musa nov. sp. of Tropical Hindustan. Almost stemless, dying to the ground each season, and called in the environs of Bombay "cowdera" or "ran-khela" (Graham); the ΤΑΛΑ tree on whose bark, Megasthenes was informed, the aboriginal inhabitants of India subsisted, — may be compared: Musa nov. sp. was observed by Graham "common on the Ghauts and hilly parts of the Concan during the rains," the leaves "used for thatching houses," and the bulb or stem boiled and eaten, the poor people about Hurrychundarghur are mentioned by Gibson as having subsisted for two months entirely "on the inner rind and heart of" this bulb; which according to Davis is sometimes "dried and pounded into a kind of flower of which cakes are made." The "M. superba" wild in the Dindigul valleys, and observed by Drury at high elevations "on the mountains in Travancore" is perhaps identical.

Sterculia villosa of Tropical Hindustan. Called in Tamil "odul" or "oadal" (Drur.); and possibly included among the trees furnishing the bark with which certain Bramins seen by Megasthenes were clothed — (Strab. xv. 1. 60): assuming the coat of bark, is mentioned by Kalidasa vicram. 5: S. villosa was observed by Nimmo in the Concan South of Bombay (Graham); by Roxburgh, Royle, and Wight, in other parts of the peninsula and as far as Assam, bags and ropes made of the bark, which is easily stripped off the whole length of the tree, and the ropes used by all elephant-hunters in the Himalaya as well as in the Annamallay forests (Drur.). *S. guttata*, whose tough and pliable inner bark is converted into a flaxy substance of which clothing is made (Drur.), has been already noticed.

Grewia oppositifolia of Tropical Hindustan. Perhaps included among the trees furnishing the bark clothing — (Strab. xv. 1. 60): G. oppositifolia was observed by Buchanan, Roxburgh, and Royle, in the Kheree Pass and Dheyra Dhoon, the inner bark used for cordage and coarse cloth; by Powell, and Stewart, in the Punjaub, the bark made into sandals, but the chief value of the tree consisting in its leaves which largely serve as fodder (Drur.).

Antiaris saccidora of Western Hindustan. A majestic forest-tree called in the environs of Bombay "chandul" (Graham), in the Northern Concan "kurwut" or "juzoogry," in Malabar "araya-angeli," in Tamil "nettavil-marum" (Drur.); and possibly among the trees furnishing the bark clothing — (Strab. xv. 1. 60): A. saccidora was observed by Lush "in 1837" in the deep ravines at Kandalla, is termed by Nimmo "lepurandra," and according to Graham "is common in the jungles near Coorg," the bark so flexible that by beating with water it can be inverted and the branch sawed off, and a sack formed by leaving a short untouched segment for the bottom; was observed by Drury and others as far as Malabar and Travancore, pieces of the bark soaked and beaten used by the hill-people as clothing.

Celtis Orientalis of Hindustan. The *Indian nettle-tree* is called in Bengalee "chakan-tubunna" (Drur.); and is perhaps one of the trees furnishing the bark clothing — (Strab. xv. 1. 60): the "jivanti" of Susrutas sutr. 19 to chikits. 37, is referred here by Hessler: C. Orientalis was observed by Rheede iv. pl. 40 in Malabar; by Graham, "common along the foot of the Ghauts" as far as Bombay; by Retz, Roxburgh, Buchanan, and Royle, in mountainous situations common throughout to Travancore, Bengal, and Assam, where the inner bark forming a kind of natural or primitive cloth is worn by the Garrows (Pers., and Drur.).

Calamus rotang of Tropical Hindustan. The *rattan* is called in Telinga "bettam," in Bengalee and Hindustanee "beta" or "bet" (Drur.); and the ΕΥΚΑΜΠΕΤΟΣ branches of trees, flexible enough to make hoops, seen in India by Megasthenes — (. . . .), may be compared: C. rotang was observed by Rheede xii. pl. 64 in Malabar; by Lush, and Graham, nearly as far as Bombay; by Roxburgh iii. 777, and Drury, in other parts of the peninsula and frequent in Coromandel and Bengal, believed to be the stouter of the different kinds of rattan exported from the valleys of the Himalaya; by Burmann, on Ceylon (Steud.). Farther East, is termed "c. petraeus" by Loureiro p. 260. (Pers., and Steud.). By European colonists, was carried to the Mauritius Islands, observed in gardens there by Bojer. (See C. rudentum.)

Calamus extensus of Eastern Hindustan. The ΚΑΛΑΜΟΥΣ: ΧΑΜΑΙΚΑΙΝΕΙΣ procumbent

and fifty fathoms long according to Megasthenes — (Strab. xv. 1. 56), or "kalamōu čpigčiōn" of Theophrastus iv. 11. 13, may be compared: C. extensus is known to grow in Silhet, over the trees of the forest to the length of "five or six hundred feet" (Drur.).

Colocasia nymphæifolia of Hindustan. Called in Malabar "welie-ela" (Rheede); and the edible roots ΡΙΖΑΙ: ΔΙΑΦΟΡΟΙ: ΤΑΙC: ΓΛΥΚΥΤΗÇΙΝ growing spontaneously according to Megasthenes and in great abundance in the marshes of Hindustan, — may be compared: C. nymphæifolia was observed by Rheede xi. pl. 22 in watery places in Malabar (Pers.), where it forms part of the food of the inhabitants (Roxb., and Drur.); by Graham, "in moist places throughout the Concans" to and beyond Bombay.

"302 B. C." (Kitt. cycl. bibl.), by treaty, the war with Ptolemy brought to a close, and Coele-Syria, Palestine, and Arabia Petræa annexed to Egypt.

"301 B. C." (Burm. hist., and Mason 40), accession of Ranman, grandson of Dwattayan, as Burmese king, — represented as a "bad king." He reigned "fifty" years.*

One hundred and twentieth generation. Jan. 1st, 300, mostly beyond youth: the Greek poets, Asclepiades of Samos, Philetas, Aratus, Nossis of Locri, Anyte of Tegea, and Antagoras of Rhodes; the comic poets, Damoxenus, Hegesippus, Philemon the younger, Plato the younger, Theognetus, Bathon, and Posidippus; the tragic poets, Lycophron, Homerus the younger, Sositheus, Alexander of Aetolia, Philiscus of Corcyra, Dionysides, Sosiphanes, and Aeantides; the dramatists, Rhinthon of Tarentum, and Sotades the younger; the philosophers, Teles, Colotes, Timon, Metrodorus, and Dionysius of Heraclea; the geographer, Patrocles; the historians, Diyllus, Athanis, Psaon of Platea, Philochorus, Lycus of Rhegium, Callias of Syracuse, Idomeneus of Lampsacus, Timaeus, Duris of Samos, Ctesibius, and Anticlides; the orators, Cineas, and Democharcs; the medical writers, Serapion of Alexandria; the grammarian Zenodotus of Ephesus; other writers, Daimachus, Simmias of Rhodes, Amometus, Lynceus of Samos, Leonidas of Tarentum; the sculptor Praxiteles; the painters, Philoxenes, Perseus, Pausias, Aetion, Ctesilochus, and Aristolaus (Bryan).

Angiras son of Uru, son of Manu Chakshusha, son of Ripu, son of Slishti, son of Dhruva, as early possibly as this date. An extract from his writings — is preserved by Hemadri in the Śraddha Mayukha (H. H. Wils. transl. vishnu purana i. 13 and ii. 7). Angiras is mentioned in the Rig Veda sanhita as well as in the Mahabharata, and his descendants in the Sama Veda x. 10 (transl. Stev.).

Aegle marmelos of Tropical Hindustan. Called in Tamil "willa-marvum," in Telinga "maredoo," in Bengalee "bela" (Lindl.), in the environs of Bombay "bilwa" or "bale" (Graham), in which we recognize the "bel" whose fruit according to Angiras marks the size of balls of food to be presented to Brahmans — (H. H. Wils. note to v. p. iii. 13), and the "vilva" of Susrutas sutr. 46 and chikits. 18 to 28: the downless "mēlōn akanthēs" growing according to Nonnus dion. xxii. 25 in the forest beyond the Hydaspes, may also be compared: Ae. marmelos is described by Rumphius i. pl. 81; was observed in Hindustan by Rheede iii. pl. 37, Roxburgh, Wight; by Graham, "a thorny tree" occurring around Bombay and "about temples in many parts of the Deccan," the pulp of the fruit "much used by the natives in cases of chronic diarrhoea;" and according to Royle, the astringent rind is used in dyeing yellow. Farther East, is enumerated by Mason v. p. 494 as "exotic" in Burmah, "cultivated extensively by the" natives, and "highly esteemed for its medicinal properties." Westward from Hindustan, the "bull" is mentioned by Ishak ben Amran, Rhazes, Elbasri, Mosih, Ebn Samhun, Serapion, and Ebn Baitar; and "bel Hendi" fruit, brought from India to Egypt, is enumerated by Forskal mat. med. as constipating and employed medicinally.†

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* *Agathis loranthifolia* of mountains in the Siamese countries and Malayan archipelago. The *dammer pine* is a mistletoe-leaved Coniferous tree called in Tenasserim "theet-men" king of woods (Mason); and the Burmese superstition of using its wood for the beam of balance-scales as early probably as this date, also the driving a peg of it into a boat or house-post "to avert evil," — mentioned by Berdmore: A. loranthifolia was observed by Griffith, and Mason 544, in Tenasserim, but is not known to yield dammer (see Hopea odorata), its wood "used by native carpenters for various purposes," being "very hard," white and "rather light;" was observed by Loureiro ii. 710 in Anam; and by Rumphius ii. pl. 57, on Amboyna.

† *Feronia elephantum* of Tropical Hindustan. The size of a *wood apple* also assigned for these balls by Angiras — (H. H. Wils.): F. elephantum is called in Tamil "vallanga" or "vola-marum," in Telinga "yellanga," in Bengalee "kath-bel;" was observed in Hindustan by Roxburgh cor. ii. pl. 141; by Wight, the fruit affording "a very pleasant jelly" closely "resembling black currant jelly;" by Graham, "a large and handsome tree" called "cawtha," in "gardens" and found by Gibson in "the vale of the Taptee common, also on the Mool river, and throughout Guzerat;" the fruit "with a grey coloured very hard rind," was observed by myself to resemble an unripe orange. Eastward, enumerated by Mason v. p. 452 and 760 as "exotic" in Burmah, found by Phayre under cultivation

"299 B. C." (Hervey-Saint-Denys), Kiu-ping-youen or Kiu-youen commencing his elegiac poem called Li-sao.

Hibiscus Syriacus of Eastern Asia. A flowering shrub called in English gardens "althæa" (A. Gray), in Japan "kin" or usually "mukunge" (Thunb.); and the "althæa flowers" of Kiu-youen 29* — may be compared: H. Syriacus was observed by Kaempfer, and Thunberg, in Japan, cultivated everywhere for hedges, and (according to Jap. centen. comm. 76) its fibres used for cordage. Westward, by Roxburgh in Hindustan; by Graham, "in every garden" around Bombay, both "single and double varieties;" by Forskal, Delile, and Clot-Bey, in the gardens of Egypt; and by Forskal, in gardens at Constantinople. Farther West, the "flos siriacus" or "flos malvae" is mentioned by Simon Januensis sinon.; and H. Syriacus is described by Camerarius hort. med. pl. 4, and Gerarde. By European colonists, was carried to Northeast America, where it continues in gardens.

"298 B. C." (Sm. b. d.), L. Cornelius Scipio and Cn. Fulvius Maximus Centumalus consuls, the Samnites invading the territory of Lucanians in alliance with Rome, the third Samnite war.

"297 B. C. = 18th year of Nan-wang" (Chinese chron. table), beginning of the Fortieth cycle.

"295 B. C." (Sm. b. d.), Q. Fabius Maximus and P. Decius Mus the younger, consuls, great defeat of the Samnites, Etruscans, Umbrians, and Gauls at Sentinum.

Sisymbrium officinale of Europe and the adjoining portion of Asia. Called in Britain *hedge mustard* (Prior), in Greece "agriōpōrihō" (Forsk.) or "agriōvrōuva" (Sibth.), in Italy "verbena muschia" (Mazziari, and Targ.); and possibly the plant tendered by the verbenarius on this occasion, tufts of grass from the capitol being sometimes employed, — as appears from Pliny xxii. 3: the "verbena" is mentioned by Plautus, Terence, Horace, Virgil, Propertius, Festus, Celsus v. 28, and the "verbenaca mas" by Pliny xxv. 59 both kinds superstitiously employed by the Gauls: S. officinale is described by Fuchsius pl. 592; is termed "e. vulgare" by Tournefort inst. 228; and is known to occur in waste places from Sweden to the Mediterranean and North Africa (fl. Dan. pl. 560, Curt. lond. v. pl. 50, Pers., and Wats.); was observed by Forskal, Sibthorp, and Chaubard, from the Peloponnesus to Constantinople, but seems unknown in Eastern Asia (Ledeb., and A. Dec.). By European colonists was carried to Greenland (Wats.), and to Northeast America, where it continues around dwellings and along walls, observed by myself from Salem to Philadelphia, known to occur in the "upper districts" of our Southern States (Chapm.), and found by Scouler at the mouth of the Columbia (Hook.; see Verbena officinalis).

"In this year" (Sm. b. d.), Cyprus recovered by Ptolemy. Who about this time, admonished by a dream, caused the statue of a god to be brought from Sinope to Alexandria. On arrival, the statue was found by his interpreter Timotheus and the Egyptian priest Manetho to be that of Serapis, and the great temple to Serapis was commenced (Callim., Apollod., Tacit., and Plut. is. and osir. 28).

Bupleurum fruticosum of the shores of the Mediterranean. A woody-stemmed umbelliferous plant called in Greece "anĕmōpurōma" (Fraas), affording perhaps the CECEΛI enumerated by Manetho among the ingredients of the "kuphi" incense (Plut. is. and osir. 88): the "kuōnōn phrikēn" of the Egyptians — is identified with the "sĕsĕli aithiōpikōn," of Dioscorides, a great shrub with boughs two cubits long, ivy-like leaves oblong as in "pĕriklumĕnōu," and "anēthōu"-like tops, the seeds crowded as in "purōs" and very odorous, mentioned also by Oribasius, and referred here

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by the natives in one of the provinces. F. elephantum is termed "anisifolius" by Rumphius ii. pl. 43; and according to Lindley, "both leaves and flowers exhale a powerful odour of anise."

Spondias mangifera of Tropical Hindustan and Burmah. The *hogplum* is called in Burmah "kywæ" (Mason), in Telinga "amatum," in Bengalee "amra" (Lindl.), in Hindustanee "ambara," in Tamil "caat-maavu," in Malabar "ambalam" (Drur.), at Bombay "ran amb" (Graham); and the size of its fruit also assigned for these balls by Angiras — (H. H. Wils.): the "amburanus" tree was seen by John de' Marignolli in Adam's garden on Ceylon (Yule cath. 362): S. mangifera is known to grow on the mountains of Coromandel (Lindl.), and as far as Travancore; is described by Rumphius i. pl. 61; was observed by Rheede i. pl. 50 in Malabar; by Graham, "a large tree" in woods around Bombay "probably planted;" its "leaves deciduous in the cold weather." Eastward, is enumerated by Mason v. p. 461 and 489 as indigenous in Burmah, its intensely astringent fruit "considered a specific" in wounds by poisoned arrows, formed the chosen offering of the Karens according to their own tradition, and hence "God cursed the Karen nation and placed it lowest among all the nations by whom they are surrounded." According to Roxburgh, the trunk when wounded yields large quantities of a mild insipid gum exactly like gum arabic.

* *Trapa incisa* of Yeso and the neighbouring countries. A species of *water-chestnut* called on Yeso "bekanbe," in Japanese "hisi" (Sieb.); and possibly the "chataigne d'eau" of Kiu-youen 29: — T. incisa is described by Siebold and enumerated among the useful plants of Yeso.

by writers: the "vŏupleŭrŏn thĕnthrŏn" is mentioned by Demetrius Chlorus (schol. Nicand.): B. fruticosum was observed by Sibthorp on the seashore of Thessaly, but by Fraas, extending farther inland in Southern Greece. Westward, is described by Anguillara p. 212 (Spreng.); is termed "b. arborescens salicis folio" by Tournefort inst. 310; and is known to grow in rocky situations along the Mediterranean shore of France (Linn. hort. cliff.; and Pers.).

"In this year" (Ptol. math. syn. vii. 2 and 3, and Blair), astronomical observations commenced at Alexandria by Timocharis and Aristyllus. Who "introduced the manner of determining the positions of the stars according to their Longitudes and Latitudes;" referring them however to the Equator.

Numenius, a pupil of Dieuches (Spreng.), possibly at this time writing.

Geranium asphodeloides of the East Mediterranean countries. The ΧΑΛΧΗC of Numenius, a leaden or copper-coloured flower, — is referred here conjecturally by Sprengel: G. asphodeloides is termed "g. orientale columbinum flore maximo asphodeli radice" by Tournefort cor. 20 and trav. li. pl. 14; is described also by Burmann geran. 28. 27, and Miller; was observed by Sibthorp on Parnassus, by Chaubard in the Peloponnesus.

"294, March 9th, four hours before midnight" (Blair), *occultation* of the star Spica Virginis by the moon, observed at Alexandria by Timocharis; the star according to his measurement, "eight degrees West from the Equinoctial point."

"Hardly later than this year" (Sm. b. d.), Antiochus eldest son of Seleucus healed by Erasistratus. Erasistratus resided some years at Alexandria, and made anatomical discoveries: he divided the nerves into those of sensation and those of motion.

Lythrum salicaria of Europe and Northern Asia. Called in Britain *purple loosestrife* (Prior), in Germany "weiderich" (Grieb), in Italy "salcerella" or "riparello" (Lenz): the "herbam lysimachiam" discovered by Lysimachus and celebrated by Erasistratus, — growing according to Pliny xxv. 35 in wet ground and having upright branchlets, willow-like leaves, purple flowers, and if placed on the yoke quieting disagreeing oxen, is referred here by writers: L. salicaria was observed by Forskal, Sibthorp, Chaubard, and Fraas, frequent in wet situations from the Dardanelles to the Greek islands and Peloponnesus. Westward, is described by Matthioli, and Clusius; is termed "partyke" or "lysimachia purpurea" by Lobel hist. p. 185, "salicaria vulgaris purpurea foliis oblongis" by Tournefort inst. 253; and is known to grow in Italy and throughout middle Europe as far as Denmark (Pers., and Lenz), often according to A. Decandolle springing up in abundance on the removal of the forest. Eastward from Greece, was observed by Kaempfer, and Thunberg, in Japan and called "sju" or usually "fagi." By European colonists, was carried to Northeast America, where it continues under cultivation (A. Gray), and has besides become naturalized from Upper Canada and Maine to the environs of Boston (Doug., Nutt., and myself); was also carried to Australia (Dec.). According to Lindley, is "an astringent which has been recommended in inveterate cases of diarrhœa."

Lysimachia atropurpurea of the East Mediterranean countries. Possibly the plant discovered by Lysimachus; — the "lusimahiŏn. purrŏn" growing according to Dioscorides in wet ground, its stems a cubit or more high and leaves willow-like, identified in the added Synonyms with the "lutrŏn," is referred here by Fraas: L. atropurpurea is described by Commelyn rar. pl. 33; is termed "l. orientalis angustifolia flore purpureo" by Tournefort cor. 7; and was observed by Sibthorp, Chaubard, and Fraas, in wet situations in and around the Peloponnesus.

Lysimachia vulgaris of Europe and the adjoining portion of Asia. Called in Britain *loosestrife* (Prior), in Italy "lisimachia" (Lenz), and possibly included in the "lysimachiam" in question: — the "lusimahiŏn hrusŏĕithĕs" differing according to Dioscorides only in the colour of the flower, is referred here by writers: L. vulgaris was observed by Sibthorp in woods on the Bithynian Olympus and around Constantinople. Westward, is described by Fragus f. 69 (Spreng.); is termed "l. lutea major" by Tournefort inst. 141; and is known to grow in Italy and throughout middle Europe as far as Denmark (fl. Dan. pl. 689, Pers., and Lenz).

"293 B. C." (Blair, and Sm. b. d.), division of the day into hours adopted at Rome; and the first *sun-dial* erected there by the consul L. Papirius Cursor. To avert a pestilence, the worship of Aesculapius introduced at the command of the Delphic Oracle or of the Sybilline books (Val. Max. i. 8, and Ovid. met. xv. 620).

Bauhinia scandens of Tropical Eastern Asia and the Malayan archipelago. A woody climber called in Burmah "myouk-hlæ-ga" (Mason), in Tagalo "banot" (Blanco); and its remarkably contorted stem said to have been the origin of Aesculapius' snaken rod — (Loudon): B. scandens was observed by Rheede viii. pl. 29 in Malabar; by Nimmo, and Graham, in a garden at Bombay, and "wild in the Concans;" by Roxburgh, Royle, and Drury, as far as Travancore; by Mason 406, in Burmah; by Loureiro, in Anam (Steud.); by Blanco, on the Philippines; and by Rumphius v. pl. 1, on Amboyna (Pers.).

"The same year" (. . . .), earliest contemporary Roman record, a *Latin inscription* on the

tomb of L. Scipio Barbatus, presenting the following forms of letters, D, F, G, Q, S, V; the language being essentially the same — as seventy years later in the time of Plautus.

About this time (. . . .), by Ptolemy, the *Alexandrian Library* founded; and at the entrance of the harbour, the ΦΑΡΟC or *light-house* commenced. — The light-house was completed in the reign of his successor, and was much celebrated in after times; continuing "one hundred and fifty cubits high" when visited by Abd-allatif i. 4.

"291 B. C." (Jap. centen. comm. 45), end of the reign of Koan, sixth dairo of Japan. His stone coffin is regarded as the earliest specimen of *stone-cutting* in Japan.

"290 B. C." (Sm. b. d.), P. Cornelius Rufinus and M. Curius Dentatus consuls, at the end of fifty-three years, the Samnites finally subdued by the Romans: peace concluded, and the Third and last Samnite war ended.

"288 B. C." (C. Mull. fragm. Megasth. p. 398, see also Strab. ii. 1. 9), Sandrocottus or Chandragupta succeeded by his son Allitrochathes or Amitraghata, now king at Palimbothra (Patna) on the Ganges. — Deimachus was sent as ambassador to Allitrochathes (Strab. ii. 1. 9).

Abrus precatorius of the wooded seashore of Tropical climates. A woody twining plant called in Hindustanee "gunj" or "ghungchi," in Bengali "gunj" or "kunch," in Tamil "gundu-mani" or "kunri-mani" (Drury), in Sanscrit "gunja" or "krishnala" (Lindl.); and as early probably as this date, its seeds called "retti" employed in the Hindu system of weights * — (Drury): the "krishnala" is mentioned in the Institutes of Manu viii. 134 to 330; an open mouth is compared in colour to a "gunja" seed by Bhavabhuti maha-vir. 5; and the "kakachincha" or "kakadani" or "rakta" or "hinsra" of Susrutas iv. 30 is referred here by Hessler: A. precatorius was observed by Rheede viii. pl. 39 in Malabar; by Graham, "very common" in the environs of Bombay, where I found it not altogether confined to the seashore; by Roxburgh, Wight, and Drury, along the peninsula and as far as Assam, the seeds prized "for necklaces and other ornaments." Farther East, by Mason v. 522 "exotic" in Burmah and called "rwæ-gnay" or "khyen-rwæ," its seeds used by jewellers as weights: by Blanco, universally known to the natives throughout the Philippines and called in Tagalo "bañgati" or "saga" or "sagamamin," in Pampango "cansasaga," in Ylocano "bugayon," in Bisaya "gicos-gicos" or "caloo" or "mangadolong" or "aroyangyang," the leaves and roots having the taste of liquorice: by myself, on the Feejeean Islands, where oracles and other objects sacred with the natives are coated with its seeds, indigenous also throughout the Tongan, Samoan, and Taheitian Islands, but not seen on mid-ocean coral-isles, nor on the unwooded shores of the Hawaiian Islands and Peru. Westward from Hindustan, was observed by myself on Zanzibar; by Grant, at "Ukuni 4° S.," and "plentiful in Uganda" on the Upper Nile; by Forskal p. 138 among the mountains of Yemen, called "byllia," and pods sold at Cairo; by Alpinus, and Hasselquist, under cultivation in Egypt and the seeds eaten (Lindl.); by Cadamosto in 1454 at the mouth of the river Senegal. Farther West, is called in Guayana "panacoco," by the Caribs "aouarou" (Desc.), having reached America before the arrival of Columbus; was observed in the West Indies by Sloane i. p. 181, and P. Browne.

"286 B. C." (Plut., and Clint.), Pyrrhus, after holding Macedonia seven months, driven out by Lysimachus.

Berosus, who was "born in the reign of Alexander" (Sm. b. d.), may have been writing as early as this date, — though his history of Babylonia was completed somewhat later.

Colocasia antiquorum of Tropical America. The *cocco* or *taro* is called by Polynesians "taro" or "talo" or "tao" (Hale), in Burmah "peing" (Mason), in Sanscrit "kuchoo" (Roxb., the Carib name of Dioscorea alata), in Bengalee "kuchoo," in Telinga "chama," in Tamil "shema kilangu" (Drur.), in the environs of Bombay "aloo" (Graham), among the mountains of Yemen "kerir" or "kurr," in Egypt "kulkas" (Forsk.), in Equatorial Africa "myoog'wah" (Grant); and the ΓΟΓΓΑC root, growing according to Berosus in marshes along the Euphrates, esculent and equal to barley bread, — may be compared (the name seemingly derived from introduction by way

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* *Phaseolus mungo* of Tropical Hindustan. Annual with a flexuous stem (Pers.), and called in Bengalee "mash-kulay," in Hindustanee "moong thikeree," in Telinga "minoomooloo," in Tamil "oalundoo" (Drur.), in the environs of Bombay "ooreed" (Graham); and as early probably as this date, its seeds used as weights by the Hindu goldsmiths — (Burnouf soc. beng.): the "mudja" is mentioned in the Institutes of Manu ix. 39, and Vishnu purana i. 6; and the "munjam" seen in Hindustan is described by Ebn Batuta as a species of "mash:" P. mungo was observed by Graham 248. "a cultivated pulse in the environs of Bombay; by Roxburgh iii. 296, Wight i. 246, and Drury, from Malabar to Travancore and the Circars, "the most esteemed of all the" kinds of pulse, and "bread for many of their religious ceremonies" made of it by the natives; the root according to Royle him. contains a narcotic principle. (See P. max).

of the Ganges): hardly later than this date, the "kōlōkasiōn" is mentioned as an Egyptian root by Diphilus of Siphnus (Athen. iii. 2): C. antiquorum was seen under cultivation there by Ishak Israeli, Ali ben-Redwhan, Abd-allatif, Belon, Alpinus, Forskal, and Delile; by Grant, around huts of Uganda and Unyoro from the Upper Nile to "2° S.;" by myself, on Zanzibar; by Forskal among the mountains of Yemen; by Graham, "very generally cultivated" in the environs of Bombay; by Roxburgh, Royle, Wight, and Drury, in other parts of Hindustan; by Mason, in Burmah; by Loureiro ii. 535, in Anam; by myself, on the Malayan archipelago, New Zealand, the Feejeean, Tongan, Samoan, Taheitian, and Hawaiian islands. Farther East, was observed by Schomburgk under cultivation by the Waraus of the delta of the Orinoko (edit. Ralegh). Northward and Westward from Egypt, the "colocasia" is mentioned by Glaucias, Claudius Iolaus, Virgil, Columella, by Pliny xxi. 51 to 102 as cultivated in both Egypt and Italy: C. antiquorum is termed "a. ægyptium" by Columna ecphr. ii. pl. 1, "a. maximum ægyptiacum quod vulgo colocasia" by Tournefort inst. 159; was observed by Belon, and Sibthorp, on Cyprus, Crete, and Zante; by Tenore, in Southern Italy; by Bossier, in Spain, and called "alcolcaz," and by Clusius in Portugal (A. Dec.). By European colonists, was carried to Madeira, observed there by myself; and doubtless in some instances to America, observed by Sloane i. pl. 106 in the West Indies.

Certain Indian weeds appear to have accompanied the introduction of *rice* and *taro* into Egypt; and being inconspicuous, or of no known utility, may have escaped the attention of ancient writers:

Elatine verticillata of Tropical Eastern Asia. An annual plant that seems to have accompanied the introduction of taro and rice: — observed by Delile pl. 26 in the rice grounds of Egypt. Eastward, by Rheede ix. pl. 78 in Malabar; by Graham, on "margins of tanks and other moist places" in the environs of Bombay; by Roxburgh cor. pl. 142, and Wight, in other parts of Hindustan; and by Mason, in Burmah.

Ammania auriculata of Tropical Asia. — Observed by Delile pl. 15 in the rice grounds of Egypt; and enumerated by him p. 29 as occurring also in India. Transported to Europe, is described by Willdenow hort. berol. i. 7.

Jussieua repens of America?. Aquatic or subaquatic, and called in Egypt "forgaa" or "frækal" (Forsk.), on Madagascar "vouloun-ranou" (Boj.); and possibly introduced into Egypt as early as this date; — observed by Forskal p. 210 at Rosetta, pentapetalous and creeping on the river-bank and margin of fields; by Bojer, on Madagascar. Eastward, is enumerated by Delile p. 30 as occurring also in India; was observed by Rheede ii. pl. 51 in Malabar; by Graham, in the environs of Bombay, "common on the margins of the tanks, and in rice-fields during the rains;" by Roxburgh, and Wight, in other parts of Hindustan; and by Mason, in Burmah. Farther East, was observed by myself in Peru and Chili, pentapetalous and aquatic, and hardly having the aspect of an introduced plant; by Short, in Kentucky, and is further enumerated by A. Gray 703 as growing "in water Illinois? and southward:" the "J. erecta" observed by Nuttall along the Arkansas, by Pursh from the Dismal swamp to Carolina, and according to R. Brown cong. occurring also in Equatorial Africa, may be compared.

Sphæranthus suaveolens of Equatorial Africa. Called in Bengalee "chagul-nudie," in Tamil "kottang-karundie," in Telinga "bodatarum," on the Deccan "moondie" (Drur.), in Equatorial Africa "bozeea" (Grant), in Egypt "habagbag" (Forsk.); and known there as early probably as this date: — observed by Forskal p. 154 on the river-bank near Rosetta, the plant and leaves exhaling the odour of hyssop; by Grant, along the Upper Nile on the "mud edges of Madi burn," and used medicinally in ague by the Wanyamuezi. Eastward, is enumerated by Delile p. 30 as occurring also in India; was observed by Rheede x. pl. 43 in Malabar; by Graham, in the environs of Bombay, "a very common plant on rice fields during the cold season;" by Roxburgh, Wight, and Drury, in other parts of Hindustan, its flowers seeds and roots employed medicinally; by Burmann pl. 94, on Ceylon. Farther East, is employed on Java as diuretic (Ainslie); was observed by Blanco on the Philippines, used medicinally by the natives, and called in Tagalo "sambong gala."

Grangea Maderaspatana of Tropical Asia. A diminutive procumbent plant called in Bengalee "namuti," in Tamil "mashiputri," in Telinga "mustarù," in Malabar "nelampata" (Drur.); and known in Egypt as early probably as this date: — observed by Delile along the canal at Alexandria; by Grant, on the "Nile bank, 14° to 15°." Eastward, was observed by Rheede x. pl. 49 in Malabar; by Graham, in the environs of Bombay, "on rice fields etc. in the cold weather;" by Roxburgh, Wight, and Drury, in other parts of Hindustan, its leaves used medicinally as a stomachic, also in antiseptic and anodyne fomentations (Ainsl.); is known to occur also on Java (Lindl.).

Ethulia conyzoides of Tropical Asia. Known in Egypt as early probably as this date: — observed by Forskal p. 153 near Rosetta, on the mud of the Nile. Eastward, according to Delile p. 30, and Persoon, occurs also in India.

Sphenoclea pongatium of Tropical Asia. Called in Malabar "pongati" (Rheede); and known in Egypt as early possibly as this date: — observed there in rice grounds by Delile; and according

to R. Brown bot. cong. 58, occurs also in Equatorial Africa (A. Dec.). Eastward, was observed by Rheede ii. pl. 24 in Malabar; by Graham, and Nimmo, in the environs of Bombay, "in rice fields during the rains;" by Retz, and Roxburgh, in other parts of Hindustan; by Mason, in Burmah; by Blanco, on the Philippines, and called in Tagalo "silisilihan." By European colonists, was carried prior at least to "1806" to the West Indies (Le Dru, and A. Dec.).

Damasonium Indicum of Tropical Hindustan. An aquatic plant with large cordate leaves, called in Malabar "ottel ambel" (Rheede), in Egypt "ouedneh cheytany" (Del.); and known there as early possibly as this date: — observed there in rice grounds by Delile. Eastward, was observed by Rheede xi. pl. 46 in Malabar; by Graham, and Nimmo, in tanks Bombay, and "generally throughout the Concans;" by Roxburgh cor. ii. pl. 185, in other parts of Hindustan.

Scirpus (*Isolepis*) *fistulosa* of Tropical Asia. — Observed by Forskal p. 15 in moist cultivated ground near Rosetta. Eastward, according to Delile p. 29, occurs also in India.

Cyperus difformis of Tropical Asia. — Described by Plukenet alm. pl. 192; observed by Delile around Cairo and Rosetta; by Sibthorp, and Chaubard, at Patras in Greece; and according to Savi and Parlatore flor. il. (A.-Dec.), introduced into the rice grounds of Italy. Eastward from Egypt, was observed by Graham in the environs of Bombay; by Roxburgh, in other parts of Hindustan.

Panicum (*Oplismenus*) *colonum* of Tropical Asia?. A grass called in Egypt "abou roukbeh" geniculate (Del.); and possibly known there as early as this date: — described by Plukenet alm. pl. 189, and Ehret pict. pl. 3; and observed by Forskal p. 19, and Delile, along the Nile from Rosetta to Cairo; by Grant, on the Nile bank as far as "16°." Eastward, was observed by Graham in the environs of Bombay; by Roxburgh, in other parts of Hindustan, according to Persoon in cultivated ground; is described by Rumphius vi. pl. 5; and this or an allied species aboriginally introduced, was observed by myself abundantly naturalized on the Hawaiian Islands. Farther East, was observed by Humboldt and Bonpland (Steud.) in Tropical America.

Panicum fluitans of Tropical Asia?. Called in Egypt "zommeyr" (Del.); and known there as early perhaps as this date: — described by Plukenet alm. pl. 417; observed by Forskal p. 18, and Delile, at Alexandria, Damietta, and Rosetta; and known to occur also in Arabia and on Madagascar (Pers.). Eastward, was observed by Graham in the environs of Bombay; by Retz obs. iii. 8 to v. 13, and Roxburgh, in other parts of Hindustan.

"In this year (= 5th year of sixth Mikado," Humb. cosm. iv.), in Japan, land sinking in the district of Omi an inland lake formed, and the volcano of Fusi jama makes its appearance, — "12,441 feet" in elevation; whose most violent eruptions were in "A. D. 799, 800, 863, 937, 1032, 1083, and 1707," but has since remained tranquil.

"285, June 26th, Monday," (Blair), the *Astronomical Era of Dionysius* of Alexandria. Who first found "the *Solar year* to consist of 365 days 5 hours and 49 minutes."

Allium schoenoprasum of Northern climates. Called in Britain *chives* (Prior), in Germany "schnittlauch" (Grieb), in France "cive" or "civette" or "ciboulette" (Nugent), in Italy "erba cipollina" or "porro settile" (Lenz), in which we recognize the Egyptian "pēshĕ" (ms. Par. 44. p. 333, from "pēsh" to divide) and the KAPTON of Diphilus of Siphnos — (Spreng.): the "skōrōthoprasōn" of Dioscorides, large like the leek, partaking of the properties of the leek and garlic, and becoming mild when cooked, may also be compared: A. schoenoprasum is known to grow wild in Siberia (Pers.), and according to A. Gray also in North America, as far as the shores of Lakes Superior and Huron. Westward from Greece, the "porrum sectivum" was brought into notice by Nero (Plin. xix. 33 to xx. 21); the "sectile" is mentioned by Columella xi. 3; A. schoenoprasum has been long cultivated in middle Europe, is described by Buxbaum cent. pl. 45, and is known to grow wild throughout Northern Europe as far as Lapland (fl. dan. pl. 971, Pers., and Fraas).

"Nov. 2d" (Astronom. can., and Clint.), abdication of Ptolemy in favour of his son Ptolemy II. Philadelphus. — The hieroglyphic ovals of Ptolemy II. Philadelphus occur on various monuments; as on the temple built by him at Philæ: and his memory has always been cherished, from the patronage he extended to Literature, and the large additions he made to the Alexandrian Library.

"In the ensuing winter" (Champoll.-Fig.), the noted Coronation-festival of Ptolemy II. at Alexandria. Described very particularly by Callixenus.

Matthiola incana of the shores of the Mediterranean and Atlantic as far as Britain. Called in Britain *stock* or *stock-gilliflower* (Prior) or *winter-gilliflower* (Ainsw.), in France "giroflée" (Nugent), in Germany "levkoje" (Grieb), in Italy "for bianco" or "leucoio bianco" or "viole bianche" (Lenz), in Greece "viōla" (Fraas), in Egypt "mantour" or "kheyley" (Del.); in which we recognize the AEYKOION flowers carried in the Coronation-festival according to Callixenus, — and produced in Egypt at all seasons according to Athenaeus v. 25 to xv. 17: the coronary "lĕukōiōn" is mentioned by Theocritus vii. 64, Philonides, and the "lĕukōiōn porphurōun" by Dioscorides: a "Cheiranthus" is enumerated by Forskal p. liii among the coronary plants of Egypt: M. incana was observed by Delile, and Clot-Bey, growing about Cairo, cultivated besides for ornament; by Sibthorp, and Fraas,

wild on the seashore of Crete and the Peloponnesus, and elsewhere under cultivation. Westward, the "lĕukŏiōn" or "vasilĕiōn" is identified in Syn. Diosc. with the "ōpōula alva" or "viōla alva" or "augustia" of the Romans; the "leucoium" is mentioned by Columella ix. 4. 4 to x. 97: M. incana is termed "leucoium rubrum" by Brunswyck (Spreng.), "l. incanum majus" by Tournefort inst. 220; was observed by Lenz wild in Italy; is known to grow wild on the seashore of Spain and Portugal (Pers.), also near Bayonne and Teste in France, and on almost inaccessible cliffs around the Isle of Wight (Laterr., Wats., and A. Dec.). By European colonists, was carried to Northeast America, where it continues a favourite garden flower.

"283 B. C. = 40 years" after the death of Alexander and "2 years" after his own abdication (Polyb., Porphyr., and Clint.), death of Ptolemy Soter. His son Ptolemy II. married Arsinoe daughter of Lysimachus; and afterwards another Arsinoe, his own sister (schol. Theocr., and Clint. iii. p. 379).

In ascending the Nile, the first temple beyond Philæ is at Debod; and presents sculptures of the Ethiopian king Ergamenes, a cotemporary of Ptolemy II. (Leps. eg. and sin. p. 123 and 243; the localities in several of Champollion's sheets of Nubian temples, having been transposed). On Philæ also, there is "a whole chamber containing nothing but *Ethiopian representations* and inscriptions."

Philinus of Cos, reputed founder of the medical sect of Empirici, and "a pupil of Herophilus" (Sm. b. d.), hardly later than this date.

Nasturtium officinale of Europe, Northern Asia, and Northwest America. Called in Britain *water-cress* (Prior), in Germany "brunnenkresse" (Grieb), in Italy "crescione" or "nasturzio aquatico" or "sisembro aquatico" (Lenz), in Greece "nĕrōkarthamōn," in which we recognize the "sisymbrium" growing "in riguis" known to Philinus — (according to Pliny xx. 91), also the "sisumvriōn tō ĕn tōis uthasin" of Zopyrus (Orib. xiv. 62), and "sisumvriōn ĕtĕrōn" an aquatic herb according to Dioscorides with leaves at first round and as they increase dividing after the manner of rocket, eaten crude, and in the added Synonyms identified with the "karthaminēn" by some called "siōn:" N. officinale was observed by Sibthorp, Chaubard, and Fraas in the water of springs everywhere in Greece. Farther South, the "sisymbrion" of Dioscorides, and Galen, is referred by Ebn Baitar to the "hurf elma;" N. officinale was observed by Hasselquist in Palestine, is enumerated by Clot-Bey as recently introduced into Egypt, and was received by Richard p. 15 from Abyssinia. Westward, is described by Anguillara p. 114 (Spreng.); is termed "s. aquaticum" by Tournefort inst. 226; and is known to grow in Algeria (Munby), Italy, and throughout middle Europe as far as Denmark (fl. Dan. pl. 690, and Pers.). Eastward from Greece, is known to grow in Armenia and throughout Northern Asia as far as Behring's Straits (Ledeb.); was observed by Thunberg in Japan, abounding in ditches and called "ta seri;" and across the Pacific, was observed by Chamisso on St. Paul Island (Schl.), and by Scouler at the mouth of the Columbia (Hook.). Possibly by European colonists carried to Tropical Hindustan, where it was observed by Graham "in gardens," but no native name is given; and to Burmah, where it is enumerated by Mason as "exotic," and seems also devoid of native names. Clearly by European colonists, was carried to Northeast America, where it continues under cultivation, and was observed by Nuttall naturalized on Long Island; was also carried to Madeira, the Canaries, and Cape Verd Islands (Bory, Braun, and A. Dec.); to the mountains of the West Indies (Sloane, and Pursh); and to the Mauritius Islands, where according to Bojer it has become naturalized.

Thymus zygis of the Mediterranean countries. Called in Greece "smari:" the ΖΥΓΙΑΑ of Philinus, — identified by Dioscorides with the "ĕrpullŏs agriōs," not creeping but erect with narrow leaves and flowers pungent to the taste, is referred here by writers: T. zygis was observed by Forskal, and Sibthorp, from Constantinople to the environs of Athens. Farther South, the "zugitha" was known to Athenaeus xv. 23 in Egypt. Westward, T. zygis is described by Clusius hist. i. 358 (Spreng.); is termed "thymbra hispanica coridis folio" by Tournefort inst. 197; was observed by Forskal on Malta, and is known to grow in Switzerland (Pers.).

Fritillaria Pyrenaica of the mountains of the Mediterranean countries. Called in Greece "gazŏuli" (Fraas); and the ΛΕΙΡΙΟΝ and ΙΟΝ, purple-flowered according to Philinus — (Athen. xv. 27), may be compared: F. Pyrenaica was observed by Sibthorp, Chaubard, and Fraas, on mountains from the Peloponnesus to Parnassus; is known to grow also in Russia and on Caucasus (Pers., and Adam), and is termed "f. tulipifolia" by Bieberstein (Bory). Westward, is termed "t. flore minore" by Tournefort inst. 377; and is known to grow in North Italy and on the Pyrenees (All., Gawl., and Steud.).

"282 B. C." (Sm. b. d.), C. Fabricius Luscinus and Q. Aemilius Papus consuls, the Boii defeated and peace granted to them. In Southern Italy the Samnites revolting, defeated with the Lucanians and Bruttians, Thurii relieved, and a Roman fleet attacked by the Tarentines.

"Nov. 9th, three hours and a half after midnight" (Blair), another *occultation* of the star Spica

Virginis observed at Alexandria by Timochares; the moon covering the star with the North part of her disk.

"281 B. C." (Polyb., and Clint.), Lysimachus defeated by Seleucus, and slain.

Plectranthus crassifolius of Tropical Arabia. Called there "medan," and in Egypt "zatar hendi" (Forsk.), equivalent to "origani indici" of the letter on preserving health to king Antiochus — (Hippocrat. coll.): the "setargi indi" is also mentioned by Mesue electuar.: P. crassifolius was observed in Egypt by Vesling obs., Forskal, and in a greenhouse there by Delile. Farther South, was observed by Forskal p. 109 under cultivation along the base of the mountains of Yemen.

"280, January" (. . . . Clint. iii. p. 346), Seleucus succeeded by Antiochus Soter, second Greek king of Syria.

Dictamnus fraxinella of Europe and the adjoining portion of Asia. The herb according to Agathon called by the barbarians on the Tanais ΦΡΥΞΑ, resembling ΠΗΓΑΝΩ, and giving out flames if a stepmother is plotting — (Plut. fluv. 14. 5), may be compared: the "fraxinellam" of Crescenzio, Tragus 26 (Spreng.), and Tournefort inst. 430, is referred here by writers: D. fraxinella was observed by Sibthorp, and Chaubard, frequent from the Peloponnesus to the woods on mount Hæmus; and Westward, is known to grow in Italy, Germany, and as far as France (Renealm. pl. 121, Jacq. austr. pl. 428, and Pers.).

Cynanchum vincetoxicum of Europe and the adjoining portion of Asia. An upright species called in Italy "vincetossico" (Lenz); and the KYOYPA herb growing according to Agathon along the Argive river Inachus, resembling ΠΗΓΑΝΩ, and placed on the umbilicus to induce abortion — (Plut. fluv. 18), may be compared: the "asklēpias" growing on mountains according to Dioscorides, and having long branches, its leaves applied externally in diseases of the matrix and mammæ, and its slender fragrant roots an antidote in bites of poisonous animals, identified with the "kissiōn" or "kissōphullōn" in the added Synonyms, is referred here by Fuchsius and others: C. vincetoxicum was observed by Sibthorp on Parnassus and other high mountains in Greece. Westward, the account of the "asclepiades" by Pliny xxvii. 18 seems taken from Dioscorides; but the "vincatossicam" is mentioned in a medical formula of the time of Charlemagne, and "vincetoxici" by Nicolaus Praepositus: C. vincetoxicum is described by Matthioli p. 129, Lobel, Dalechamp, and according to Dodoens p. 407 its roots are certainly fragrant (Spreng.); is termed "asclepias albo flore" by Tournefort inst. 94, "vincetoxicum officinarum" by Moench; was observed by Lenz in Italy; by Forskal, near Marseilles; is known to grow throughout middle Europe as far as Denmark (fl. Dan. pl. 849, and Pers.), but not in Britain. According to Lindley, is "emetic and purgative," and is named from having been "once celebrated as an antidote to poisons."

"The same year" (Polyb., Blair, and Clint.), landing in Southern Italy of an army under Pyrrhus, to aid the colonists of Tarentum against the Romans; who were now becoming known to the Greeks. A history of Pyrrhus is given by a contemporary, Hieronymus of Cardia; one of the first Greeks who wrote on Roman affairs — (Dionys. ant. i. p. 16).

"The same year" (Polyb., and Clint.), the *Achæan League* or republic, instituted among the Greek States.

"In this year (= 50th of the First Calippic period," Hipparch., and Sm. b. d.), observation of the summer solstice by Aristarchus of Samos. Aristarchus maintained, That the Earth not only rotates, but moves in an oblique circle around the sun: — an opinion advanced also somewhat later by Seleucus the Babylonian (Humb. cosm. ii.).

"Before the close of the year" (Dexipp., and Clint.), in Macedonia, Ptolemy Ceraunus defeated by an army of Gauls? who next proceeded South, as far as Delphi in Greece; — but at the end of two years were repelled, and by invitation of Nicomedes king of Bithynia, entered Asia Minor (Liv. xxxviii. 16).

"278 B. C." (Clint.), the epoch in Literature called the "School of Alexandria." Philosophy divided into four recognized Sects, under Strato, Zeno, Epicurus, and Arcesilaus; and the establishment of a Library, attracting the *seat of learning* from Athens to Alexandria. The "first regular body of grammarians or critics" also formed, and called "ĕpihutikōi" (Blair).

Rumex obtusifolius of Europe and the adjoining portion of Asia. Called in Britain *dock* (Lindl.), in Greece "lapathō" (Sibth.) or "lapatō," in Egypt "humæid" (Forsk.); and the "bulapathon" of Solon Smyrnaeus, differing only in length of root and the effect on dysentery — (Plin. xx. 83 to 86), may be compared: R. obtusifolius was observed by Forskal, Sibthorp, Chaubard, and Fraas, frequent in waste places from the Peloponnesus to Constantinople; by Forskal, as far as Cairo in Egypt; by Grant on the Coast range of Eastern Africa in "Lat. 6° 38′ S." Westward, the "herba lapathi" called "paratella" is mentioned by Macer Floridus . . .; the Anglo-Saxon "docca" is trans-

lated "dilla" in Ælfric's glossary, and the "paradilla" or "padella" is mentioned by Galfridus pr. pm. (Prior): R. obtusifolius is termed "l. folio minus acuto" by Tournefort inst. 504; was observed by Pollini in Italy (Lenz), and is known to grow throughout middle Europe (Curt. lond. iii. pl. 22, Lam. fl. fr., and Pers.). By European colonists, was carried to Northeast America, where it has become a frequent weed in our Atlantic States, and is distinctively termed by A. Gray "bitter dock." Is used medicinally according to Lindley, having "properties similar to those of" R. crispus.

"274 B. C." (Blair, and Clint.), departure from Italy of Pyrrhus, defeated at Maleventum by the Romans under Curius.

As early probably as this date (Strab. xvi. 4. 5, and Plin. vi. 21), by Ptolemy II., Dionysius sent as ambassador to India, while Satyrus proceeded down the Red Sea to the country of the Troglodytes, to investigate the hunting of elephants.

"273 B. C." (Liv., Eutrop., and Clint.), arrival in Rome of ambassadors from Ptolemy II. of Egypt, seeking friendship.

Under Ptolemy II. (inscript. adul. ii. p. 141), "Troglodytic and Ethiopic" elephants were first brought from Adulë to Egypt to be trained for the purposes of war. The account is confirmed by Agatharchides 1 and 56, and the species is again asserted to be the African: (by what route the elephants reached their destination we are not informed, but it seems probable that the public and the Syrian king were deceived by landing *Indian elephants* on the coast near Adulë).

Odina Schimperi of Eastern Equatorial Africa. A tree called "m'oooomboo" (Grant); and possibly furnishing the net in which a serpent "thirty cubits" long was captured, and brought down the Nile to Ptolemy II. at Alexandria — (Agatharch. 78): O. Schimperi was observed by Grant from "5° S. to 3° N." on the Nile, and nets for game made from its roots; was received also from Africa and described by Hochstetter.

Acacia sp. of Eastern Equatorial Africa. A large tree, prickly-stemmed, and called "m'salla" (Grant); and possibly furnishing lashings on the above occasion: — observed by Grant "Dec. 12, 1862," in woods in Madi on the Nile, its inner bark made into lashings.

Ficus Kotschyana? of Eastern Equatorial Africa. A tree with huge boughs, and called "m'koo" (Grant); possibly furnishing lashings on the above occasion: — observed by Grant from "5° S. to 3° 30′ N." on the Nile, its bark used for bark-cloths and short ropes.

"272 B. C." (Liv., Blair, and Clint.), the Tarentine Greeks, although aided by a Carthaginian fleet, defeated by the Romans. Terminating the war in Southern Italy.

"In this year" (Sm. b. d.), Pyrrhus invading the Peloponnesus slain before Argos, and the kingdom of Macedonia recovered by Antigonus Gonatas.

Aratus of Cilicia, physician and astronomical poet, was invited to the court of Antigonus Gonatas. — He is mentioned by Theocritus vi and vii, Cicero orat. i. 16, and is quoted by Paul (Acts xvii. 28).

"270 B. C." (Polyb., Diod., and Sm b. d.), Hieron II., a son of Hierocles, made king at Syracuse. He is praised in the Sixteenth idyl of Theocritus.

Glaucium violaceum of Egypt and the Mediterranean countries. Called in Egypt "ridjlet el ghrab" (Forsk.) or "rigl el-ghorab" crow-foot (Del.); and the ΚΥΑΝΕΙΟΝ: ΧΕΛΙΔΟΝΙΟΝ of Theocritus xiii. 40, growing in company with ΑΔΙΑΝΤΟΝ around a fountain, — may be compared: G. violaceum was observed by Sibthorp in Cyprus and the Peloponnesus; and by Forskal, and Delile, around Alexandria and in the Egyptian Desert to the vicinity of Cairo. Westward, is termed "g. flore violaceo" by Tournefort inst. 254, "chelidonium hybridum" by Linnæus; is known to grow in various parts of Southern Europe as far as France (Lam. fl. fr., and Pers.), but as occurring in Britain does not seem permanently naturalized (Engl. bot. pl. 201, and A. Dec.).

Cistus Monspeliensis of the Mediterranean countries. Called in Greece "vōukithō:" the ΛΗΔΩΝ of Theocritus xxi. 10, — identified by Dioscorides with a kind of "kiśtōu" yielding "lathanōn," the leaves longer and becoming clammy in Spring, is referred here by Fraas: C. Monspeliensis was observed by Sibthorp, and Fraas, on dry hills in Greece and the Greek islands. Westward, is termed "c. ladanifera monspeliensium" by Tournefort inst. 260, and is known to grow in Spain and Southern France (Pers.; see C. Creticus).

Cistus incanus of the Mediterranean countries. Called in Greece "kōunōuklia," or by the Turks "ladan otu:" the ΡΟΔΟΚΙΚΚΟΣ or ΡΟΔΟΚΙΚΤΟΣ of Theocritus v. 131 — is referred here by Hogg: C. incanus is termed "c. mas secundus folio longiore" by Tournefort inst. 259; was observed by Sibthorp frequent from Samos to Cyprus and the Peloponnesus; by Hogg in Sicily, and having "large rose-coloured flowers;" is known to grow also in Spain and Southern France (Pers.).

Fragaria vesca of Northern climates. Called in Britain *strawberry*, in Anglo-Saxon "stréow berie" (Prior), in France "fraise" (Nugent), in Germany "erdbeere," in Italy "fraga" or "fragola" (Lenz), in Greece "phraōuli" (Forsk., and Fraas) or "kōukōumaria" (Sibth.); and the ΚΟΜΑ ΡΟΙΣΙ upon which goats are reposing in Theocritus v. 129 — are identified with "fraga" by Apule-

ius; the "humi nascens fragum" is mentioned by Virgil ecl. iii. 92; "montanum fragum" and "silvestri nata sub umbra mollia fraga" by Ovid met. i. 104 to xiii. 815; "terrestribus fragis" among wild esculents by Pliny xv. 28 to xxi. 50; and the "phragŏuli" by Nicolaus Myrepsus iii. 46: berries of F. vesca occur in debris of the earliest lake-villages of Switzerland; the plant was cultivated in the medieval period (A. Dec.); is described by Ruellius, and Valerius Cordus (Spreng.); is termed "f. vulgaris" by Tournefort inst. 295; is known to grow wild in North Italy and Portugal (Brot., and Lenz) and throughout middle and Northern Europe as far as Lapland and Iceland (Hook., Pers., and Wats.); was observed by Forskal, Sibthorp, Chaubard, and Fraas, on mountains from the Peloponnesus to Constantinople; the medicinal use in Egypt of "fragaria" root is mentioned by Forskal mat. med., and cultivation of the "fraisier" according to Clot-Bey has been recently introduced. Eastward, F. vesca is known to grow wild on the Taurian mountains (Bieb.), and from Lat. 54° on the Volga to and beyond the Yenisei throughout Siberia (Gmel., and Pall.). Farther East, from Alaska and the Pacific shore of America to Cumberland House on the Saskatchewan (Hook., and Wats.) and throughout Canada and our Northern States; extending along the Atlantic to Lat. 43° as observed by myself, and farther South on mountains. From Europe, was however introduced into the gardens of North America, where it continues to be occasionally cultivated; into Jamaica and the Mauritius Islands, and in these Tropical localities has become naturalized on the mountains (Purdie in Hook. j. bot. for 1844, Bory, and Boj.).

Galega officinalis of the Mediterranean countries. An allied plant is called in our Middle States *goat's rue* (a name doubtless derived from Europe): the ΑΙΓΙΑΟΝ eaten by goats according to Theocritus v. 128, — and growing on mountains according to Babrius iii. 3 (Daub.), may be compared; G. officinalis was observed by Sibthorp on mount Athos and the Bithynian Olympus. Westward, is described by Hieronymus Fracastor, Gesner, Matthioli, Gerarde, and Morison ii. pl. 7; is termed "g. vulgaris floribus cæruleis" by Tournefort inst. 398; and is known to grow in Barbary and various parts of Southern Europe as far as France (Lam. fl. fr., and Pers.). By European colonists, was carried to Egypt (Clot-Bey); and to the Mauritius Islands, where it was observed under cultivation by Bojer.

Scabiosa columbaria of Europe and the adjoining portion of Asia. Called in Greece "psōrōhōrtŏn," and the ΚΝΥΖΑ growing among good plants for fodder according to Theocritus iv. 25 — may be compared; also the "psŏra" plant of Aetius (Ruel ii. 145): S. columbaria was observed by Sibthorp frequent on the Greek islands. Farther South, is known to grow on the mountains of Abyssinia (A. Richard), and the "djussar er raaja" observed by Forskal on the mountains of Yemen is regarded by him as perhaps identical. Westward, is described by Columna (Tenor., and A. Dec. p. 707); is termed "s. capitulo globoso major" by Tournefort inst. 465; was observed by Munby in Algeria, by Gussone in Italy, by Forskal near Marseilles, and is known to grow throughout middle Europe as far as Denmark (fl. Dan. pl. 314, Engl. bot. pl. 1311, and Pers.). "S. coronopifolia" observed by Sibthorp pl. 114 on rocks in Greece, is regarded as not distinct (Steud.).

Erica arborea of the wooded portion of the Mediterranean countries. A small tree called on the Canaries "brezo" (Lowe), in Italy "scopa arborea" (Lenz), in Greece "rĭki" (Sibth.) or "ĕrĕikē" (Fraas); and the ΕΡΕΙΚΑC cut with the woodman's hatchet according to Theocritus v. 64 —is referred here by Fée: E. arborea was observed by Sibthorp, and Chaubard, frequent in the Peloponnesus and on the Greek islands. Westward, is termed "e. maxima alba" by Tournefort inst. 602; is known to grow in Italy and throughout Southern Europe; was observed by Lowe on the Canary Islands (Major edit. Bethenc. p. 134); by myself, in the mountain-region of Madeira. (See E. multiflora).

Cyclamen hederaefolium of the West Mediterranean countries. The ΚΥΚΛΑΜΙΝΟΝ of Theocritus v. 123 growing along the river Ales — (in Italy) according to the scholiasts, and the herb described by them as also called "kalamithran," altogether useless or its slender root sometimes applied to chilblains, may be compared: C. hederaefolium is described by Lobel pl. 605; was observed by Hogg on Sicily; by Lenz in North Italy; was already cultivated in Britain in the days of Gerarde 845, but has since become naturalized and is called *sow bread* (Engl. bot. pl. 548, Pers., Wats., A. Dec., and Lindl.). According to Smith, and Burnett, "a very acrid plant" that "has been used medicinally, its action being that of a drastic purgative" (Lindl.).

Calamagrostis calamagrostis of Europe and the adjoining portion of Asia. The ΚΑΛΑΜΟC around a temple in the city of Neileus according to Theocritus xxviii. 3, — or "ĕtĕrōs phragmitēs" slender and whitish according to Dioscorides i. 114, may be compared: C. calamagrostis was observed by Sibthorp not infrequent by the road-side between Smyrna and Bursa; and by Forskal p. 24, abounding in the Ghobeibe marsh in the Sinai peninsula. Westward, the "calamus qui circa sepes" is mentioned by Pliny: C. calamagrostis is termed "gramen paniculatum arundinaceum panicula densa" by Tournefort inst. 523; and is known to grow throughout middle Europe as far as Denmark (fl. Dan. pl. 280, Engl. bot. pl. 403, and Pers.).

"269 B. C." (Plin., Blair, and Clint.), Fabius Pictor and Q. Ogulnius Gallus consuls; *silver* first coined at Rome.

As early at least as this date, navigation practised on the Indian Ocean and along the African coast as far as the Equator.

Guatteria ticida of Equatorial East Africa. A shrub growing along the seashore on Mombas island. — Carried in 1824 to the Mauritius Islands, and cultivated there (Boj.).

Riedleia capitata of Equatorial East Africa. Growing on Zanzibar. — Carried to the Mauritius Islands, and cultivated there (Boj.).

Corchorus procumbens of Equatorial East Africa. An annual growing in moist openings on Zanzibar. — Carried to the Mauritius Islands, and cultivated in kitchen-gardens. (Boj.).

Triumfetta tomentosa of Equatorial East Africa. Suffruticose, growing on Mombas Island. — Carried to the Mauritius Islands, and cultivated there (Boj.).

Grewia ulmifolia of Equatorial East Africa. A bush growing on Zanzibar. — Carried to the Mauritius Islands, and cultivated there (Boj.).

Grewia cuneifolia of Madagascar and Equatorial East Africa. A bush, — carried to the Mauritius Islands, and cultivated there (Juss. pl. 49, and Boj.).

Cissus fragariæfolia of Equatorial East Africa. Perennial, growing on the outskirts of the forest on the mainland and on Zanzibar. — Carried to the Mauritius Islands, and cultivated there (Boj.).

Omphalobium? scandens of Equatorial East Africa. A climbing shrub, growing on the islands of Zanzibar and Pemba. — Carried to the Mauritius Islands, and cultivated there (Boj.).

Cretalaria strigosa of Equatorial East Africa. Biennial, growing on Zanzibar. — Carried to the Mauritius Islands, and cultivated there (Boj.).

Cytisus glomeratus of Madagascar and Equatorial East Africa. Biennial, growing on Zanzibar, the Comoro Islands, and Madagascar. — Carried to the Mauritius Islands, and cultivated there (Boj.).

Indigofera hirta of Madagascar and Equatorial East Africa. Perennial, growing on Zanzibar, the Comoro Islands, and Madagascar. — Carried to the Mauritius Islands, and cultivated there (Boj.).

Tephrosia noctiflora of Equatorial East Africa. Perennial, growing on Zanzibar and the Comoro Islands. — Carried to the Mauritius Islands, and cultivated there (Boj.).

Tephrosia hirta of Equatorial East Africa. Perennial, growing on Mombas island. — Carried to the Mauritius Islands, and cultivated there (Boj.).

Desmodium spectabile and *D. lactescens* of Equatorial East Africa. Shrubs growing on Zanzibar. — Carried to the Mauritius Islands, and cultivated there (Boj.).

Rhynchosia malacophylla of Equatorial East Africa. Perennial, twining, growing on Mombas island. — Carried to the Mauritius Islands, and cultivated there (Boj.).

Rhynchosia inflata of Madagascar and Equatorial East Africa. Perennial, twining, growing on Zanzibar, the Comoro Islands, and the West side of Madagascar. — Carried to the Mauritius Islands, and cultivated there (Boj.).

Cassia (*Chamæcrista*) *pulchella* of Equatorial East Africa. Suffruticose, growing on Zanzibar. — Carried to the Mauritius Islands, and almost naturalized there (Boj.).

Phyllolobium? Zanzibarense of Equatorial East Africa. Perennial, twining, growing on Zanzibar. — Carried to the Mauritius Islands, and cultivated there (Boj.).

Telfairia pedata of Equatorial East Africa. A perennial Cucurbitaceous vine called "kouemé," — cultivated at Mombas, Zanzibar, and Mozambique. Carried by captain Joliff to the Mauritius Islands in 1807; re-introduced in 1824, and continuing generally cultivated (Boj.).

Hedyotis densiflora of Equatorial East Africa. Annual, growing on Zanzibar. — Carried to the Mauritius Islands, and cultivated there (Boj.).

Mimusops fruticosa of Equatorial East Africa. Growing on Mombas island and Pemba. — Carried to the Mauritius Islands, and cultivated there (Boj.).

Vahea Comorensis of the Comoro Islands. A twining shrub, with fruit of the form and colour of an orange, — growing on the mountains around Musamodo, the chief town on Johanna or Anjouan. — Carried to the Mauritius Islands, and cultivated there (Boj.).

Bignonia (*Spathodea*) *tenuifolia* of Equatorial East Africa. A twining shrub, growing on the mainland and on Zanzibar. — Carried to the Mauritius Islands, and cultivated there (Boj.).

Bignonia (*Arthrophyllum*) *Comorense* of the Comoro Islands. A shrub, growing in ravines along streams on Johanna or Anjouan (Boj.).

Tanæcium pinnatum of Equatorial East Africa. A tree, growing on Zanzibar, and Pemba, and in Mozambique. — Carried to the Mauritius Islands, and cultivated there (Jacq. coll. iii. pl. 18, and Boj.).

Dicerocaryum sinuatum of Equatorial East Africa. Perennial, growing in the sands of the seashore of Zanzibar. — Carried to the Mauritius Islands, and cultivated there (Boj.).

Convolvulus (*Calonyction*) *Comorensis* of the Comoro Islands. Perennial, twining, growing in the bushy forests along streams on Johanna. — Carried to the Mauritius Islands, and cultivated there (Boj.).

Convolvulus (*Calonyction*) *comosperma* of the Comoro Islands and Madagascar. Perennial, twining, growing on the Comoro Islands, Seychelles, Galéga, and the West side of Madagascar, — Carried to the Mauritius Islands, and cultivated there (Boj.).

Ipomaea arachnoidea of Equatorial East Africa. Perennial, twining, growing on Zanzibar. — Carried to the Mauritius Islands, and cultivated there (Boj.).

Ipomaea ligulata of Madagascar and Equatorial East Africa. Annual, growing on Zanzibar, the Comoro Islands, and around Boyana Bay on the West side of Madagascar. — Carried to the Mauritius Islands, and cultivated there (Boj.).

Ipomaea macropoda of Equatorial East Africa. An annual vine, growing on Zanzibar and the Comoro Islands. — Carried to the Mauritius Islands, and cultivated there (Boj.).

Convolvulus (*Jacquemontia*) *umbellata* of the Comoro Islands. Annual, growing in grassy places on the mountains on Johanna. — Carried to the Mauritius Islands, and cultivated there (Boj.).

Convolvulus (*Jacquemontia*) *hastigera* of the Comoro Islands. A perennial vine, growing in ravines along streams on Johanna and Mohila. — Carried to the Mauritius Islands, and cultivated there (Boj.).

Convolvulus (*Elythrostamna*) *convolvulacea* of the Comoro Islands and Madagascar. Annual, growing even in cultivated ground on Johanna. — Carried to the Mauritius Islands, and cultivated there (Boj.).

Calystegia ochroleuca of Equatorial East Africa. A perennial vine, growing on Zanzibar. — Carried to the Mauritius Islands, and cultivated there (Boj.).

Ehretia corymbosa of the Comoro Islands. A shrub, — carried to Mauritius and Bourbon, and almost naturalized there.

Solanum suaveolens of Madagascar and Equatorial East Africa. Suffruticose, growing on Zanzibar and Madagascar. — Carried to the Mauritius Islands, and cultivated there (Boj.).

Solanum nodiflorum of Equatorial Africa, Madagascar, and the neighbouring islands. Annual. — Carried to the Mauritius Islands, almost naturalized there, and besides cultivated abundantly in kitchen gardens (Jacq. rar. ii. pl. 326, and Boj.).

Solanum heterocanthum of Madagascar and Equatorial Africa. Suffruticose. — Carried to the Mauritius Islands, and growing spontaneously there in various localities (Boj.).

Solanum anghivi of the Comoro Islands and Madagascar. A shrub. — Carried to the Mauritius Islands, and growing there spontaneously in various localities (Lam., and Boj.).

Solanum Balbisii of the Comoro Islands and Madagascar. Suffruticose. — Carried to the Mauritius Islands, and cultivated there (Roth, bot. mag. pl. 2828, and Boj.).

Campuleia coccinea of Madagascar and the Comoro Islands. Perennial, growing on mountains on Johanna. — Carried to the Mauritius Islands, where it has become naturalized and a troublesome weed (Pet. Th., Hook. exot. pl. 203, and Boj.).

Moschosma polystachya of Equatorial East Africa. Annual, growing on the mainland and on Zanzibar and the Comoro Islands. — Carried to the Mauritius Islands, and growing there spontaneously in one locality (Linn., Jacq., and Boj.).

Ocymium cinnamomeum of Equatorial East Africa. Annual, growing on the mainland and on Zanzibar. — Carried to the Mauritius Islands, and cultivated there (Boj.).

Thunbergia alata of Equatorial East Africa. A perennial vine, growing on the mainland and on Zanzibar. — Carried to the Mauritius Islands, cultivated there and growing spontaneously (Hook. exot. pl. 177, and Boj.).

Polygonum Owenii of Equatorial East Africa. Called at Mombas "m'bilivilli," — and observed there by Bojer, growing in savannas and among rubbish. Cultivated in gardens as a medicinal plant.

Fluggea Comorensis of the Comoro Islands. Suffruticose, growing in valleys and on mountains on Johanna. — Carried to the Mauritius Islands, and cultivated there (Boj.).

Phyllanthus atropurpureus of the Comoro Islands. A shrub, growing in valleys at the margin of forests on Johanna. — Carried to the Mauritius Islands, and cultivated there (Boj.).

Tragia furialis of the Comoro Islands. Annual, growing along streams on Johanna. — Carried to the Mauritius Islands, and cultivated there (Boj.).

Euphorbia obconica of Equatorial East Africa. Suffruticose, growing on Mombas island and Pemba. — Carried to the Mauritius Islands, and cultivated there (Boj.).

Casuarina lateriflora of Madagascar and Equatorial East Africa. A tree. — Carried to the Mauritius Islands, cultivated there, and called "filao" (Lam., and Boj.).

Pandanus sessilis of Equatorial East Africa. A bush, growing on the mainland and on Zanzibar and Pemba. — Carried to the Mauritius Islands, and cultivated there (Boj.).

Phoenix Equinoxialis of Equatorial East Africa. A palm of the stature of a bush, growing in the extensive forests on Pemba. — Carried to the Mauritius Islands, and cultivated there (Boj.).

Costus sarmentosus of Equatorial East Africa. A perennial vine, growing on Zanzibar. — Carried to the Mauritius Islands, and cultivated there (Boj.).

Sanseviera cylindrica of Equatorial East Africa. Perennial, growing on Zanzibar. — Carried to the Mauritius Islands, and cultivated there (Boj.).

Dioscorea toxicaria of Equatorial East Africa. A perennial vine, growing on Mombas island, the tubers along the stem poisonous, if cooked and eaten inducing vomiting. — Carried to the Mauritius Islands, and cultivated there (Boj.).

As early possibly as this date, the poet Bion removing from Smyrna to Sicily. — His death is mentioned by Moschus 3, who styles himself a pupil.

Adonis autumnalis of Europe and the adjoining portion of Asia. Called in Britain *rose-parsley* (Ainsw.), in Italy "camomilla di fior rosso" or "adonide" or "fior d' atone" (Lenz), in which we recognize the "adonium" of Ovid and ΑΝΕΜΩΝΑΝ that sprung from the tears of Venus on the death of Adonis according to Bion i. 66, — from the blood of Adonis according to Nicander, and Ovid met. x. 503: the "mĕlan," one of the two kinds of "anĕmŏnas" distinguished by Cratevas (schol. Theocr. v. 92), may also be compared: A. autumnalis was observed by Sibthorp, and Fraas, in waste and cultivated ground in Southern Greece and called "mŏrōhōrtōn;" by Reuter and Margot, in wild situations on Zante. Westward, the "adonium" is mentioned by Pliny xxi. 34 as sown or occurring in cultivated ground in Italy; A. autumnalis is described by Gerarde; is termed "ranunculus arvensis folĭis chamæmeli flore minore atrorubente" by Tournefort inst. 291; is known to occur in Italy and in grain-fields throughout middle Europe (Pers., A. Dec., and Lenz); in Britain, is regarded by Watson and others as exotic.

One hundred and twenty-first generation. May 1st, 267, mostly beyond youth: the Greek poets, Heracleitus of Halicarnassus, and Dionysius Iambus; the comic poets, Machon, and Apollodorus of Carystus; the philosophers, Lycon, Lacydes, Hermachus, Menippus of Gadara, Meleager of Gadara, Cleanthes, Lysimachus, and Hieronymus of Rhodes; the historians, Philostephanus of Cyrene, Ister, Neanthes of Cyzicum, and Nymphis of Heraclea; the grammarians, Lysanias of Cyrene, Sosibius of Laconia, and Euphorion of Chalcis; other writers, Timosthenes, Philon of Heraclea, Apollonius son of Sotades, and Euphantus of Olynthus; the architect Sostratus of Cnidus; the painters, Mecophanes, Artemon, Clessides, and Theodorus (Bryan).

"264 B. C." (Polyb., and Clint.), war first carried beyond the limits of Italy by the Romans: who now enter Sicily, inaugurating war with the Carthaginians; called the "First Punic" war, — and continuing "twenty-four" years.

"The same year" (Liv. ep. 16, Val. Max. ii. 4. 7, and Clint.), *gladiatorial combats* instituted by D. Junius Brutus. — Whose name seems perpetuated in the changed meaning of the word "brutal" in English.

"261 B. C." (Clint. iii. p. 346), Antiochus Soter slain in battle against the Gauls; and succeeded by Antiochus II. Theus, third Greek king of Syria. Antiochus II. married Berenice, daughter of Ptolemy II. of Egypt.

"In this year" (Lalande, Delambre, and Humb. cosm. iv.), observation on the planet Mercury; the first — of fourteen, partly belonging to the Chaldeans, employed by Claudius Ptolemy.

"260 B. C." (Polyb., Blair, and Clint.), the Carthaginians defeated in *naval combat* by the first fleet built by the Romans; commanded by Duilius.

"In or about this year" (Sm. b. d.), Zenodotus succeeded by Callimachus as chief librarian of the Alexandrian library.

Trifolium fragiferum of Europe and the adjoining portion of Asia. Called in Britain *strawberry-clover* (Prior), in Germany "erdbeerklee" (Grieb); and the running ΩΚΥΘΟΟΝ: ΤΡΙΠΕ ΤΗΛΟΝ of Callimachus, — may be compared: T. fragiferum was observed by Sibthorp, and Fraas, abounding from the Peloponnesus throughout the Greek islands to Caria and mount Athos; by Griesebach p. 34 along the seashore of Macedonia. Westward, is termed "t. fragiferum frisicum folio cordato flore rubro" by Tournefort inst. 406; was observed by Forskal near Marseilles; and is known to grow throughout middle Europe as far as Denmark (fl. Dan. pl. 1042, and Pers.).

Cynara horrida of the Mediterranean countries. A species of *wild artichoke;* and the thorny ΚΥΝΑΡΑ, pubescent according to Callimachus around the Areaniticum sea, growing also in Khorasan and as far as the Indus — (Ruel iii. 14), may be compared: C. horridum is described by Aiton iii. 148, the leaves "subtus tomentosis;" was observed by Sibthorp on Sicily, and apparently also on Crete and Naxos (J. E. Smith), by Dænzer, near Navarino in the Peloponnesus (Chaub.).

In this year (= 288 — "28 years reign" in the Mahavamsa v., Avadana asok., and Buns. iv. 7,

2), Bindusara (Allitrochathes) succeeded by his son Priyadasé or Asoka, now king at Pataliputra on the Ganges.* — He reigned "thirty-seven," or according to the Mahavamsa xx. "forty" years.

"256 B. C. = 59th year of Nan-wang" (Chinese chron. table), end of the Tcheou dynasty.

"255 B. C. = 52d year of Siang-wang II.," now head of the new dynasty of the Thsin — (Chinese chron. table).

"The same year" (Polyb., Zonar., and Clint.), in Africa, Regulus defeated and taken prisoner by the Carthaginians under the Spartan general Xantippus.

"253 B. C." (Sm. b. d.), at Rome, Cn. Servilius Caepio and C. Sempronius Blaesus consuls, the first plebeian pontifex maximus Tib. Coruncanius.

251 B. C. (= his "tenth year" in the 8th inscription at Girnar, Burnouf ii. 732), king Asoka already a Budhist. He is said to have been converted by Nigrodha (Max Müll. p. xx). The *inscriptions* bearing the name of Asoka on Buddhist cave-temples not earlier than his conversion, and he is said to have erected the greatest monuments of Budhism.

"In this year" (Burm. hist., and Mason 40), Ranman succeeded by his son Rekkhan, now Burmese king. — Rekkhan reigned "thirty-one" years, is said to have had many wives, and to have been a remarkable shot with a cross-bow.†

"250 B. C. = 1st year of Hiao-weng-wang, of the Thsin" or Sixth dynasty (Chinese chron. table).

The same year (Euseb., Blair, and Clint. iii. p. 315), revolt against the Greek king of Syria of the Bactrians under Theodotus and Parthians under Arsaces. Recovering their independence, the Parthians — (Persians) ruled for the succeeding "475 years" by the Arsacidæ; a dynasty of "thirty-one" successive kings, whose numerous coins all bear *Greek inscriptions*.

"249 B. C. = 1st year of Tchoung-siang-wang, of the Thsin" or Sixth dynasty — (Chinese chron. table).

The same year (= his "twelfth year" in the 4th inscription at Girnar, Lassen, and Burn. ii. 731), king Asoka publicly professing Budhism. An inscription of the same date dedicating a cave-temple (Burnouf ii. 779).

One of the inscriptions at Girnar contains the name "Tambapanni," — regarded as the "Taprōvanē" of the Greeks (Sm. geogr. dict.) or island of Madagascar.

Thylachium sumanguï of Madagascar. A Capparideous bush called there "voua sumangui," and growing in the Emirne district. — By European colonists, carried to the Mauritius Islands, and cultivated there in the Botanic garden (Boj.).

Abutilon angulosum of Madagascar. A bush called there "hafou poutsi." — Carried to the Mauritius Islands, and cultivated there (Boj.).

Hilsenbergia cannabina of Madagascar. A tree called "hafoutra," growing in the extensive forests and on high mountains in the Emirne district. — Carried repeatedly to the Mauritius Islands, but not cultivated there with success (Boj.).

Shakua excelsa of Madagascar. Called there "shakoua," fruit-tree, growing on the Northwestern side of the island in the Saccalava district, — and observed by Bojer around St. Augustin Bay. Carried to the Mauritius Islands, and cultivated there (Boj.).

Shakua minor of Madagascar. A shrub, growing around St. Augustin Bay and called "shakoua keli." — Carried to the Mauritius Islands, and cultivated there (Boj.).

Sorindeia Madagascarensis of Madagascar and the neighbouring portion of Africa. Called on Madagascar "voua sourindi" (Boj.); and known there as early probably as this date: — observed by Grant in East Africa, on the "banks of rivers 7° S.," a tree with mango-tasting fruit, large as a

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* *Jonesia asoca* of Tropical Hindustan and Burmah. A flowering tree called in the environs of Bombay "jassoondie" (Graham), in Sanscrit "vanjula" or "asoca" (W. Jones): the name not older than the accession of Asoka, although according to Hindu mythology Guadama was born under this tree — (Klapr., and Mason v. 403): the "asoka" is mentioned in the Avadana Asoka (Burn. i. 365); also by Valmiki ramayan.; in the Mrichchhakati iv. as planted in gardens and having rich crimson flowers; its flowers ornamenting curls, by Kalidasa kum. iii. 26 and ragh. viii. 61; and is prescribed medicinally by Susrutas (Hessl.): J. asoca was observed in Hindustan by Rheede v. pl. 50, W. Jones as. res. iv. p. 274, Roxburgh, and Wight; by Graham, in gardens and near caves "evidently planted," found by Law "wild in jungles at the foot of the Ram Ghaut." Farther East, is enumerated by Mason as indigenous in Burmah and called "a-thau-ka-pho." By European colonists, was carried to the Mauritius Islands, where it continues under cultivation (Boj.).

† *Dalbergia?* of Southern Burmah. The *Maulmain lance-wood*, a tree found all over the Tenasserim provinces (Mason), possibly furnished the material of Rekkhan's cross-bow: — at the present day according to Mason 530, its wood is sometimes used by the Karens to "make bows of."

sparrow's egg and in bunches two feet long. Carried to the Mauritius Islands, and cultivated there (Boj.).

Clitoria lasciva of Madagascar. Perennial, twining, growing around the village of Foulepointe, and called "vahé embouritsika." — Carried to the Mauritius Islands, and cultivated there (Boj.).

Galactia diversifolia of Madagascar and the Comoro and Mauritius Islands. Perennial, twining, — observed by Bojer in the savannas and on the mountains in almost all parts of Mauritius.

Desmodium umbellatum of the shores of Madagascar, Hindustan, and the Malayan Archipelago. A bush called "toudinga-damvoa" in Madagascar. Eastward, — observed by Burmann pl. 51 on Ceylon; by Wight, in Southern Hindústan; and by Graham, and Law, in "districts south east of Surat" and in the environs of Bombay, always "on the banks of streams." Farther East, enumerated by Mason as indigenous in Burmah; known to grow on Java (Rumph. iv. pl. 52, and Pers.). By European colonists, carried to the Mauritius Islands, and cultivated there (Boj.).

Desmodium cæspitosum of Madagascar, the Seychelles, and Mauritius Islands. Perennial, growing in tufts or beds — (Poir., and Pers.); observed by Bojer throughout Mauritius, in savannas and even on lofty mountains.

Desmodium scalpe of the Comoro and Mauritius Islands. Suffruticose; — discovered by Commerson; observed by Bojer in shaded situations on the culminating mountain on Mauritius.

Erythrina versicolor of Madagascar. A tree called there "hazou-bohi," the flowers yellow and red. — Carried to the Mauritius Islands, and cultivated there (Boj.).

Dalbergia Telfairii and *D. Hookeri* of Madagascar. Two shrubs growing around Tananarivou in Interior Madagascar; the first called "hara-heitra," and the second "hara-heitra-lava." — Both of them carried to the Mauritius Islands, and cultivated there (Boj.).

Mimosa latispinosa of Madagascar. A bush growing in the district of Betanimena, and called "fama-hou-foutsi" or "rouhi-mena." — Carried to the Mauritius Islands, and cultivated there (Boj.).

Acacia (*Stachychrysum*) *pterosperma* of Madagascar. A bush growing around Tananarivou in Interior Madagascar, and called "fannou." — Carried to the Mauritius Islands, and cultivated there (Boj.).

Poinciana regia of Madagascar. A tree called "fannou," — discovered by Bojer growing around the village of Foulepointe. Carried to the Mauritius Islands (Boj.); recently to Hindustan and Burmah, and further described by Mason v. p. 411 as "gorgeous," bearing "a most magnificent and graceful flower."

Cassia (*Chamæcrista*) *brevifolia* of Madagascar. Annual, called "mandri-arivou," — growing around the village of Tamatave. Carried to the Mauritius Islands, and cultivated there (Boj).

Cassia (*Chamæcrista*) *filipendula* of Madagascar. Annual, called "indriena manitra keli," and growing in the Emirne district, — Carried to the Mauritius Islands, and cultivated there (Boj.).

Hymenæa verrucosa of Madagascar. A tree called there "tanrouk-rouhi." — Carried to the Mauritius Islands, and cultivated there (Boj.). From transported specimens, described by Gaertner ii. pl. 139, and Lamarck ill. pl. 330 (Pers.).

Tristemma virusanum of Madagascar and the Comoro and Mauritius Islands. A perennial Melastomaceous plant called "voua-touka" in Madagascar. — Described by Commerson; and observed by Bojer in the sombre and humid forests of the central portion of Mauritius.

Bryophyllum calycinum of Madagascar and the Mauritius Islands. Perennial, called "soutou-fafan" in Madagascar; — observed by Commerson on Mauritius; and according to Bojer, growing there on arid hills in the gorges of Black river. Introduced by Lady Clive (about 1765) "from the Moluccas" into Hindustan, and thence into Burmah, where it continues "growing around old pagodas like a wild plant" (Mason v. p. 434); observed in Hindustan by Roxburgh, and Wight; by Graham, "common in gardens Bombay, and throughout Giergaum woods but probably planted," found by Law "wild in abundance within ten or twelve miles of Belgaum and also on the Ram Ghaut." The "Kalanchoe Brasiliensis" observed by myself naturalized along the Bay shore opposite Rio Janeiro, may be compared.

Siphomeris lingua of Madagascar. A climbing shrub called "lingouna," — growing around the village of Majungay in Bombetok Bay on the Western coast. Carried to the Mauritius Islands, and cultivated there; and in 1826 carried to Britain (Sweet hort. app., and Boj.).

Vernonia appendiculata of Madagascar. A shrub called "ampiadi" growing on the mountains in the Emirne district. — Carried to the Mauritius Islands, and cultivated there (Boj.).

Microglossa altissima of Madagascar. A bush called "toudinga." — Carried to the Mauritius Islands, and cultivated there (Boj.).

Tabernæmontana Noronhiana of Madagascar. A bush called "voua-pandaka" or "louvourou," growing in the forests along the river Naman-Rahan, — near Foulepointe. Carried to the Mauritius Islands, and cultivated there (Pet. Th., and Bojer).

Bignonia (*Colea*) *floribunda* of Madagascar. A bush called "rei-rei," growing in the forests

along the whole Eastern coast, — around Foulepointe, in Anton-Gil Bay. Carried to the Mauritius Islands, and cultivated there (Boj.).

Bignonia (*Colea*) *Telfairiæ* of Madagascar. A tree or bush called "voua-kidzi-kidzi-ka," growing in the Temperate portion of Interior Madagascar on the Angave mountains. — Carried to the Mauritius Islands and long cultivated there, but destroyed by the hurricane of 1825 (Boj.).

Bignonia (*Arthrophyllum*) *Madagascarense* of Madagascar. A tree called "zahane," growing in the extensive forests called "Béfourouna," in the districts of Betani-mena and on the lofty Angave mountains, at Tananarivou. — Carried to the Mauritius Islands, and cultivated there (Boj.).

Cordia monoica of Equatorial East Africa, Madagascar, and Hindustan. — Observed by Roxburgh cor. i. pl. 58 wild in Coromandel; and by Graham, "a shrub of no beauty," in "gardens Bombay." Westward, according to Bojer, growing on Zanzibar. And carried to the Mauritius Islands, and cultivated there.

Cordia subcordata of the shores of the Seychelles, Madagascar, and other East African islands. — Termed "novella nigra" by Rumphius v. pl. 75: and further according to Bojer, growing in coral soil on Zanzibar, Pemba, Galega, and along the West side of Madagascar. Carried to the Mauritius Islands, and cultivated there.

Buddleia diversifolia of Madagascar and the Comoro and Mauritius Islands. Suffruticose, growing abundantly on Mauritius — (Vahl, Lam., and Boj.).

Centranthera prostrata of the Seychelles and Galega. Perennial. — Carried to the Mauritius Islands, and cultivated there (Boj.).

Plectranthus ternatus of the Comoro Islands and Madagascar. Perennial, called in Madagascar "omine," and growing among rocks on lofty mountains on Johanna. — Carried to the Mauritius Islands, where it is cultivated as a potherb (Sims bot. mag. pl. 1460, and Boj.).

Calpidia macrophylla of Galega Island. A tree, — called by the colonists "bois mapou." Carried to the Mauritius Islands, and cultivated there (Boj.).

Celosia spathulata of Galega Island. Perennial. — Carried to the Mauritius Islands, and cultivated there (Boj.).

Phyllanthus stipulaceus of Galega and Diego Garcia. Suffruticose, — called "herbe à balais" by the colonists on Galega. Carried to the Mauritius Islands, and cultivated there (Boj.).

Euphorbia splendens of Madagascar. Suffruticose, growing in the Interior, and called "sougou-sougou." — Carried to the Mauritius Islands, and cultivated there (Hook. bot. mag. pl. 2902, and Boj.).

Ficus avi-avi of Madagascar. A bush called there "avi-avi," — Carried to the Mauritius Islands, and cultivated there (Chapelier and Boj.).

Boehmeria frondosa of Galega and Diego Garcia. A shrub, — called "bois cendré" by the colonists on Galega (Don fl. Nep., and Boj.).

Celtis Madagascarensis of Madagascar. A tree called "andrarizouna," growing in the Emirne district. — Carried to the Mauritius Islands, and growing there spontaneously in some districts (Boj.).

Pandanus hoffa of Madagascar. A shrub called "hoffa," growing in marshes along Ivoundrou river and the margin of Nosi-Bé lake. — Carried to the Mauritius Islands, and cultivated there (Chapelier and Boj.).

Areca Madagascarensis of Madagascar. A palm of the stature of a tree, called "voua sira" and growing in the extensive forests called "be-fouroun," in the Betanimena district and around Foulepointe. — Carried to the Mauritius Islands, and cultivated there (Stadtmann, and Boj.).

Borassus Madagascarensis of Madagascar. A palm of the stature of a tree, growing along Marou-Voai river in Bombetok Bay, and called "dimouka." — Carried to the Mauritius Islands, and cultivated there (Boj.).

Hyphæne schatan of Madagascar. A palm of the stature of a tree, growing along the whole Western coast, and called "schatan." — Carried to the Mauritius Islands, and cultivated there (Boj.).

Angræcum pectinatum of Madagascar and the Comoro and Mauritius Islands. A perennial epidendric Orchideous plant — (Pet. Th., and Boj.).

Urania speciosa of Madagascar. A tree called there "ravin-ala," — By European colonists, carried to the Mauritius Islands, and cultivated there (Sonnerat voy. pl. 124 to 126, and Boj.); also to Hindustan, and Burmah (Roxb., Graham, and Mason).

Curculigo Seychellensis of the Seychelles. Perennial, — called by the colonists "coco marron," and the leaves employed for cordage. — Carried to the Mauritius Islands, and cultivated there (Boj.).

Aloe glauca of Austral Africa and Madagascar. Perennial, growing on mountain-summits at St. Augustin Bay, and called "vahoun." — Carried to the Mauritius Islands, and cultivated there (Spreng. syst., bot. mag. pl. 1278, and Boj.).

Aloe sahundra of Madagascar. A bush called "sahoundra," growing on the sandy shores

of St. Augustin Bay, and often forming considerable forests in the Interior, especially in the Emirne district. — Carried to the Mauritius Islands, and cultivated there (Boj.).

Tacca Madagascarensis of Madagascar. Perennial, growing in the forests in the Interior, and called "tavoulou." — Carried to the Mauritius Islands, and cultivated there (Boj.).

Mariscus glandulosus of Galega Island. Perennial. — Carried to the Mauritius Islands, and cultivated there (Boj.).

Lomaria grandis of Galega Island. A perennial vine, the young shoots tender and edible. — Carried to the Mauritius Islands, and cultivated there (Boj.).

"The same year" (Liv., Blair, and Clint.), the Romans defeated in *naval combat* at Drepanum on the Sicilian coast by the Carthaginians under Adherbal.

"247 B. C. (Porphyr., and Clint. iii. p. 15), Ptolemy II. succeeded by his son Ptolemy III. Euergetes: the inherited kingdom consisting of "Egypt, Lybia, Syria, Phoenicia, Cyprus, Lycia, Caria, and the Cyclades" — (inscript. adul., and Cosm. Ind. ii. p. 141). Hieroglyphic ovals of Ptolemy III. occur on temples at Dakkeh, Philæ, Esneh, and Thebes. His coins are dated from the death of Alexander, and an "astronomical era" was employed during his reign (Leps. eg. and sin. p. 110).

With a naval force and the elephants brought by his father and himself from Adulë, Ptolemy III. invaded Asia: and after rendering tributary "Cilicia, Pamphylia, Ionia, the Hellespont, and Thrace," crossed the Euphrates and extended his conquests over "Mesopotamia, Babylonia, Susiana, Persia, Media, and as far as Bactria" (inscript. adul., and Cosm. Ind. ii. p. 141).

Rhamnus catharticus of Europe and the adjoining portion of Asia. Called in Britain *buckthorn* (Prior), in Germany "kreuzdorn" (Grieb), in France "nerprun" (Nugent), in Greece "lĕukagkatha," in which we recognize the ΑΚΑΝΘΑΙ bearing round fruit of Demetrius reb. ægyp. — (Athen. xv. 24), "lĕukēn akanthan" identified by Antigonus with the "leukas" (schol. Nic. 849), of which two kinds are distinguished by Dioscorides, the "lĕukas ōrĕinē" having broader leaves than the "ēmĕrōu" and more acrid and bitter but weaker fruit, both kinds employed against poisonous animals, those especially of the sea: R. catharticus was observed by Sibthorp in the Peloponnesus. Westward, the "rhamnus" called by the French "neprum" or "burgam spinam" is mentioned by Ruellius i. 123; R. catharticus is termed "cervi spina" by Valerius Cordus; is described also by Tragus, and Tournefort inst. 593, and is known to grow in Italy and throughout middle Europe as far as Denmark (fl. Dan. pl. 850, Pers., and Lenz). By European colonists, was carried to Northeast America, where it continues under cultivation, chiefly for hedges, and escaping to wild situations in the forest has become naturalized (Barratt, Torr., and A. Dec.). The fruit according to Lindley is "violently purgative," but producing colic and "only given in some kinds of dropsy."

Rhamnus oleoides of the Mediterranean countries. An allied spinescent species called in Greece "xulagkatha" or "mauragkathia" (Fraas), and possibly the "akanthai" of Demetrius, — and one of the two kinds of "lĕukas" distinguished by Dioscorides: R. oleoides was observed by Sibthorp, D'Urville, Chaubard, and Fraas, frequent in mountainous situations from the Greek islands to the Peloponnesus. Westward, is termed "r. hispanicus oleæ folio" by Tournefort inst. 593, and is known to grow in Barbary, Portugal, and Spain (Desf., Pers., Brot., and Steud.). Is enumerated among medicinal plants by Lindley.

Probably about this time (Sm. b. d.), the inventions of Ctesibius of Alexandria. He is said to have been the first to discover the elastic force of air and apply it as a moving power.

"246 B. C. = 1st year of Wang-tching, of the Thsin" of Sixth dynasty (Chinese chron. table). He is identified with "Tching-wang" or Chi-hoang-ti, "son of Tchouang-siang-wang" (Pauth. p. 212).

"The same year" (Clint. iii. p. 346), Antiochus II. Theus succeeded by Seleucus II. Callinicus, fourth Greek king of Syria.

"In this year" (Max Müll. p. xviii to xxxvii, the Mahavamsa giving "17th year of Asoka" = 244), Third Buddhist council, king Asoka reminding the assembled priests that "What had been said by Buddha, that alone was well said." Apocryphal writings being carefully excluded, the Dhammapada, believed to consist of teachings actually uttered by Gautama or Buddha, was adopted. — Mahinda, son of Asoka, was dispatched to Ceylon, where he converted Devanampriya Tishya then reigning (Mahavans.).

Santalum myrtifolium of mountainous coasts in Southern Hindustan and the Malayan archipelago as far as Timor. Called in commerce *sandal-wood*, in Hindustanee "sandal" or "chandan" (D'roz), at Bombay "chundun" (Graham); and the fragrance of "sandal-wood" is mentioned in the Dhammapada 54 to 56, — the "santalōn" by Aetius, and Actuarius, and "sandal" by J. B. Amran, Rhazes, Avicenna, Edrisi, and Ebn Baitar: S. myrtifolium is described by Rumphius ii. pl. 11; was observed in Hindustan by Roxburgh cor. i. pl. 2; by Graham, "in gardens about Bombay and in the Deccan;" and according to Royle, is indigenous on the mountainous Malabar coast. Farther East,

"sandal" is said by Serapion to come from China; "sendal" or "sandoint" was seen by Marco Polo 157 and 170 in both "Melibar" and China; "sandal-wood imported from Hindustan" was found by Mason v. p. 500 "constantly for sale in the bazars" of Burmah, "being a favourite cosmetic with" maidens; S. myrtifolium is mentioned also by Loureiro cochinch. i. p. 87, and is known to grow as far as the island of Timor (Marsd. sum. p. 129, and Lindl.). Westward, was observed by myself in gardens at Bombay, as well as in Egypt, where it is enumerated by Clot-Bey as recently introduced. By European colonists, was carried to the Mauritius Islands, and was observed there under cultivation by Bojer.*

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* *Nymphæa rubra* of Tropical Hindustan and Burmah. The *red water-lily* is called in Telinga "yerra kulwa," in Hindustanee "rukhta-chunduna," in Bengalee "buro-rukto-kumbal" (Drur.), in the environs of Bombay "kummul" (Graham), in Burmah "kya-nee" (Mason); and the "autumn lotus" of the Dhammapada 285 — may be compared: a tank glowing with water-lilies like the dawn with the fiery beams of the rising sun, is mentioned in the Mrichchhakati (transl. H. H. Wils.): the "padma" of the Hitopadesa, and Vetala panchavinsati 1., may also be compared: N. rubra was observed by Graham in the environs of Bombay, "in tanks particularly in the neighbourhood of caves or temples," its flowers "of a dark crimson colour, very beautiful," appearing "about the close of the rains;" by Roxburgh, and Wight, in other parts of Hindustan as far as Tanjore and Bengal, its capsules seeds and roots eaten by the natives, a kind of arrowroot prepared also from the roots and underground stems (Drur.); by Mason, indigenous in Burmah.

Sinapis dichotoma of Northeastern Hindustan. A species of *mustard* called in Hindustanee "sarsori" (Pidd.), in Assam "sarsu" (Robinson); and "mustard seed" is mentioned in the Dhammapada 401 to 407: — the "sarshapa" or "kshava" of the stanzas of the Ayurvedas, prescribed as an external application (Susrut. chik. 5), is referred here by Hessler: S. dichotoma is described by Roxburgh (Steud.), and is one of the kinds enumerated by Drury as extensively cultivated in India "for the oil yielded by the seeds, as well as for dietetical purposes." (See S. juncea.)

Sinapis ramosa of Hindustan. Annual; and from early times, extensively cultivated for dietetical purposes, the oil from its seeds used also medicinally: — observed by Roxburgh (Steud., madr. exh. rep., and Drur.).

Sinapis glauca of Hindustan. Also from early times cultivated for dietetical purposes and the oil from its seeds — (Steud., madr. exh. rep., and Drur.).

Tabernæmontana coronaria of Tropical Eastern Asia. A flowering Apocynous shrub called in Sanscrit "tugura," in Hindustanee and Bengalee "tugura" (J. F. Wats.), in the environs of Bombay "tuggai" (Graham); and the fragrant "tagara" of the Dhammapada 54 to 56 — may be compared: the "tagara" prescribed by Susrutas chik. 15 to kalp. 5, is referred here by Hessler: T. coronaria was observed by Rheede ii. pl. 54 in Malabar; by Graham, at Bombay, very common "in gardens," the "flowers generally double;" by Roxburgh, and Ainslie, in other parts of Hindustan; by Burmann pl. 59, on Ceylon; by Mason v. 412 to 799, "exotic" in Burmah, cultivated and its "large blue-white double flowers" worn in garlands, the original single-flowered kind comparatively rare.

Justicia (*Adhatoda*) *vasica* of Tropical Hindustan and Burmah. A tall shrub called in Sanscrit "vasika" or "vasooka" or "singhee" or "singhashya" or "uturoosha" or "vajiduntuka," in Bengalee "bakus" (J. F. Wats.) or "arusa," in Tamil "adatodai," in Telinga "adasaram" (Drur.), in the environs of Bombay "adulsa" or "bakus" or "vasooka" (Graham); in which we recognize the fragrant "vassika" shedding its withered flowers of the Dhammapada 55 to 377, — also the "vasika" or "sinhi" or "sinhasya" or "atarusha" or "vajidanta" prescribed by Susrutas sutr. 46 to chik. 37: A. vasica was observed by Graham in the environs of Bombay, "common as a hedge plant about villages;" by Stewart, in the Punjaub; by Roxburgh, Ainslie, and Wallich, as far as Bengal and Nepaul, the leaves flowers and root employed medicinally (Drur.); by Hermann lugd. pl. 643, and fl. Zeyl. 16, on Ceylon; by Mason, in Burmah, enumerated as indigenous. Transported to Europe, is described by Plukenet alm. pl. 173; and from Europe was carried to Northeast America, where it continues in greenhouses.

Andropogon muricatus of Tropical Hindustan. The *cuscus grass* is called in Sanscrit "virana" or "viritara" (W. Jones), in Tamil "viranam" or "vetti-ver" or "vizhal-ver," in Telinga "vatti-veru" or "ouru-veru," in Bengalee "shandaler-jar" or "bala," in Hindustanee "balah" (Drur.); in which we recognize the sweet-scented "usira" root of the "birana" grass, mentioned in the Dhammapada 337: — the "asmantaca" of the Institutes of Manu ii. 43, supplying in case of need a cincture for Brahmans, is referred here by Deslongchamps: roots were brought by Gautami to her pupil Sakuntala (W. Jones as. res. viii. 306): the "usira" is mentioned also by D'hanvantari (Susrut. sarir. iii. 2), and Kalidasa: A. muricatus was observed by Graham in the environs of Bombay; by Ainslie, Retz, W. Jones, and Roxburgh, in other parts of Hindustan as far as Bengal, its roots interwoven in screens

"245 B. C." (Kitt. cycl. bibl.), returning from his victories in the East, Ptolemy III. entered Jerusalem; where he offered sacrifices, and "made magnificent presents to the temple."

Continuing homeward, Ptolemy III. brought back to Egypt the sacred objects carried away by the Persians. He also gave great attention to the increase of the Alexandrian Library and encouragement of learning.

A Greek inscription containing the name of Ptolemy III. presents the following form of the letter ϵ, and the "earliest" example known of ω (Franz. 81). "Complications of" *hieroglyphic* signs also began during his reign (Glidd.).

"244 B. C." (Pauth. p. 208), the "Hioung-nou Tartars" now mentioned in Chinese history: — by some writers identified with the "Hunni" or Huns; who at a later period invaded Europe from the East.

"243 B. C.," the "eighth" year after his liberation of Sicyon (Polyb., and Clint.), Corinth liberated by the historian Aratus.

"The same year" (Strab., and Schlegel journ. asiat. 1828), Theodotus succeeded by Theodotus II., second Greek king of Bactria.

At this time (Plut. vit. Arat., and G. M. B. in Kitt. cycl. bibl.); a *banker* in Sicyon, "whose whole business consisted in exchanging one species of money for another."

242 B. C. = "19th year" of his reign in an inscription by king Asoka — (Burn. ii. 779).

"241 B. C." (Liv., and Clint.), the Carthaginians defeated in *naval combat* by the Romans at the Aegates Islets off the West end of Sicily; and suing for peace, the First Punic war brought to a close.

In the Description of Greece by Heraclides Creticus, the head-covering of the women of Boeotian Thebes is said to conceal the face all but the two eyes — (Apollon. mir. 19): to the present day, the fashion in Egypt (see figures in Lane's modern Egyptians). The Boeotians therefore may have derived the custom through the Cadmeans from Phoenicia?

Carpinus betulus of Europe and the adjoining portion of Asia. Called in Britain *hornbeam* or *horn-beech* or *yoke-elm* (Prior), in Germany "hainbuche" (Fraas), in France "charme" (Nugent), in Italy "carpine bianco o commune" or "carpino" (Lenz), in Greece "gaurōs" or "agriōtzōuknitha," in which we recognize the "carpinum" by some identified with the "zygiam" of the Greeks (Plin. xvi. 26): possibly therefore the ΖΥΓΙΑ frequent on mount Pelion according to Heraclides Creticus: — C. betulus was observed by Sibthorp, and Chaubard, from the environs of Constantinople to the mountains of the Peloponnesus. Westward, the "carpinus" is mentioned by Vitruvius ii. 9, by Columella as furnishing handles for agricultural implements, and by Pliny as growing in Italy both on the mountains and plains: C. betulus is described by Tragus p. 1109, and Gerarde p. 1479; is termed "carpinus" by Tournefort inst. 583, and is known to grow in Italy and throughout middle Europe as far as Britain (Engl. bot. pl. 2032, and Pers.). The wood being exceedingly hard and tough continues to be "used to yoke horned cattle" (Prior; see Acer campestre).

"240 B. C." (Cic., and Clint.), first dramatic exhibition of Livius Andronicus: regarded as the beginning of *Latin literature*. This writer or rather translator was by birth a Greek. — Seven years later, both he and four native Latin writers, Naevius, Plautus, Ennius, and Cato, were all living.

Scirpus lacustris of Northern climates. Called in Britain *bulrush*, in Old English "pole-rush," equivalent to the French "jonc d'eau," in Anglo-Saxon "ea-risc" (Prior): the "scirpus" having no knots according to a Roman proverb — (quoted by Ennius, and Terence), made into rafts in the days of Plautus, employed also on roofs (Isidor.), and for sails on the river Po and along the coast of Barbary in the days of Pliny xvi. 70, may be compared: S. lacustris occurs in debris of the lake-villages of Switzerland (Troyon); is described by C. Stephanus p. 520, Tragus, Gesner, Lobel, and C. Bauhin; is termed "s. palustris altissimus" by Tournefort inst. 528; and is known to grow in shallow water in Barbary, Italy, Portugal, and throughout middle and Northern Europe as far as Lapland and Iceland (Desf., Savi, Brot., Hook., and Wats.). Eastward, was observed by Sibthorp, and Chaubard, in the rivers of Crete and Greece and called "supha;" is known to grow along the Taurian mountains and throughout Siberia (Gmel., Bieb., Ledeb., and A. Dec.), and was observed by Thunberg about mount Fakon in Japan. Farther East, was observed by myself on the Hawaiian Islands and in California and Oregon, by Nuttall in Arkansas, by Pursh in Canada, by Baldwin along the Atlantic as far South as Lat. 29° in Florida; and doubtless furnished the "rushes" employed by the aboriginal women of New England for making baskets, witnessed by W. Wood ii. 20, and

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or tatties to impart when dashed with water coolness and fragrance to the atmosphere; used also for covering palanquins and thatching bungalows (Drur.). Farther East, was observed by Mason v. 501 "exotic" in Burmah and called "pan-yen," little bunches cultivated by both Karens and Burmese for "its fragrant roots."

Gookin coll. 3. "S. lacustris" is attributed also to the Southern Hemisphere, to Australia and New Zealand (Wats., and J. D. Hook.), but as growing in Austral America I found the stem obtusely trigonal at base.

"237 B. C. = 10th year of Wang-tching" or Chi-hoang-ti (Chinese chron. table), beginning of the Forty-first cycle.

"235 B. C." (Liv., Eutrop., and Clint.), Second closing of the temple of Janus. The Romans having peace with all nations for the first time since the reign of Numa Pompilius.

The same year = "26th year of Asoka" in inscriptions on columns at Delhi and Allahabad — (Burnouf ii. 655 to 741).

One hundred and twenty-second generation. Sept. 1st, 234, mostly beyond youth: the Greek poets, Rhianus, Archimelus, Hegesianax of Alexandria, Samius, Alcaeus of Messene, and Dioscorides of Egypt; the comic poet, Epinicus; the philosophers, Evander, Ariston of Ceos, Zenon of Tarsus, and Chrysippus; the astronomer Conon of Samos; the historians, Chares, Phylarchus, Philinus of Agrigentum, Mnesiptolemus, and Ptolemaeus of Megalopolis; the grammarian Aristophanes of Byzantium; the biographer Hermippus; other Greek writers, Apollonius of Perga, and Antigonus of Carystus; the Greek painters, Neacles, Cydias, and Antidotus (Bryan): the Latin writer Marcius; and the Roman painter M. Valerius Messala.

As early perhaps as this date, the first regular work on *pharmacy* composed by Mantias, a follower of Herophilus, and the preceptor of — Heracleides Tarentinus (Galen, and Sm. b. d.).

Rheum rhaponticum of Western Tartary. The PHON of Mantias — (Gal. sec. loc. viii. 3), Zopyrus, described by Dioscorides as a medicinal root brought from beyond the Bosphorus, mentioned also by Oribasius (Daremb.), Aetius, and Paulus Aegineta, is referred here by writers; and the "rawand" of Elhur, Serapion, Avicenna, and the earlier Arab physicians, is referred here by Ebn Baitar: R. rhaponticum is known to grow wild from the Volga North of the Caspian to Krasnojar on the upper Yenissei (Spreng., and Lindl.). Westward, the "rēon" or "ra" is identified in Syn. Diosc. with the "rapontikōum" of the Romans: the "radicis ponticae" is mentioned by Celsus v. 23, and Scribonius Largus; the "rhacoma," by Pliny xxvii. 105; the root of R. rhaponticum is distinguished by Matthaeus Sylvaticus pandect. 589; and the living plant introduced into Europe prior to 1612, is described by Alpinus libell. rhapon., and Parkinson. By European colonists, was carried to Northeast America, where it continues under cultivation for its esculent leaf-stalks, and is called *garden rhubarb;* also to Tropical Hindustan (Graham). Its root according to Guibourt is bitter, astringent, and aromatic (Lindl.).

"231 B. C." (Dionys., Blair, and Clint.), first divorce among the Romans, that of Spurius Carvilius.

"The same year" (Zonar., Blair, and Clint.), the Corsicans and Sardinians, who had been induced by the Carthaginians to revolt, subdued by the Romans.

"229 B. C." (Eutrop., Blair, and Clint.), war against the Illyrians on account of their piracies commenced by the Romans. — At the end of a year, the Illyrian queen Teuta sued for peace.

"228 B. C." (Polyb., Blair, and Clint.), at the invitation of the Achaean and Aetolian Leagues, Roman ambassadors first visit Athens, Corinth, and other cities of Greece.

227–6 B. C. (Polyb. v. 89, and Clint. iii. p. 425), the colossus at Rhodes about this time thrown down by an earthquake. Presents to the Rhodians to repair their losses, sent by the Greek kings of the East, Mithridates IV., Seleucus II. Callinicus, Prusias, Attalus, Antigonus Doson, and Ptolemy III. of Egypt.

"226 B. C. (Clint. iii. p. 346), Seleucus II. succeeded by Seleucus III. Ceraunus, fifth Greek king of Syria.

Hardly later than this year (Sm. b. d.), by invitation of Ptolemy III., Eratosthenes removing to Egypt to take charge of the Alexandrian library. *Parallels of Latitude* were applied to geographical maps by Eratosthenes. From the entrance to the Mediterranean, his celebrated "First parallel" extended through the island of Rhodes, and thence across the Euphrates and Tigris to the mountains of India, having been determined by observing where the longest day continued "fourteen hours and a half;" — therefore, as afterwards ascertained by Hipparchus, corresponding to "the Latitude of 36°" (Blair).

According to Eratosthenes (Strab. i. 3. 11), the current in the Strait between Italy and Sicily changes twice a day; corresponding in general to the *tides* of the Atlantic, but not so invariably following the moon. — Further details respecting the tides of the Atlantic, are given by Posidonius, and Athenodorus.

Eratosthenes (Strab. i. 3. 3, 4. 9, and xvii. 1. 19) maintained, That the Earth is CΦAIPOEIΔHC spheroidal (compare Archimedes). He divided mankind into good and bad, a distinction existing throughout all nations; he admired the institutions of the Romans and Carthaginians; but states, that the Carthaginians would sink any vessel containing a foreigner sailing to Sardinia, or the entrance of the Mediterranean.

Inga mellifera of Tropical Arabia. Called in Yemen "dhoba" or "dobb" or "smurr" (Forsk.); and probably included in the ΜΕΛΙΤΟΥΡΓΕΙΑ plants suitable for bees abounding according to Eratosthenes at the Southern extreme of Arabia — (Strab. xvi. 4. 2): clearly the "akanthōs" with fragrant flowers yielding the "aiguptiōn murōn" mentioned by Galen voc. hipp. 414 (compare A. myrrhifera): I. mellifera is termed "mimosa unguis cati" by Forskal p. 176; was observed by him in moist places in Yemen, the flowers yielding to bees white honey in abundance, the wood supplying fuel, and the masticated leaves applied to the eyes of bullocks to remove cloudiness.

Dobera glabra of Tropical Arabia. A large tree called in Yemen "dober" (Forsk.); and its fruit probably included among the ΕΥΚΑΡΠΙΑ abounding according to Eratosthenes in the Southern extreme of Arabia — (Strab. xvi. 4. 2.): D. glabra was observed by Forskal p. 32 frequent along the base of the mountains of Yemen, the fruit eaten.

Asclepias spiralis of Tropical Arabia. A shrub, not lactescent, and called in Yemen "schuntob" (Forsk.); and its follicles included perhaps in the "ĕukarpia" of the Southern extreme of Arabia, mentioned by Eratosthenes — (Strab. xvi. 4. 2): A. spiralis was observed by Forskal p. 49 not far from Lohaia growing on the Desert plain, its follicles eaten, and the seeds sweet and relieving colic.

Stapelia? variegata of Tropical Arabia. A leafless sarmentose plant called in Yemen "draet el kelbe" (Forsk.); and its follicles probably among the "ĕukarpia" of the Southern extreme of Arabia mentioned by Eratosthenes — (Strab. xvi. 4. 2): S. variegata was observed by Forskal p. xciii to 51 along the base of the mountains of Yemen, the follicles eaten crude.

Oncoba spinosa of Tropical Africa and Arabia. A large tree called in Yemen "onkob" (Forsk.); and its berries possibly among the "ĕukarpia" of the Southern extreme of Arabia, mentioned by Eratosthenes — (Strab. xvi. 4. 2): O. spinosa was observed by Forskal p. 103 among the mountains of Yemen, the fruit eaten by boys. Westward, is known to grow as far as Senegal (Juss., and Pers.).

Mærua crassifolia of Tropical Arabia. An arborescent shrub called in Yemen "mæru" (Forsk.); and its fruit possibly among the "ĕukarpia" of the Southern extreme of Arabia, mentioned by Eratosthenes — (Strab. xvi. 4. 2): M. crassifolia was observed by Forskal p. 104 in arid situations throughout Yemen, its fruit eaten by boys.

Furia moghadd of Tropical Arabia. Called in Yemen "moghadd" (Forsk.); and its fruit probably among the "ĕukarpia" of the Southern extreme of Arabia, mentioned by Eratosthenes — (Strab. xvi. 4. 2): T. moghadd was observed by Forskal p. 166 along the base of the mountains of Yemen, the fruit eaten.

Ficus Forskali of Tropical Arabia. Called in Yemen "bæles" (Forsk.); and its figs probably among the "ĕukarpia" of the Southern extreme of Arabia, mentioned by Eratosthenes — (Strab. xvi. 4. 2): F. Forskali was observed by Forskal p. 179 on the mountains of Yemen, its fruit not agreeable but eaten.

"224 B. C." (Blair), the Romans pursuing the Gauls, first cross the Po.

"223 B. C." (Clint. iii. p. 346), Seleucus III. succeeded by Antiochus III. Magnus, sixth Greek king of Syria.

Hardly later than this date (Sm. b. d.), the inventions of Heron of Alexandria, a pupil of Ctesibius. Applications of *steam* to mechanical purposes are described by Heron.

Anacyclus pyrethrum of the Mediterranean countries. Called in Spain "pelitre," and hence in English *pellitory of Spain* (Prior): the ΠΥΡΕΘΡΟΝ of Iolas — (schol. Nic. ther. 683), Andreas, Antipater (Gal. comp. med. gen. vii. 7), Nicander ther. 938, Paulus Aegineta, an herb according to Dioscorides having leaves like those of "thaukōs agriōs" and its root fiery to the taste, is referred here by writers: A. pyrethrum was observed by Fraas near dwellings and in wooded mountain-ravines in Southern Greece. Farther South, the "purĕthrōn" or "thōrukniōn" or "purŏthrōn" or "purŏtōn" or "purinōn" or "arnōs puritēs" is identified in the Syn. Diosc. with the "puritēs" of the prophets: "pyrethrum" root is enumerated by Alpinus as used medicinally in Egypt, imported according to Forskal mat. med. "from Barbary;" but according to Lindley A. pyrethrum occurs also in Syria and Arabia. Westward, the "purĕthrōn" is identified in the Syn. Diosc. with the "salivaris" of the Romans; the "pyrethrum" is mentioned by Celsus, Scribonius Largus 9, Pliny xxviii. 42, Serenus Sammonicus, and as exotic by Macer Floridus: A. pyrethrum is described by Fuchsius p. 641, Tragus p. 173, Dodoens p. 347 (Spreng.), and Gerarde p. 758; and was observed by Shaw spec. n. 138, and Desfontaines ii. 287, wild in Barbary. The root according to Persoon induces salivation; and according to Lindley is "a powerful rubefacient and stimulant," and "is imported from the Levant."

"222 B. C." (Polyb., and Clint.), the Gauls defeated by Marcellus, and their leader Viridomar slain.

"In this year" (geogr. Chin., and Klapr.), the small kingdom of Yan, in the north of the Chinese province of Tchy-li overthrown, the last king Lou-wan seeking refuge among the Hioung-nou. At this time a man of Yan named Wei-man proceeding to Corea obtained possession of the government; dethroning Ki-tsum, the last of the Chinese dynasty.

"November", (Porphyr., and Clint. iii. p. 384 and 399), in Egypt, Ptolemy III. succeeded by Ptolemy IV. Philopator. — Who put to death his mother Berenice, his wife and sister Arsinoe, his brother Magas, and his uncle Lysimachus.

The hieroglyphic ovals of king Ptolemy IV. occur on buildings at Esneh and Karnak; on restorations at Luxor; and on the small temple to Athyr on the Western hill-slope at Thebes. He also built the temple at Akhmin, continued the one at Dakkeh in Nubia, and founded the great temple at Edfu.

Among the *Pali* inscriptions by king Asoka on columns at Delhi and along the Ganges, and on rocks in Guzerat and Cattac, one edict relates to establishing charitable institutions beyond his own territory "within the dominions of Antiochus the Greek (Antioko Yona), of which Antiochus's generals are the rulers:" and a subsequent edict contains "and the Greek king besides, by whom the Chapta (?) kings Turamayo, Gongakena, and Maga" (two of these names being Ptolemaios and Magas, according to Prinsep).

Hardly earlier than this year (Bunsen iv. 7. 2 giving 260 — "37 yrs." = 223), Asoka succeeded by his son Suyasas, now king at Pataliputra on the Ganges — (Bhagavata purana, Vichnu purana, and Burnouf ii. 778).

"221 B. C. = 26th year of Chi-hoang-ti, of the Thsin" or Sixth dynasty (Chinese chron. table). By Chi-hoang-ti, the year was made to commence with the conjunction of the sun and moon in Sagittarius, or two months earlier than under the Tcheou (Pauth.).

"In the 27th year of Ptolemy III." (Samuel Aniens.), "ziunacanos" that "preserved snow in summer" (*ice-houses*) constructed in Armenia by Arsaces.

"As far back as the 3d century B. C." (Klapr. mem. i. 411), commencement of *Georgian history*. — Among several historical works, the most esteemed was procured by Vakhtang V. from the archives of the convent of Mzkheta and Ghelathi at the beginning of the Eighteenth century.

Archimedes (Strab. i. 3. 11) observing that fluids in solidifying tend to assume the spherical form, concluded, That it was so with the Earth.

"220 B. C." (Strab., and Schlegel journ. asiat. 1828), Theodotus II. succeeded by Euthydemus of Magnesia, third Greek king of Bactria.

"In this year" (Burm. hist., and Mason 40), Rekkhan succeeded by his son Khanloung, now Burmese king. — Who reigned "thirty-eight" years.

"The same year" (Polyb., Blair, and Clint.), in Greece, commencement of the Social war, between the Achaean and Aetolian Leagues; Philip IV. of Macedonia joining the Achaeans.

"The same year" (Clint. ii. p. 269, and iii. p. 382), Cleomenes III. of Sparta seeking refuge in Egypt, put to death by Ptolemy IV. He is regarded as the last Spartan king in the Agid line (Pausan.).

A Greek inscription of about this date (Franz. 80) found on Corcyra, presenting the following form of the letter Π.

"218 B. C." (Polyb., Blair, and Clint.), from Spain, a Carthaginian army led by Hannibal through France and over the Alps into Italy: in this unexpected manner commencing the Second Punic war. An account of the journey is given by L. Cincius Alimentus; who was himself taken prisoner, derived many particulars from Hannibal's own lips, and principally wrote in Greek.

"The same year" (Polyb., and Clint. iii. p. 315 and 384), commencement of war for the possession of Palestine, between Antiochus III. and Ptolemy IV. — The war continued a year.

Not later than this date (C. Aurel., and Sm. b. d.), the treatise on ΚΥΝΟΛΥϹϹΟϹ *hydrophobia* by Andreas.

Helminthia echioides of Europe and the adjoining portion of Asia. A Lactucoid herb called in Britain *oxtongue* (Prior), in Greece "hĕirōvōtanī" (Sibth) or "agriōs sōhōs" (Fraas), in Egypt "libbæjn" (Forsk.), in which we recognize the "vōuglōssŏn mĕga" identified through Syn. Diosc. with the ΚΙΡϹΙΟΝ named from and prescribed against varices by Andreas, — two cubits high according to Dioscorides, with "vōuglōssŏ"-like leaves spinescent around, and heads of purple-tipped flowers changing into pappus, referred here by Ruel iii. 126; H. echioides was observed by Forskal in Egypt; by him, Sibthorp, and Fraas, from Athens to Smyrna and Constantinople, its leaves eaten crude as well as cooked. Westward, the "kirsiōn" is identified in Syn. Diosc. with the "spina mōllis" of the Romans; and the account of the "cirsion" having "spinae molles" by Pliny xxvii. 39, seems taken from Dioscorides: H. echioides is described also by Lobel pl. 557; is termed "hieracium echioides capitulis cardui benedicti" by Tournefort inst. 470; was observed by Forskal on Malta; and is known to grow from Italy throughout middle Europe as far as Britain (Curt. lond. iii. pl. 51, and Pers.).

Aloe Socotrina of Socotra and the countries around. The imported drug is called in English *aloes*, in Bengalee "musabbar," in Hindustanee "musabbar" or "elwa" (D'roz., and Royle), in which we recognize the ΑΛΟΗϹ: ΙΝΔΙΚΗϹ of Andreas — (Gal. comp. med. gen. vii. 7), "aloe"

of Celsus v. 1, Juvenal, and Plutarch, the concrete juice "ōpisma" imported according to Dioscorides from India, or according to Pliny xxvii. 5 the Indian kind is the best (brought of course by way of India originally from the district around the entrance to the Red Sea): "A. officinalis" was observed by Forskal p. 73 wild in Yemen and called "sabr," from the odour of its juice clearly the source of the Socotrine aloes of commerce; this according to Lindley is imported from Bombay and Smyrna, and "*Mocha aloes* and genuine *hepatic aloes* are supposed to be varieties of the same species." By European colonists, the living A. Socotrina was carried from Socotra to the botanic garden at Bombay (Graham): from transported specimens is described also by Miller 15, and Woodville pl. 202.

Aloe littoralis of the seashore of peninsular Hindustan. Yielding a good kind of *aloes* (Drur.), possibly the "alōēs inthikēs" of Andreas: — A. littoralis was observed by Koenig, and Ainslie, in Hindustan, the juice of its leaves applied externally in ophthalmia, and by the Mahommedans used for making ink (Drur.).

Aloe Indica of the arid sandy plains of Northwestern Hindustan. Yielding *aloes* (Drur.), and perhaps included in the "alōēs inthikēs" of Andreas, — and "aloes indicae" distinguished by Marcellus 8; A. Indica, termed "a. perfoliata." by Roxburgh, was also seen in Hindustan by Royle.

Althea officinalis of Europe and the adjoining portion of Asia. Called in Britain *marsh-mallow* (Prior), in France "guimauve" (Nugent), in Germany "eibisch" (Fraas), in Italy "bismalva" or "buonvisco" or "altea" (Lenz), in Greece "nĕrōmōlōha" (Fraas); in which we recognize the "althaia" identified through Syn. Diosc. with the ΕΒΙCΚΟΥ whose root is prescribed by Andreas — (Gal. c. med. gen. vii. 7): the "iviskōn" is further identified in Syn. Diosc. with the "althiōkōn;" and the "althaia" is described by Dioscorides as having a stem two cubits high, downy leaves, and a "rōthōĕithĕs" rose-like flower: A. officinalis was observed by Sibthorp, Chaubard, and Fraas, frequent in marshy situations from the Peloponnesus throughout Greece; is known to grow also in Siberia (Pers.). Farther South, seeds of "althaea" are enumerated by Alpinus as employed medicinally in Egypt, and the living A. officinalis according to Clot-Bey has been recently introduced. Westward, the "hibisco" is described by Virgil ecl. ii. 30 to x. 71 as green and slender, furnishing a switch for driving kids, and woven into wicker baskets "fiscellam texere;" is prescribed by Celsus; is identified by Pliny xx. 14 with the "molochen agriam" by some called "pistolochiam;" and "agrestisque malva" or "althaea" or "eviscus" is mentioned by Macer Floridus: A. officinalis is termed "a. Dioscoridis et Plinii" by Tournefort inst. 97; was observed by Lenz in Italy; and is known to grow "near the sea" as far as Denmark (fl. Dan. pl. 530, Pers., and Lindl.). Seeds may have floated across the Atlantic to New England, the plant observed by myself only along salt-marshes: but clearly by European colonists, was carried to Southeast Australia, where it has become naturalized (T. Corder, and A. Dec.); and to the Mauritius Islands, observed under cultivation by Bojer. The whole plant, especially the root, yields according to Lindley "a plentiful tasteless" mucilage, "very salutary in cases of irritation," and "a favourite medicine with the French." (See Alcea acaulis.)

Orchis undulatifolia of the Mediterranean countries. Called in Greece "sarkinōvōtani" or "ōura tōu alĕpōu" (Sibth.): the CΑΡΑΠΙΑΔΑ of Andreas, — so called from the many uses of its root, is identified by Dioscorides with the "ŏrhis ĕtĕrōs" having oblong "prasŏ"-like leaves curling at the axil, stems a span high and purplish flowers, and referred here by Fraas: the "sarapiatha" is also mentioned by Aetius: O. undulatifolia was observed by Sibthorp, Chaubard, and Fraas, from Cyprus to the Peloponnesus, not rare, and the root dried and used for food. Westward, the account by Pliny xxvi. 62 of the "serapias" or "orchis herba" seems chiefly taken from Dioscorides and the Greeks: O. undulatifolia is termed "o. cercopithecum lusitanic." by Breynius pl. 42, is further identified by Chaubard with the "3d ophrys insectifera" of Linnæus 1343 and "orchis longicruris" of Link; is known to grow in Portugal (Brot., Pers., and Steud.), and was observed by Bivona ii. pl. 6 in Sicily.

"217 B. C." (Polyb. 81, and Sm. b. d.), attempt to assassinate Ptolemy IV.; in which his physician Andreas was slain.

Amanita aurantiaca of Europe. An *edible mushroom* called in Piedmont "bole real," and the "boletos" commended by Glaucias — (Plin. xxii. 47), Asellius Sabinus (Suet. vit. Tiber. 42), and Apicius, are referred here by Dierbach and others: A. aurantiaca is known to grow in various parts of Southern Europe.

"216 B. C." (Polyb, and Clint.), the Romans defeated by Hannibal at Cannae. The swords of the Gallic or French allies of Hannibal are described by Polybius ii. 33 as easily bent, and straightened on the ground under foot; and by Livy xxii. 46, as "praelongi ac sine mucronibus," very long and not sharp-pointed; swords agreeing with this description, long, straight, double-edged, rounded at the extremity, and of untempered iron, are found in tombs apparently contemporaneous in Switzerland and Northern Europe (Troyon p. 347)

After the defeat at Cannae, Q. Fabius Pictor sent by the Romans to consult the Oracle at Del-

phi. His last name Pictor, came from his paintings in the temple to Health (Bryan dict. paint.). He wrote in both Greek and Latin.

"215 B. C." (Liv., and Clint.), the envoys of Philippus V. of Macedonia, on their way to Hannibal, captured by the Romans.

As early probably as this date, Moschus of Syracuse composing poetry. He was acquainted with Aristarchus — (Suid.).

Crocus luteus of the East Mediterranean countries. The ΞΑΝΘΟΙΟ: ΚΡΟΚΟΥ of Moschus ii. 68 — may be compared: C. luteus is termed "c. vernus Mæsiacus primus" by Clusius pannon. 228; and was observed by Sibthorp near Sestus on the Hellespont. Transported to Britain, is described by Miller, and in a single park continues growing spontaneously (A. Dec.).

"214 B. C. (= 33d year of Chi-hoang-ti," Amyot, and Pauth. p. 222), the *Great wall* along the Northern frontier of China commenced. — It was finished in "ten years."

"213 B. C. (= 34th year of Chi-hoang-ti," Pauth. p. 221 to 227), a *comet;* and the decree ordering the *destruction of books* throughout the Chinese empire. At the same time, the minister Li-sse caused the different kinds of *alphabetic characters* to be reduced to a single kind, called "li-chou;" — the same that continues to be employed in Chinese writing.

"212 B. C." (Liv., and Clint.), during the capture of Syracuse by the Romans under Marcellus, Archimedes at the age of "seventy-five" slain. The first *paintings* and *statues* brought to Rome, were from the spoils of Syracuse.

"209 B. C. = 1st year of Eulh-chi-hoang-ti, of the Thsin" or Sixth dynasty — (Chinese chron. table).

"The same year (= 453 years after Synmu," Kaempf. i. 6), death of Sinosikwo in the "fiftieth" year of his age; and arrival in Japan of a colony of Chinese led by a physician.

"The same year" (Liv., and Clint.), Tarentum recovered by the Romans under Q. Fabius.

Polygonum aviculare of Europe and Northern Asia. Called in Britain *knot-grass* or *swine's grass*, by Trevêris grete herbal "swynel grass" (Prior), in France "renouée" (Nugent), in Germany "knöterich" (Grieb): the ΠΟΛΥΓΟΝΟΥ prescribed by Heraclides Tarentinus against blood flowing from the ear — (Galen comp. med. loc. iii. 1), mentioned also by Nicander ther. 901, Magnus of Philadelphia, and Charixenes, or the "pōlugōnōn arrĕn" described by Dioscorides as having numerous slender branches, jointed, creeping on the ground like grass, with fruit at each leaf, is referred here by writers: P. aviculare was observed by Forskal, Sibthorp, and Chaubard, everywhere in Greece and on the Greek islands. Farther South, the "pōlugōnōn arrĕn" is identified in the Syn. Diosc. with the "thĕphin" or "mĕmphin" of the Egyptians: P. aviculare was observed by Hasselquist in Palestine; by Delile, around Alexandria in Egypt; and was received from Abyssinia by Richard. Westward, the "ērakliān" or "hīliōphullōn" or "pōlugōnōn arrĕn" is identified in the Syn. Diosc. with the "hōulōum" of the Numidians, and "prŏsĕrpinăka" or "saggŏuinalis" of the Romans; the "herba sanguinalis" is mentioned by Celsus ii. 33, and Columella vi. 12 and vii. 5; the "polygonum," by Scribonius Largus 46, and is identified by Pliny xxvii. 91 with the "calligonum" or "sanguinaria;". P. aviculare is described by Fuchsius 614, Lobel, and Tabernæmontanus, is known to grow in waste places and along roadsides throughout Europe as far as Lapland (Pers., and Wats.). Eastward from Greece, is known to grow in Nepal and throughout Northern Asia (Wats., and A. Dec.), was observed by Thunberg on the seashore and elsewhere in Japan; and farther East, was observed by myself around Chinook villages on the American shore, clearly aboriginally introduced. By European colonists, was carried to Iceland and Greenland (Hook.; and Wats.), to New England prior to 1670 (according to Josselyn), but has since multiplied throughout Northeast America, especially around dwellings and in places that have been trampled on; and to Southeast and Southwest Australia, where it has become naturalized (Corder, Drumm., and A. Dec.). According to Lindley, the "fruit said to be emetic and cathartic."

Polygonum maritimum of the seashore of the Mediterranean and North Atlantic: possibly a distinct species, the stems harder, more or less ascending, and leaves somewhat glaucous. — The "karkinēthrōn" or "pēthaliōn" of the Syn. Diosc. may be compared: P. maritimum called "argentina" was observed by Forskal, Sibthorp, and Chaubard, in the maritime sands of Cyprus, Crete, and Greece to the sea of Marmora. Farther South, was observed by Delile on the Mediterranean border of Egypt near Alexandria; by myself, on the sea-beach there, the same in every respect as on the sea-beaches of our Middle States; is known to grow at intervening stations, as on the Atlantic shore of Europe, Madeira, the Canaries and Azores (Barrel. pl. 560, Pers., Webb, Wats., and A. Dec.). In the Southern Hemisphere, observed by J. D. Hooker fl. Ant. ii. p. 340 in Patagonia and Southern Chili.

Berberis Cretica of the East Mediterranean countries. Called in Greece "muilkunia" (Sibth.) or "mulkini" or "ōxuakantha" (Fraas); in which we recognize the ΑΥΚΙΟΝ of Heraclides Tarentinus, — Celsus v. 28, Scribonius Largus, the juice of a plant growing according to Dioscorides in

broken ground in Lycia Cappadocia and many other districts, its branches three cubits long crowded with leaves like those of box, and referred here by Honorius Beltus, and Alpinus exot. pl. 20: the "lukiōn" is identified in Syn. Diosc. with the "puxakanthan;" is mentioned also by Galen comp. med. iii. 2, Oribasius, and Paulus Aegineta; by Pliny xii. 15 as a "spina" growing on mount Pelion, and by some among the Greeks called "pyxacanthum chironium:" B. Cretica is described by Bauhin hist. i. 60; is termed "b. cretica buxi folio" by Tournefort cor. 42; and was observed by Sibthorp, and Fraas, from the mountains of Crete and Southern Greece to Cyprus.

"207 B. C." (Liv., and Clint.), the Carthaginians under Hasdrubal, defeated by the Romans.

"206 B. C. = 1st year of Tsou-pa-wang" (Chinese chron. table): an usurper as shown by title, his real name being Hiang-yu. Coins issued during his reign are extant (Pauth.).

"The same year" (Gaubil note to Chou-king ii. 1. 44) is regarded as the beginning of the Han dynasty; and maps and geographical lists of places (specially excepted by Chi-hoang-ti in his decree for burning the books) were now carefully collected.

"In this year" (Gildem. p. 28), expedition of Antiochus III. against India.

"In this year (= L. Veturius and Q. Caecilius Metellus consuls," Sm. b. d.), the poet Naevius imprisoned for a disparaging verse on the Metelli, the laws of the Twelve Tables punishing libel with death. His imprisonment is alluded to by Plautus mil. glor. ii. 2. 56.

The ΤΙΡΡΥΛΑ of Plautus, — so light as to run on the top of the water according to Varro, and a diminutive animal with six feet according to Pompeius Festus (Paul. Diac.), is clearly the insect tribe of *Gerris*.

Hypericum perforatum of Europe and the adjoining portion of Asia. Called in Britain *St John's wort* (Prior), in Germany "hartheu" (Fraas), in France "millepertuis" (Nugent), in Italy "perforata" or "iperico" (Lenz), in Greece "lĕihēnōhōrtōn" or "valsamōn" (Sibth.) or "valsamaki" (Fraas), in which we recognize the ΗΥΡΕΡΙCΟΝ of Plautus, — a cubit high according to Pliny xxvi. 53, strong-scented, and ripening seed at the same time with barley: the "herba sancti ioannis herba perforata" is mentioned by Symon Januensis sinon.: H. perforatum is described by Arnoldus de Villanova (Pouchet), Valerius Cordus, and Dodoens (Spreng.); is termed "h. vulgare" by Tournefort inst. 254; is known to grow in Italy and throughout middle Europe (Lam. fl. fr., and Smith); according to Prior, "gathered on the eve of St. John's day, the 21st June," as "a preservative against thunder and evil spirits, whence it was called 'fuga dæmonum,' and given internally against mania." Farther East, was observed by Sibthorp, Chaubard, and Fraas, throughout Greece and the Greek islands; is possibly included among the imported "hypericum leaves and flowers" found by Alpinus, and Forskal mat. med. employed medicinally in Egypt (see H. crispum); but seems altogether unknown in Eastern Asia (Ledeb., and A. Dec.). By European colonists, was carried to Northeast America, where it has become naturalized in open and sometimes wild situations. Its leaves according to Lindley are "astringent, an infusion has been used in gargles and lotions."

Cinnamomum iners of Tropical Hindustan and the Siamese countries. The *wild cinnamon* is called in Hindustanee "darchini," in Malabar "kat-carua," in Canara "cuddoo-lavanga" (Drur.), in the environs of Bombay "ohez" or "bojevar" (Graham), in Burmah "theet-kyam-boo" (Mason), and the exported dried leaves "folia malabathri" (Lindl.); in which we recognize the ΡΕΤΑLΙΟΝ of Plautus curcul., — "malabathrum" of Horace, Ovid, Celsus, Pliny xii. 59, Isidorus (Stapel, and Ainsw.), and "folium" of Apicius: the "malavathrōn" growing in India, is mentioned by Andromachus, Dioscorides, Claudius Ptolemy, and Paulus Aegineta; the "phullōn malavathrōu" or phullōn inthikōn," by Nicolaus Myrepsus xxxiv. 22; the "sadsadsch," by Rhazes, and Ebn Baitar; aromatic "folio indico" is enumerated by Van Ghistele (Voyag. Belg.) among the ingredients of the Egyptian teriacle; and "sadedj hendi" or "malabathrum foli." imported from Hindustan, was seen in Egypt by Forskal. Southward and Eastward, the "kinnamōmōn used for firewood among the Sabaeans according to Agatharchides 101, and Artemidorus (Strab. xvi. 4. 19), may be compared; also the "xulōkinnamōmōn" and importations into Mosul, mentioned by Dioscorides i. 12 to 13, and Pliny vi. 34: C. iners was observed by Rheede i. pl. 75 in Malabar; by Graham, along the "Ghauts, and in the hilly parts of the Concans," its bruised leaves having "a strong spicy smell," its bark put in curries "as a spice," but "billets from the tree are often sold together with other kinds of firewood;" by Buchanan, Roxburgh hort. calc. 30, Wallich, Wight, and Drury, as far as Travancore, its inner bark "capable of affording *cassia lignea* of good quality," and its dried buds used medicinally; according to Ainslie, Royle, and Lindley, its dried leaves constitute the principal part of the *folia malabathri* of commerce. Farther East, was observed by Mason wild in Burmah; by Blume rumph. xxxv. pl. 15, as far as Java. (See C. tamala).

Laurus sp. of the Canary Islands. The aromatic bark ΜΑCΙS of Plautus, — "maceris" of the antidote of Antipater (Scrib. Larg. 167), "makĕr" brought according to Dioscorides from "varvarōu," yellowish, thick, astringent, and taken in potion against dysentery diarrhœa and spitting blood, is referred by Alpinus to the "selica seuda" bark imported from Barbary into Egypt and confounded

with the spice cassia: one or more species of Laurus are known to grow, if not on the Atlas mountains on the neighbouring Canary Islands. The "macir" is mentioned also by Pliny xii. 16, Galen fac. simpl. vii. p. 66, and Paulus Aegineta, but is attributed to India.

Tussilago petasites of Europe and the adjoining portion of Asia. Called in Britain *butterbur* (How, Skinner, W. Coles, and Prior), in Italy "petasite" or "tussilagine maggiore" (Lenz), in Greece "kōllōpanna;" and the FOLIA-FARFERI of Plautus poen. ii. 1. 32, — "farfarum" or "farfugium" or "chamaeleucen" of Pliny xxiv. 85 is referred here by Billerbeck: T. petasites is termed "petasites major et vulgaris" by Tournefort inst. 451, and is known to grow in Italy and throughout middle Europe as far as Denmark, flowering in the early spring (fl. Dan. pl. 842, and Pers.). Eastward, the "pĕtasītēs" is described by Dioscorides as a sprout thick as the thumb and more than a cubit high, bearing a large leaf like a broad-rimmed hat: T. petasites was observed by Sibthorp along shaded rills in Greece and on mount Athos and the Bithynian Olympus.

Festuca ovina of Subarctic Climates. A grass called in Britain *fescue* (Prior), and the FESTVCA of Plautus, laid by the praetor on the head of a slave in freeing him, — may be compared (referred by Fée to "f. rubra"): F. ovina is termed "gramen loliaceum minus capillaceo folio spica brizæ longissima" by Tournefort inst. 517; is known to grow from Lapland to the Mediterranean (Pers., Engl. bot. pl. 585, and Wats.); was observed by Brotero in Northern Portugal; by Scopoli, and Pollich, in Northern Italy and Carniolia; by Sibthorp, and Chaubard, frequent on the loftier mountains of Greece; is known to grow also on the Taurian mountains and in Siberia (Bieb., and Kunth). Westward, was observed by Hooker on Iceland; by Sabine, in Greenland; and is known to grow from Lat. 65° at Bear Lake to the Saskatchewan, Lake Winnipeg (Hook.), and Lake Superior (A. Gray), also to the Pacific at Nootka Sound (Kunth). The viviparous variety is known to grow "on the alpine summits of the White mountains" of New England (A. Gray), on Iceland, the mountains of Britain and middle Europe (Ray syn. pl. 22, Engl. bot. pl. 1355, and Pers.), and on the mountains of the Peloponnesus. "F. amethystina" of Linnæus, observed by Chaubard in the Peloponnesus, is regarded by him, together with "F. rubra," Linn., as perhaps not distinct from F. ovina.

Festuca duriuscula of Northern Climates. Notwithstanding the flat leaves often confounded with the preceding, and probably included in the "festuca" of the Romans: — termed "gramen pratense panicula duriore laxa unam præcipue partem spectante" by Tournefort inst. 522; known to grow from Lapland and Russia to the Mediterranean (fl. Dan. pl. 700, Pers., and Wats.); observed by Ray pl. 19 in Britain; by Lamarck, in France; by Host, in Austria; by Sibthorp, and Chaubard, in dry situations in the Peloponnesus. Westward, by Hooker on Iceland; by myself, to all appearance indigenous on the coast cliffs of Eastern New England, and by Nuttall as far as the seashore of New Jersey; but occurs also in fallow ground, perhaps introduced among grass seed: was observed by Short in Kentucky; by Chapman, "around dwellings, Florida and northward, introduced."

"The same year" (Liv., and Clint.), a Roman army led into Africa by P. C. Scipio; and a treaty negociated by him with Syphax.

"205, November" (Porphyr., and Clint. iii. p. 339), in Egypt, Ptolemy IV. succeeded by Ptolemy V. Epiphanes; now about "five" years old — (Justin, and Hieron.). Hieroglyphic ovals of Ptolemy V. occur on the temple at Ombos, founded by him; and during his reign, a large amount of building was accomplished, especially at Thebes, Esneh, Edfu, and Philæ. At the last named place, his name occurs in a Greek inscription, dedicating the small temple to Aesculapius.

"203 B. C." (Liv., and Clint.), departure of Hannibal from Italy.

As early perhaps as this date (Vishnu purana, and Burnouf ii. 778), Suyasas succeeded by his son Dasaratha, now king at Pataliputra on the Ganges. His name occurs at Budha Gaya, in an inscription dedicating a Budhist cave-temple immediately after his accession — (Prinsep, and Burn.).

"202, Oct. 19th" (Blair), partial *eclipse of the sun*. And shortly afterwards, Hannibal defeated at Zama in Africa by P. C. Scipio — (from this time called "Africanus").

"The same year = 5th year of Tai-tsou-kao-hoang-ti;" now, "in the twelfth month," head of the new dynasty of the Han (Chinese chron. table, and Pauth. 234). His original name is given as Lieou-pang, and he is also called Kao-tsou. He is blamed for giving in marriage a princess of the imperial family to the chief of the Hioung-nou Tartars: the first instance in Chinese history of an alliance with barbarians.

"In the reign of Tai-tsou-kao-hoang-ti" (Pauth.), and under the superintendence of his general Chang-liang, a road partly on pillars constructed at great expense among the mountains of Chensi.

"201 B. C." (Blair), end of the Second Punic war, in peace on ignominious terms granted to the Carthaginians.

One hundred and twenty-third generation: Jan. 1st, 200, mostly beyond youth: the Jewish historian Demetrius (Clint. i. p. 288); the Greek poets Seleucus, and Moschus; the philosophers,

Sotion, and Hegesinus; the historians, Menodotus of Perinthus, Sosilus, Silenus, and Zenon of Rhodes; the grammarians, Demetrius of Scepsis, and Aristarchus; other Greek writers, Polemon, Adaeus, and Mnaseas of Patara; the painters, Nicias, and Athenion (Bryan); the Latin writers, Fulvius Nobilior the historian, and Caecilius Statius the comic poet.

VII. ROMAN DOMINION.

"The same year" (Liv., and Clint.), war commenced by the Romans against Philippus V. of Macedonia: and an embassy from Ptolemy V., proposing to remain neutral, unless the Romans should desire a different course.

"In this year" (according to Greek authority, "Megasthenes" in Drur.), teaching writing on school-boards introduced into Hindustan, — the method practised to the present day.*

"198 B. C." (Clint. iii. p. 316), the army of Ptolemy V. led by the Aetolian general Scopas, defeated at Panicum by Antiochus III. After inclining towards the cause of Antiochus III., the Jews now submitted voluntarily, and passed from the dominion of Egypt.

Meum athamanticum of mountainous situations throughout middle Europe. Called in Britain *spicknel* or *mew* (Ainsw., and Prior), in the drug-shops "radix mei" (Lindl.), in which we recognize the MHOY root of the theriac of Antiochus Philometor, inscribed on the temple of Aesculapius — (Plin. xx. 100, and Gal. antid. ii. 14), or the "mēōn athamantikōn" of Andromachus, Servilius Damocrates, Paulus Aegineta, described by Dioscorides as abounding in Spain and Macedonia, in stem and leaves resembling "anēthō," the roots warm to the taste and fragrant: named according to Pliny xx. 94 as if discovered by Athamas, or by another account found of the best quality in the Athamantian district (in Bœotia). Westward, the "meum" is further mentioned by Pliny as sparingly sown in Italy and only by physicians; M. athamanticum is termed "bervurtz" by Hildegarde ii. 142, was observed by Bartholem. Urbetanus and A. Palla Juvenātiensis on the mountains of Nursia (Spreng.); is described also by Gesner hort. f. 274, and Dalechamp p. 1170 (Spreng.); and is known to grow in Northern Italy and throughout middle Europe as far as Britain (Jacq. austr. pl. 303, Pers., Engl. bot. pl. 2249, and Lenz). The roots according to Lindley "are aromatic and sweet, something like carrot," and "form an ingredient in Venice treacle." Seeds of "mu" or "mei" are enumerated by Alpinus as entering into the composition of the Egyptian theriac.

197 B. C. = "9th year of Ptolemy V.," the date of the *Rosetta Stone:* a decree in hieroglyphic characters, with a translation in demotic, and also in Greek: — thus affording the means of recovering the art of reading hieroglyphic writing.

"196 B. C." (Polyb., Liv., and Clint.), at the Isthmian games, Greece declared free by T. Quinctius Flamininus.

"195 B. C." (Plut., Trog., and Schlegel journ. asiat. 1828), Euthydemus succeeded by Apollodotus Soter, fourth king of Bactria; and (according to some authorities) also by Menander Nicator. — Coins of Apollodotus and Menander continued current in Barygaza (Baroach) in the time of the author of the Erythraean Periplus, and to the present day are found in great numbers from Cabul as far East as the Jumna (Sm. geogr. dict.).

"194 B. C. = 1st year of Hoei-ti or Hiao-hoei-ti, of the Han" or Seventh dynasty (Chinese chron. table, and Pauth. p. 235). He revoked the decree against ancient books.

"The same year" (Liv., Val. Max., and Clint.), at Roman spectacles, separate seats first assigned to senators.

"In or about this year" (Suid., and Sm. b. d.), Eratosthenes succeeded by Apollonius Rhodius in the charge of the Alexandrian Library.

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* *Alstonia scholaris* of Tropical Eastern Asia and the Malayan archipelago. A tree called in the environs of Bombay "satween" or "shaitan" (Graham), in Bengalee "chhatin," in Telinga "edakula-ariti" or "edakula-ponna" or "edakula-pala" or "pala-garuda," in Tamil "ezhilaip-palai" (Drur.); and furnishing the school-boards in question: — the "saptaparna" with fragrant flowers according to Kalidasa ragh. iv. 23, prescribed medicinally by Susrutas, is referred here by W. Jones, and Hessler: A. scholaris was observed by Rheede i. pl. 45 in Malabar; by Graham, in "the hilly parts of the Concan pretty common" as far North as Bombay, employed by the natives medicinally but held in "superstitious fear," supposed to assemble "all the trees of the forest once a year to pay homage;" was observed by Roxburgh, Wight, Nimmo, and Drury, as far as Travancore, Coromandel, and Assam; and is termed by Rumphius ii. pl. 82 "lignum scholare" from boys learning to write on tablets of the wood (Pers.). Farther East, was observed by Blanco on the Philippines, and called in Tagalo "dita," in Ylocano "*dallopaven*;" and apparently the same species, observed by myself as far as the Feejee Islands.

"192 B. C." (Liv., and Clint.), by Philopoemen, Sparta joined to the Achaean League.

"The same year" (Porphyr., and Clint. iii. p. 399), marriage of Ptolemy V., with Cleopatra daughter of Antiochus III. of Syria.

"190 B. C." (Liv., and Clint.), *eclipse of the sun*. And at "Magnesia in Lydia," Antiochus III. defeated by L. C. Scipio; commanding the first Roman army led into Asia.

"189 B. C. (the plebeian M. Fulvius Nobilior and Cn. Manlius Vulso consuls," Cic. tusc. 1. 2, and Sm. b. d.), Fulvius Nobilior, having "obtained Aetolia as his province," proceeding thither accompanied by the poet Ennius.

"188 B. C." (Liv., and Clint.), at Sparta, by Philopoemen again elected Achaean praetor, the *Laws of Lycurgus* abrogated.

"187 B. C. = 1st year of Liu-chi or Kao-hoang-heou-liu-chi, of the Han" or Seventh dynasty (Chinese chron. table); the first woman who ruled China — (Pauth. p. 236).

"The same year" (Polyb., and Clint.), embassies sent by the Achaean League to Rome and Egypt; and the alliance of Ptolemy V. with the Achaeans renewed. Before the close of the year (Clint. iii. 346), Antiochus III. succeeded by Seleucus IV. Philopator, seventh Greek king of Syria.

"186 B. C. (= 326 — "140 yrs." of Masudi, Wilford as. res. ix. 181), in Hindustan, end of the dynasty of Phour (Porus who was overcome by Alexander).

"184 B. C." (Cic., and Clint.), at Rome, Cato appointed censor.

Smyrnium perfoliatum of the Mediterranean countries. Called in Greece "tragŏgŏuli:" the MELANTHII-ACETABVLVM by physicians called SMYRNIVM according to Cato 102, — or the "smyrnion" of Pliny xxvii. 109 (whose account seems in great part taken from Dioscorides), is referred here by writers: S. perfoliatum is described by Morison ix. pl. 4; is termed "s. peregrinum rotundo folio" by Tournefort inst. 316; and is known to grow in Hungary, Italy, and Spain (Kitaib., Pers., and Lenz). Eastward, the "smurnion" is described by Dioscorides as growing mostly on mount Amanus and called in Cilicia: "pĕtrōsĕlinōn," its stem "sĕlinŏ"-like and umbel "anēthōĕithĕs" with round black seeds tasting like myrrh for which they can be substituted: S. perfoliatum is termed "s. creticum" by Matthioli p. 366; and was observed by Sibthorp, Chaubard, and Fraas, frequent on mountains from Cyprus to Crete and the Peloponnesus.

Asparagus officinalis of Western Europe. Called in Britain *asparagus* or sometimes *sparrow-grass* (Prior), in Germany "spargel" (Grieb), in France "asperge" (A. Dec.), in Italy "sparaggio" or "asparago" (Lenz), in which we recognize the ASPARAGVS cultivated according to Cato 161 and especially succeeding in gardens at Ravenna, — mentioned also by Augustus (Suet. oct. 87), Pliny xix. 42, Palladius iv. 9. 10, and a bundle of the young shoots distinctly figured at Pompeii (Schouw 4): A. officinalis is described by Blackwell pl. 332, is known to grow wild in Italy and throughout middle Europe (Pers., and Lenz), is besides abundantly cultivated as far as Holland. Eastward, has not been observed in Greece: but "asparagus" is enumerated by Alpinus among the esculent plants of Egypt, and "asparagus" roots imported "from Europe" are according to Forskal mat. med. employed medicinally. Farther East, was observed by Thunberg under cultivation at Jeddo in Japan, and called "kikak kusi." Possibly by European colonists carried to Hindustan, where it was observed by myself in the botanic garden at Bombay, and by Roxburgh, and Graham, under cultivation, but no native name is given; and to Burmah, where it is enumerated by Mason as "exotic," and seems devoid of a native name. Clearly by European colonists was carried to North-east America, where it continues under cultivation, and occurs besides in wild situations perhaps fairly naturalized. (See Asparagus tenuifolius).

Glyceria fluitans of Temperate climates. Called in Britain *float-grass* or *flote-grass* (Prior), and the VLVA-OVIVM of Cato 37, — and "agrŏstis pōtamiōs" of Dioscorides iv. 30 (?), are referred here by Thiebault de Berneaud (Fée): the "flot grese" is mentioned by Galfridus pr. pm.: G. fluitans is termed "gramen fluviatile." by Gerarde, "gr. paniculatum aquaticum fluitans" by Tournefort inst. 521; was observed by Desfontaines, and Munby, in Barbary; by Lemann, on Madeira (A. Dec.); by Brotero, in Portugal; and is known to grow throughout middle and Northern Europe as far as Sweden and Iceland (Hook., Fries. and Wats.). Eastward, was observed by Sibthorp from the Peloponnesus to Constantinople; is known to grow also in the Tauro-Caspian countries (Bieb.), and on the Ural in Siberia (Ledeb.). Farther East, was observed by Drummond at Cumberland House in Lat. 54° in central North America; by Nuttall, on the Arkansas; by myself, along the Atlantic from Lat. 43°; and is known to grow as far South as the Delaware peninsula (Muhl.) and Upper portion of Carolina (Ell.). In the Southern Hemisphere, is known to grow in Chili (Brogn. 1st voy. Astrol. p. 39), and was observed by R. Brown i. p. 179 in Australia.

Arundo festucoides of Barbary. The "arundinis italiae" used chiefly for vines, and directions for planting which are given by Cato, — or the "ampelodesmon" described by Pliny xvi. 67 to xvii.

35. 26 as employed in Sicily for tying vines, is referred here by Cyrillo: A. festucoides is termed "donax tenax" by Beauvois; was observed by Hogg on Sicily; is known to grow wild in dense "caespite" cane-brakes in hilly situations in Barbary (Desf. pl. 34, and Pers.).

Avena fatua of Tartary. Called in France "folle avoine" (Fée), in Italy "avena salvatica" (Lenz), in Greece "agriōgĕnēma" or "agriōsiphŏnari" or "agriōvrōmō," in which we recognize the AVENA of Cato r. r. xxxvii. 5, — "sterilis avena" and "vana avena" of Virgil ecl. v. 35 and georg. i. 77, or the "avĕna" into which barley is supposed by Pliny xviii. 44 to degenerate: A. fatua was observed by Forskal in Southern France, is known to grow as a weed in grain-fields throughout middle Europe as far as Holland and Britain (Bauh., C. Bauh. pin. 10, Parkins. p. 1149, Pers., and Wats.). Eastward, the "vrōmōs" compared with the "aigilŏpi" by Dioscorides iv. 138 is identified in the added synonyms with the "siphŏniōn" or "akrōspĕlōs," and with the "avĕnam" of the Romans: A. fatua was observed by Forskal, Sibthorp, and Chaubard, frequent in grain-fields from Constantinople to the Peloponnesus; is called in Egypt "zommeyr" or "chafur," in which we recognize the "khafur" of Ebn Baitar; and was observed in the cultivated ground of Lower Egypt by Forskal, and Delile. Farther East, is known to grow wild in the Crimea, and probably wild also around Caucasus (Bieb., Ledeb., and A. Dec.); was observed by Thunberg here and there in Japan, growing spontaneously and called "tsusikusa." *A. sterilis*, regarded by some writers as not distinct, was also observed in Greece by Sibthorp, and Bory; and by Delile, growing around Cairo in Egypt.

"182 B. C." (Liv., Plut., and Clint.), while opposing the measures of T. Quinctius Flamininus, Philopoemen captured and slain. Lycortas was next elected Achaean praetor; and his son, the historian Polybius, carried the urn at the funeral of Philopoemen.

In this year (= "220 − 38 yrs.," Mason 40), Khanloung succeeded by his son . . . . as Burmese king.

"181 B. C." (Cass. Hemin., Plin., and Clint.), in Rome, the writings of Numa discovered; and being on "*philosophy*," publicly burned.

"The same year" (Schlegel, Bayer, and Wilson), accession of Eucratides as Greek king of Bactria. He conquered a portion of Hindustan — (Strab. xv. 1. 3), a fact confirmed by the abundance of his coins, some of them bearing bilingual inscriptions, *Pali* and Greek; he is termed the "Great King" by Artemidorus.

"October" (Porphyr., and Clint. iii. p. 399), in Egypt, Ptolemy V. succeeded by Ptolemy VI. Philometer. Who married his own sister Cleopatra. The hieroglyphic ovals of Ptolemy VI. occur on temples erected or continued by him at Antaeopolis, Koos, Edfu, Ombos, Philae, and Paremboleh in Nubia. His name occurs also on these temples in Greek inscriptions; and (according to Champollion-Figeac) he dedicated one or more Egyptian temples to the gods of Greece.

"179 B. C. = 1st year of Wen-ti or Hiao-wen-ti, of the Han" or Seventh dynasty (Chinese chron. table); the first Chinese emperor, who on the occasion of remarkable phenomena and public calamities demanded to be informed of his faults; and who gave orders for searching out men of merit for public employ (Pauth. p. 236).

Wen-ti also caused *money* to be coined outside of the capital, in the provinces: the coins being "all of copper, and round, with a square hole in the centre" for stringing them together (Pauth.).

"The same year" (Liv., and Clint.), death of Philippus V., and the accession of Perseus, last king of Macedonia.

Asclepiades of Myrleia a "pupil of Apollonius Rhodius" (Sm. b. d.), and therefore hardly later than this date.

Cerasus chamæcerasus of the mountains of Eastern Europe and the neighbouring portion of Asia. The ΧΑΜΑΙΚΕΡΑΣΟΣ growing according to Asclepiades Myrleanus in Bithynia, — is referred here by Sprengel and others: "chamaecerasi" are mentioned by Pliny xv. 30 as growing in Macedonia, in cold situations towards the North, and the fruit dried and yielding profit to farmers; C. chamæcerasus is described by Jacquin rar. pl. 90, is known to grow on the Austrian Alps, and according to Persoon, is besides cultivated. Farther South, the "hamaikĕrasōs" was known to Athenaeus ii. 11 in Egypt.

"177 B. C. = 3d year of Wen-ti" (Chinese chron. table), beginning of the Forty-second cycle.

"In the first half of the second century B. C." (Humb. cosm. ii.), Szu-ma-thsian writing.

"In the time of the Western Han" (Topog. Cant., and Pauth. 472), arrival in China* of persons

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* *Cocculus fibraurea* of Anam and Tropical China. A thick-stemmed woody climber called in Anam "cay vang dang," in China "tien sien tan" (Lour.); and from early times used medicinally and for dyeing yellow: — C. fibraurea was observed by Loureiro 769 in the woods of Anam and

"from Kan-tou, Lou, Hoang-tchi, and other nations of the South: the nearest about ten days journey, and the most distant about five months, their territories being large and populous (Siamese countries); and they had many productions and rare objects."

"176 B. C." (Pauth.), on application from the emperor Wen-ti, the Chou-king recited from memory by Fou-chen; having charge of Chinese literature thirty-seven years previously, at the time of the Burning of the books.

The same year (= 313 — "137 yrs." in the Vichnu purana, Burn. ii. 778), a date possibly marking the accession of Samgata, son of Dasaratha and now king at Pataliputra on the Ganges. He is called Sampada in the Avadana Asoka (Burn. introd. 430).

"175 B. C." (Clint. iii. p. 346), Seleucus IV. succeeded by Antiochus IV. Epiphanes, eighth Greek king of Syria.

"171 B. C." (Liv., and Clint.), invasion of Macedonia by the Romans, warring against king Perseus.

Hegesander of Delphi may have been at this time writing. He mentions Rhodophon of Rhodes, legate to the Romans on the occasion of the above outbreak (Polyb. xxvii. 6. 3 to xxx. 5. 4).

Astragalus glaux of the Mediterranean countries. A species of *milk-vetch*; and the ΓΛΑΥΚΙΣΚΟΝ according to Hegesander 35 not growing about the Hellespont — (Athen. ii. 62), may be compared: the "eugalacton" of the ancients is identified by Pliny xxvii. 58 with the "glaux," described by Dioscorides as growing by the seaside, its five or six slender branches spreading on the ground a span from the root, leaves whiter beneath and resembling those of "kutisŏ" or "phakŏ," flowers "lĕukōiōis"-like but smaller, purple, the plant in decoction restoring suppressed milk, and referred here by Clusius, and Sprengel: A. glaux was observed by Sibthorp on Cyprus, growing in the open country. Westward, the account of the "glaux" by Pliny seems chiefly taken from Dioscorides: A. glaux was observed by Clusius hist. ii. 240 in Spain; is described also by C. Bauhin pin. 347, and Rivinus pent. irr. pl. 109.

"The same year" (Diodor., Blair, and Clint.), invasion of Egypt by Antiochus IV.; and between Pelusium and Mount Casius, the army of the youthful Ptolemy VI. defeated.

"170 B. C." (2 Maccab. v. 1, Blair, Clint. iii. p. 319, and Kitt. cyc. bibl. lit.) expulsion of the high-priest Menelaus, appointed by Antiochus IV.; the Jews being deceived by a false rumour. Returning alive from Egypt, Antiochus IV. plundered Jerusalem, and polluted the temple by sacrifices of swine.

"170–69 B. C." (Porphyr., and Clint. p. 387 and 399), Ptolemy Physcon associated with his brother Ptolemy VI. in ruling Egypt.

"168, June 21st" (Blair, and Clint.), *eclipse of the moon*. The first eclipse predicted by a Roman astronomer; by Sulpicius Gallus to the Roman army at Pydna, which on the following day defeated Perseus, bringing the Macedonian kingdom to a close. Gentius king of the Illyrians and ally of Perseus, was separately defeated and taken prisoner by the Romans.

Gentiana lutea of the high mountains of middle Europe. Called in Italy "gentiana maggiore" (Lenz), and the ΓΕΝΤΙΑΝΗ discovered by Gentius, king of the Illyrians — and growing according to Dioscorides on the loftiest mountains, the stem smooth as thick as the finger and two cubits high with leaves at intervals, mentioned also by Servilius Damocrates, Galen, and Paulus Aegineta, is referred here by writers: the "gĕntianē" or "alōē gallikē" is identified in Syn. Diosc. with the "alōitis" of the Dardani (on the border of Illyria), and "gĕnŏus" or "kikĕnthia" or "kuminalis" of the Romans: the "gentianam" is mentioned by Pliny xxv. 34 as growing chiefly in "subalpinis;" and G. lutea is described by Renealme spec. pl. 63, and is known to grow in and around Switzerland in Subalpine situations (Pers., A. Dec., and Lenz). Farther South, is mentioned by Serapion (Spreng.); its imported root is enumerated by Alpinus among the ingredients of the Egyptian theriac,

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China, the root and lower part of the stem "resolvens deobstruens diuretica;" bitter in taste according to Lindley, and used by the Malays in intermittent fevers and liver complaints.

Commia Cochinchinensis of Anam. An Euphorbiaceous tree of medium size called in Anam "cay son gia" (Lour.); and from early times, its gum used medicinally: — C. Cochinchinensis was observed by Loureiro 742 wild near the seashore of Anam, its white tenacious gum emetic, purgative, deobstruent, useful in obstinate dropsy and obstructions (see also Lindley).

Muricia Cochinchinensis of Anam and Tropical China. A woody climbing Curcubitaceous plant called in Anam "cay goc" or "mouc biet tu," in China "mo pie su" (Lour.); and from early times, employed medicinally: — observed by Loureiro 732 wild in Anam and China, its berries used for tingeing food, its seeds and leaves given in obstructions of the liver and spleen, in tumours and malignant ulcers, and applied externally in prolapsus, dislocations, and fractures (see also Lindley).

and "djentiana" root was found by Forskal mat. med. imported by the way of Greece into Egypt. According to Lindley, the "gentian of the shops" is "a valuable bitter drug, employed extensively in certain forms of dyspepsia, in intermittents, and as an anthelmintic."

One hundred and twenty-fourth generation. May 1st, 167, mostly beyond youth: the Greek poet, Antipater of Sidon; the philosophers, Antipater of Tarsus, and Diodorus of Tyre; the historians, Heracleides of Oxyrynchus, and Sosicrates of Rhodes; the biographer Satyrus; the grammarians, Aristodemus of Elis, Ammonius of Alexandria, Menecrates of Nysa, and Callistratus; other Greek writers, Apollodorus, and Jason of Cyrene; A. Posthumius Albinus who wrote principally in Greek: the Latin writers, Pacuvius the tragic poet, and the three historians C. Fannius, Calpurnius Piso, and Cassius Hemina.

"The same year" (Blair), a *Library* first established in Rome; consisting of books brought from Macedonia by Paulus Aemilius.

Cleitophon of Rhodes possibly at this time writing: he mentions the betraying of Ephesus to Brennus, composed a history of the Gauls, and works on India, Italy, and the founding of cities — (Sm. b. d.).

Trichodesma Indicum of Tropical Hindustan and Burmah. The *Indian borage* is called in the environs of Bombay "chota-kulpa" (Graham); and the KAPΠYKH resembling according to Cleitophon the BOYΓΛΩCCΩ, and employed in India against jaundice — (Plut. fluv. 25. 3, and Stob. 98), may be compared; T. Indicum was observed by Gibson, and Graham, in the environs of Bombay and on the Deccan, an annual "very common in waste places during the rains;" by Roxburgh, and Drury, in various parts of the peninsula, held in repute against snake-bites, and emollient poultices made of the leaves by the natives; by Powell, in the Punjaub, used for purifying the blood and as a diuretic; and farther East, by Mason, indigenous in Burmah. Transported to Europe, is described by Plukenet alm. pl. 76 f. 3.

Trichodesma Zeylanicum of Tropical Hindustan and Ceylon. Included perhaps in the "karpukē" of Cleitophon: — T. Zeylanicum was observed by Gibson, and Lush, on the Deccan South of the Taptee (Graham); by Burmann ind. pl. 14, and Roxburgh, in other parts of Hindustan; is known to grow on Ceylon, and according to Lindley as far even as Tropical Australia. Transported to Europe, is described by Plukenet mant. pl. 335 f. 4, and is termed "borago Zeylanica" by Linnæus. The species of Trichodesma according to Royle are considered diuretic, and one of the cures for snake bites in India (Lindl.).

"164 B. C." (Clint. iii. p. 346), Antiochus IV. Epiphanes succeeded by Antiochus V. Eupator, ninth Greek king of Syria. A Greek inscription of this date (Sylvestre) presenting the following forms of the letters A, M.

"164–3 B. C." (Liv. and Clint. iii. p. 387), departure from Egypt of Ptolemy Physcon for Cyrene; disputing with his brother Ptolemy VI., who now set out for Rome.

"163 B. C. = 1st year of the 'heou' of Wen-ti" (Chinese chron. table). From this date, the years of the Chinese emperors are further defined by clusters, each bearing a separate name (Amyot).

The same year (H. S. in Kitt. cycl. bibl.), treaty with Antiochus V., the Jews led by Judas Maccabaeus, recovering their independence. — The treaty was confirmed by the successor of Antiochus V., but the citadel of Jerusalem continued to be held by a Syrian garrison.

"162 B. C." (Polyb., and Clint. iii. p. 387), arrival of Ptolemy Physcon in Rome; seeking possession of Cyprus, and assistance against his brother.

"Sept. 27th" (C. Ptol., Blair, and Clint.), at Rhodes, the *Autumnal equinox* first observed by Hipparchus, "at sunset on the 30th Mesorē in the seventeenth year of the Third Calippic period." Recurring to a former Observation by Timocharēs, the star Spica in Virgo was found by Hipparchus to have changed its position in reference to the Equinoctial point, though in its old place in reference to the middle of the zodiac or ecliptic; thus making known the *Precession of the equinoxes*. Besides determining the places of the stars, Hipparchus attempted to number them; — in the words of Pliny ii. 26, "ausus rem etiam Deo improbam, annumerare posteris stellas."

"The same year" (Clint. iii p. 346, and H. S. in Kitt. cycl. bibl.), Antiochus V. put to death; and succeeded by his uncle Demetrius Soter, tenth Greek king of Syria.

"161 B. C." (Gell., Sueton., and Clint.), philosophers and rhetors excluded from Rome.

"160 B. C." (Sm. b. d.), at the funeral games of Paulus Aemilius, the Adelphi or last comedy of Terence acted, the author at this time in his "thirty-fifth" year. Terence was "born at Carthage," — and died in "B. C. 159," or according to Hieronymus in the year following.

Juncus effusus of Temperate climates. With other species called in Britain *rush*, in Old English "rash" or "rysch" or "rish," in Anglo-Saxon "risc," in Gothic "raus?" (Prior), in Germany "rusch" or "binse" (Grieb), in France "jonc" (Nugent), at Constantinople "vourla" (Forsk.): VIRGINES IVNCEAE are mentioned by Terence; — "juncetum" where rushes grow, by Varro;

"vincla juncea" by Ovid; the "juncus" by Virgil, and its pith substituted for candles, by Pliny xxi. 69: "joncs" used perhaps for bedding or thatching, occur in debris of the ancient lake-villages of Switzerland (Troyon p. 44); J. effusus is termed "j. lævis panicula sparsa major" with a variety "panicula non sparsa" by Tournefort inst. 246; was observed by Forskal near Marseilles; and is known to grow in Barbary, Portugal, and throughout middle and Northern Europe as far as Lapland and Iceland (Desf., Brot., Hook., and Wats.). Eastward, was observed around Constantinople in both varieties by Forskal, and Sibthorp; is known to grow on Sinai (Decsne ann. sc. nat.) and on the Taurian mountains (Bieb.), also in Siberia (Wats.), and was observed by Thunberg in Japan. Farther East, was observed by Nuttall on the Arkansas, by Short in Kentucky; by myself, the glomerate variety in Nova Scotia, the usual form along the Atlantic from Lat. 45° to 39°; but by Baldwin, and Chapman, as far as 31° in Florida. In the Southern Hemisphere, is known to grow in New Zealand and Australia (R. Brown 258, A. Rich., J. D. Hook., and A. Dec.).

"159 B. C." (Blair), at Rome, measuring time by water invented by Scipio Nasica. (The *clepsydra* had long been in use in Greece, see above).

"Sept. 27th" (C. Ptol., and Clint.), "in the morning of the first day of the Epagomena, in the twentieth year of the Third Calippic period," the *Autumnal equinox* observed on Rhodes by Hipparchus.

In or about this year (Clint.), arrival in Rome of the grammarian Crates of Mallus, as ambassador from Attalus II. king of Pergamus.

"158, Sept. 27th" (C. Ptol., Blair, and Clint.), "about noon on the first day of the Epagomena, in the twenty-first year of the Third Calippic period," the *Autumnal equinox* observed on Rhodes by Hipparchus.

"156 B. C. = 1st year of King-ti or Hiao-king-ti, of the Han" or Seventh dynasty (Chinese chron. table, and Pauth. p. 240). The name "heou" continuing, included his first years.

"155 B. C." (Cic., Gell., Blair, and Clint.), arrival in Rome of the philosophers, Diogenes the Stoic, Critolaus, and Carneades, as ambassadors from Athens. The Roman Senate alarmed at the eloquence of Carneades.

"154 B. C." (Polyb., and Clint. iii. p. 387), Ptolemy Physcon again in Rome; and the assistance of the Senate again extended to him against his brother.

"153 B. C." (Liv., Cassiod., and Clint.), in Spain, war between the Romans and Celtiberians. — The Lusitani taking part against the Romans (Liv., and others).

"151 B. C." (Plut., and Clint.), return to Greece of the historian Polybius and the other Achaean exiles.

"150 B. C." (Clint. iii. p. 346 and 388), Demetrius Soter succeeded by Alexander Bala, eleventh Greek king of Syria: and the marriage of Alexander Bala with Cleopatra daughter of Ptolemy VI.

"In the middle of the Second century B. C." (Lübke and Lutrow), at Athens, building of the Tower of the winds by Andronicus Cyrrhestes.

"About this time" (Amyot, and Pauth. 200), the *flattened form* of the Earth at the poles, mentioned by the Chinese philosopher Hoaï-nan-tseu.

"149 B. C. = 1st year of the 'tchoung' of King-ti" (Chinese chron. table).

"In this year" (Armen. hist.), accession of Valarsace as king of Armenia. He was a brother of Arsace V. called Mithridate I. of Parthia, — and reigned until "127." He sent the historian Mar Apas Catina on a commission.

As early perhaps as this date (Avadan. Asok.), Sampadi succeeded by his son Vrihaspati, now king at Pataliputra on the Ganges. — He is mentioned in the Sama Veda adhy. 22, and called Salisuka in the Puranas (Burn. i. 430 to ii. 778).

Beef eaten by the ancient Hindus,* — as appears from the work of Arvalayana on Slaughtering cattle, and other evidence cited by Rajendralala Mitra (in Beng. asiat. soc. xli).

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* *Gmelina arborea* of Tropical Hindustan and Burmah. A tree called in Nepal "gambhari," in Telinga "kasmaryamu" (J. F. Wats.) or "goomadee," in Bengalee "gumbaree," in Tamil "tagoomooda," in Hindustanee "joogani-chookur" (Drur.), in the environs of Bombay "sewun" or "shewunee" (Graham), in Burmah "kywon-pho" male teak (Mason); in which we recognize the "kasmarya" wood used on such occasions — (Arval.), the "kasmari" or "kasmaryya of Susrutas sutr. 44 to chik. 25, and the "gambhari" of Bhavabhuti mal. 9: G. arborea was observed by Rheede i. pl. 41 in Malabar; by Graham, "common throughout the Concans," its wood used by the natives for "cylinders of the drums called dholucks," also for "carriage pannels, as combining lightness with strength;" by Roxburgh, and Wight, as far as Coromandel and Oude; by Mason v. 526, indigenous in Burmah, according to McClelland affording "large remarkably strong tough timber."

Ficus infectoria of Tropical Hindustan. A tree call in Sanscrit "plucsha" (Pidd.) or "placsha,"

"The same year" (Cic., and Clint.), in Rome, the first law against bribery at elections.

"The same year" (Appian, Blair, and Clint.), commencement of the Third Punic war, between the Romans and Carthaginians. — the war continued three years.

"147, Sept. 26th" (C. Ptol., and Clint.), "at midnight on the third of the Epagomena," in the thirty-second year of the Third Calippic period," the *Autumnal equinox* observed on Rhodes by Hipparchus.

Towards the close of the reign of Ptolemy VI. (. . . .), the temple at Bubastis sought and obtained by the Jews under Onias for a place of religious worship. — The spot continued in the possession of the Jews; is the "vicus Judaeorum" of the Itinerarium Antonini, and is called "Tel Jehudeh" to the present day (Leps. eg. and sin. 449).

"146 B. C." (Clint. iii. p. 346), Alexander Bala succeeded by Demetrius II. Nicator, twelfth Greek king of Syria. Who married his predecessor's widow, Cleopatra.

"The same year" (Schlegel journ. asiat. 1828), Eucratides slain and succeeded by his son, Eucratides II. now Greek king of Bactria.

"March 24th" (C. Ptol., and Clint.), "in the morning of the 27th of Mechir, in the thirty-second year of the Third Calippic period," the *Vernal equinox* observed on Rhodes by Hipparchus.

"Sept. 27th" (C. Ptol., and Clint.), "in the morning of the fourth of the Epagomena," the *Autumnal equinox* observed on Rhodes by Hipparchus.

"November" (Porphyr., and Clint. iii. p. 399), in Egypt, Ptolemy VI. succeeded by Ptolemy VII. Physcon. Who married his brother's widow and own sister Cleopatra; and afterwards another Cleopatra, his niece: and who appointed a Roman as one of his provincial governors. The hieroglyphic ovals of Ptolemy VII. occur on restorations in the Asasif, on the temple of Athyr at Thebes, on the small temple of Thoth built by him at Medinet-Abu, and on additions made by him to temples at Edfu, Ombos, Philæ, and Dakkeh in Nubia.

"The same year" (Clint.), capture and destruction of Carthage by the Romans under P. C. Scipio Africanus the younger. "Two months" afterwards, by the Romans under L. Mummius, Corinth captured, and the Achaean League and independence of Greece overthrown. Among the spoils of Corinth, Polybius witnessed the contempt of the Roman soldiers for works of art; playing at draughts on pictures thrown on the ground, as on the "Bacchus painted by Aristides," and the "Hercules tormented by the shirt." — To the time of Strabo, the finest and most numerous works of art in Rome, were those brought from Corinth; and he speaks in the highest terms of the "Bacchus," mentioning however that it had been recently destroyed by fire.

In the days of Polybius (Strab. iv. 6. 12), there were four passes across the Alps: First, through "Liguŏn" (Liguria) along the sea: Second, "Taurinŏn" (Mount Cenis to Turin) followed by Hannibal:" Third, "Salassŏn" (St. Bernard): and Fourth, "Raitŏn" (St. Gothard).

145 B. C. (Campb., and Royle fibr. plants), the art of making *paper* from pulp, known to the Chinese as early at least as this date. — From China, the art was carried into Hindustan; and is supposed to have been learned by the Arabs in the "Eighth" century. By the Arabs, the art was introduced into Spain in the "Ninth or Tenth" century: and paper from pulp was first manufactured at Nuremburg in "1390," and in England in "1450."

"143 B. C. = 1st year of the 'heou' of King-ti" — (Chinese chron. table).

"The same year" (Cic., and Clint.), P. Scipio Africanus the younger, accompanied by the philosopher Panaetius, sent as ambassador to Egypt.

"September 26th" (C. Ptol., Blair, and Clint.), "about sunset on the fourth day of the Epagomena in the thirty-sixth year of the Third Calippic period," the *Autumnal equinox* observed on Rhodes by Hipparchus. "Two days later, from the new moon of September 28th," Hipparchus began his Cycle of 304 years = 111,035 days = 3760 lunations.

"The same year" (J. Nicholson in Kitt. cycl. bibl.), coined money first issued by the Maccabees. The inscriptions on these coins are the earliest examples known of *Hebrew writing:* the forms of the letters being in most instances identical with the Phoenician.

"142 B. C." (Kitt. cycl. bibl.), the Syrian garrison at Jerusalem forced to surrender and the citadel demolished by Simon. The Jews having now acquired complete independence, established in this year (Steinscheid. i. 4) the *Sanhedrim*, a Superior court of law.

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or "jati" or "pareati," in Bengal "pacari" or "pacar" (W. Jones) or "pakoor" or "pakur," in Hindustanee "pakar" (J. F. Wats.), in Malabar "tsjakala" (Rheede), in which we recognize the "plaksha" leaves on which the roasted beef was served — (Arval.), and the "jati" of Susrutas: F. infectoria was observed by Rheede iii. pl. 64 in Malabar; by Graham, in the Concans; by W. Jones as. res. iv. 310, Roxburgh, Piddington, and Voight, as far as Bengal, the root yielding a red dye, and the bark of the root made into a peculiar kind of bow-string (Drur.).

As early possibly as this date (Graha Munjari tables, Puranas, and Bentl.), Subala reigning in Hindustan.

"141, Jan. 17th, Tuesday, two hours before midnight" (Blair), *eclipse of the moon*. Observed at Alexandria.

"The same year" (Blair, and Clint.), in Spain, commencement of war between the Romans and the Numantians under Viriathus. — The war continued eight years.

"140 B. C. = 'ian-youan,' 1st year of Wou-ti or Hiao-wou-ti, of the Han" or Seventh dynasty (Chinese chron. table). He abolished the law of *primogeniture* in the succession to principalities; and founded a national *library* (Pauth.).

Competent ambassadors were also sent by Wou-ti to different mercantile nations; where they were well received, and obtained "*pearls, precious stones*, various curiosities, *yellow gold*, etc.;" since which time these articles have continued to flow into China (Topog. Cant., and Pauth. 472).*

"139 B. C." (Val. Max., and Clint.), "Chaldaeans" or astrologers banished from Rome.

"138 B. C." (Clint. iii. p. 346), Demetrius II. leading an army into Persia, captured by Arsaces. The government of Syria now seized by Antiochus Sidetes, brother of Demetrius II.

"In this year" (Sm. b. d.), Attalus II. Philadelphus succeeded by his nephew Attalus III. Philometor, sixth and last king of Pergamus. Nicander dedicated his georgica to Attalus III. (Cic. de orat. i. 16, Suid., and Spreng.).

Nigella aristata of the Mediterranean countries. A species of *fennel-flower* called in Greece "agriŏn kuminōn" (Fraas); in which we recognize the ΚΥΜΙΝΟΝ: ΑΓΡΙΟΝ of Nicander ther. 710, — growing according to Dioscorides mostly in Lycia, Asiatic Galatia, and Carthagena in Spain, a span high, with leaves divided as in "giggithiōn," five or six round soft capitula containing chaffy fruit more acrid than in the "ēmĕrōu" kind: N. aristata is described by Sibthorp pl. 510; and was observed by him, and Fraas, frequent on the hills of Attica. Westward, the "kuminōn agriŏn" is identified in Syn. Diosc. with the "kuminōum agrĕstĕm" or "silvatikōum" of the Romans; seeds of "cumini silvatici" are prescribed by Scribonius Largus 119; but the "cuminum silvestre" seems chiefly known to Pliny xx. 57 from its medicinal properties and the account of Dioscorides.

Nigella arvensis of the Mediterranean countries. Called in Greece "aspĕrŏlōllōugi" or "mĕlanōhōrtarō" (Forsk.); and included perhaps in the "kuminōn agriōn" of Nicander: — the "kuminōn agriŏn ĕtĕrōn" of Dioscorides, resembling the "ēmĕrŏ" kind, and having horns arising from each flower, the contained seed like that of "mĕlanthiŏ," is referred here by Valerius Cordus, and Sprengel: N. arvensis was observed by Forskal, and Sibthorp, from Imros and the Dardanelles to Cyprus; by Delile, on the Mediterranean border of Egypt near Alexandria. Westward, is termed "n. arvensis cornuta" by Tournefort inst. 258; and is known to occur in fallow ground as far as middle Europe (Pers.).

Dianthus arboreus of Greece and the Greek islands. A species of pink called in Greece "agria garōuphala" (Fraas); and the fragrant ΔΙΟϹ: ΑΝΘΟϹ of Nicander — (Athen. xv. 31) may be compared: D. arboreus is termed "caryophyllus arborescens creticus" by Tournefort inst. 331; and was observed by Sibthorp, Chaubard, and Fraas, on the maritime rocks of the Isthmus and Greek islands. (See D. fruticosus.)

Hypericum barbatum of the mountains of Eastern Europe. The mountain ΥΠΕΡΙΚΟΝ mentioned as an antidote by Nicander alex. 603, — may be compared: H. barbatum was observed by Sibthorp on mount Athos; is known to grow also in Austria (Jacq. austr. pl. 259, Pers., and Engl. bot. pl. 1986); and according to Sprengel yields a strong-scented resinous exudation.

Scorpiurus sulcata of the Mediterranean countries. Called in Greece "margŏhōrtōn:" the ϹΚΟΡΠΙΟϵΙϹ of Nicander alex. 145, — or "skōrpiōčithĕs" of Dioscorides, a little few-leaved herb with "spĕrmata" resembling a scorpion's tail, applied externally against the sting of a scorpion, is referred here by Dodoens p. 71, and Sprengel: S. sulcata was observed by Sibthorp, and Fraas, in waste and cultivated ground from Caria and the Greek islands to the Peloponnesus. Farther South, was observed by Delile around cultivated fields in Lower Egypt. Westward, the account by Pliny xxii. 17 of the "scorpio herba" having few leaves with "semen" like a scorpion's tail,

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* *Armeniaca Sinensis* of China. The "kin-hing" highly prized by the emperor Wou-ti of the Han — (Cibot in mem. Chin. v. . .), was perhaps the *Chinese apricot*. The apricots seen by Cibot, are described by him as of "nearly the same size, colour, form, and flavour as in France:" but among imported Chinese preserves, I have found a fruit agreeing with the apricot even to the shape of the stone, except only one or more excavated grooves on its surface, somewhat after the manner of the peach. In Japan, the "kjoo" or "kara momu," regarded as introduced from China, was seen by Kaempfer v. p. 798, and though not distinguished from A. vulgaris by Thunberg, is described by him as a very large tree "arbor magna et vasta ramosissima."

seems taken from Dioscorides: S. sulcata is termed "scorpioides bupleuri folio" by Tournefort inst. 402; was observed by Desfontaines ii. pl. 1 in Barbary (Pers.), and by Forskal near Marseilles.

Scorpiurus subvillosa of the Mediterranean countries. Possibly included with the preceding by ancient writers: — was observed by Chaubard in the Peloponnesus; and by Forskal, around Cairo in Egypt. Westward, is described by Morison ii. pl. 11; was observed by Forskal near Marseilles, and is known to occur as an exotic weed as far even as Britain (Wats., and A. Dec.).

Scorpiurus vermiculata of the Mediterranean countries. Possibly included with the preceding by ancient writers: — was observed by Sibthorp in the cultivated ground of Attica. Westward, is described by Columna ecphr. i. p. 156 (Spreng.), Morison, and Rivinus; is termed "scorpioides siliqua crassa" by Tournefort inst. 402, and is known to occur in various parts of Southern Europe (Pers.).

Valeriana tuberosa of the East Mediterranean countries. Called in Greece "valĕrianĕ" or "muristikĕ" or by the Wallachians "agriōs sampōukōs" (Fraas): the ΝΑΡΔΟΥ: ΘΥΛΑΚΙΤΙΔΟC of Nicander alex. 403, — identified in the Syn. Diosc. with the "nēris" or "ōrĕinē narthōs," growing according to Dioscorides in Cilicia and Syria and having two or more odorous roots smaller and more slender than those of asphodel, is referred here by writers: V. tuberosa was observed by Sibthorp, and Fraas, frequent on mountains from Cilicia to Cyprus, Crete, and the Peloponnesus. Westward, the nardum "syriacum" is enumerated by Pliny xii. 26 among the kinds known in Italy (apparently from the imported root): V. tuberosa is described by Camerarius epit. 16; is termed "v. alpina minor" by Tournefort inst. 132, and is known to grow in Dalmatia, Sicily, and Southeastern France (Gerard 218, and Pers.).

Ptychotis verticillata of the Mediterranean countries. The ΟΡΔΕΙΛΟΝ of Nicander ther. 841, — according to the scholiast an edible seed, may be compared: the "tōrthuliōn" is described by Dioscorides as growing on mount Amanus in Cilicia, a little herb having a roundish shield like double seed subacrid and aromatic, and is identified in the added Synonyms with the "tōrthulōn" or "sĕsĕli krētikōn:" P. verticillata was observed by Link, and Fraas, from the Peloponnesus to Parnassus. Westward, the "seselis cretici" is prescribed by Julius Bassus against colic (Scribon. Larg. 121); the "tordylion" or "tordylon" is mentioned by Pliny xx. 87 to xxiv. 117 as the seed of "sĕsĕli" or "silis," or according to others an herb called "syreon:" P. verticillata is termed "seseli verticillatum" by Desfontaines (Bory); was observed by Tenore in Italy, and by Brotero in Portugal (Steud.).

Geropogon glaber of the Mediterranean countries. A Hieracioid annual called in Greece "kōurphĕstōs" (Sibth.); and the ΓΕΡΑΟC: ΠΩΓΩΝ of Nicander, — called in Etruria "saxifica," by the Romans "petrae barba," is referred here by Ruel ii. 138, and others: G. glaber is described also by Linnæus, and Jacquin hort. pl. 33; is known to grow about Nice and in Italy (Pers.); and was observed by Sibthorp, and Chaubard, from the Peloponnesus to Cyprus.

Anthemis tinctoria of the East Mediterranean countries and Uralian plains. Called on the Volga "popafka" (Pall.); coronary kinds of "anthĕmis" are mentioned by Nicander fr. ii. 37: — A. tinctoria was observed by Sibthorp, and Chaubard, frequent in dry sandy situations in Greece; by Pallas trav. i. 95, used in dyeing on the Volga. Westward, the "stephanomelis" of Pliny xxvi. 84 is referred here by Fraas; A. tinctoria is described by Tragus 58, and Barrelier pl. 465; is termed "buphthalmum tanaceti minoris foliis" by Tournefort inst. 495; and is known to occur as far North as Sweden (fl. Dan. pl. 741, Pers., and Wats.), but is regarded by A. Decandolle as not indigenous in Western Europe.

Echium Italicum of Europe and the adjoining portion of Asia. Called in Greece "manōuni:" the ΛΥΚΑΨΟΝ: ΟΡΜΕΝΟΕΝΤΑ of Nicander ther. 840, — or "lukōpsis" called by some "aghōusan" growing according to Dioscorides in the open country, the leaves lettuce-like but longer and rough, the stem upright and tall with rough branches a cubit in length bearing small purplish flowers, is referred here by writers. E. Italicum was observed by Forskal, Sibthorp, Chaubard, and Fraas, in open situations as described by Dioscorides, and frequent from the vicinity of Constantinople to the Peloponnesus. Westward, the account of the "lycapsos" by Pliny xxvii. 73 seems chiefly taken from Dioscorides; E. Italicum is described by the Bauhins, and Parkinson p. 519; is termed "e. majus et asperius flore albo" by Tournefort inst. 135, "e. altissimum" by Jacquin austr. ap. pl. 16; and is known to grow on dry hills in Pannonia, Italy, France (Pers.), and as far as the isle of Jersey, the flowers "dilute violacei" according to Sprengel. *E. pyramidatum* described as distinct, is known to grow in Spain, Algeria, Southern France, and Eastward as far as Asia Minor and the country South of Caucasus (Desf. i. p. 164, Lam. fl. fr., Pers., Steud., and A. Dec.).

Lithospermum purpureo-coeruleum of Europe and the adjoining portion of Asia. Called in Greece "skulōglōssōn," in which we recognize the ΚΥΝΟΓΛΩCCΟC of Nicander georg. . . , — stemless according to Dioscorides and prostrate on the ground in sandy places, the leaves like those of the broad-leaved plantain but smaller and downy: L. purpureo-coeruleum was observed by Sibthorp, and Chaubard, by no means rare in the shade of thickets in Greece. Farther South, the "kunōglōs-

sōs" was known to Athenaeus ix. . . in Egypt. Westward, is identified in Syn. Diosc. with the "phutōn" or "kavallatiōn" or "splēniōn" or "skōlumōs," and with the "liggōua kanis" or "liggōua kanina" of the Romans; the root of a "cynoglossos caninas imitans linguas" producing three thyrsi of seeds reputed good for tertian intermittents, and one with four thyrsi for quartan, according to Pliny xxv. 41: L. purpureo-coeruleum is termed "l. minus repens latifolium" by Tournefort inst. 137, and is known to grow in Austria and France (Jacq. austr. pl. 14, Lam. fl. fr., and Steud.; see Cynoglossum officinale).

Onosma stellulata of the East Mediterranean countries. Called in Greece "mĕlihōrtōn" (Sibth.), in which we recognize the ΜΕΛΙΖΩΡΟΙΟ of Nicander alex. 351, — Eutecnius, and the scholiast; also the "nectaream" herb or "helenion" or "orestion" or "idaeam" or "medicam" identified by Pliny xiv. 19 with the "symphyton" and further mentioned as mixed in wine: the "sumphutōn pĕtraiōn" taken in wine according to Dioscorides, is described by him as sweet to the taste and fragrant, having a long ruddy root, "ōriganŏ"-like branches, "thumōu"-like capitula, slender leaves, and agglutinating recent wounds and even meat cooked with it: O. stellulata is described by Columna ecphr. pl. 183; is termed "symphytum echii folio angustiore radice rubra flore luteo" by Tournefort inst. 138; was observed by Sibthorp in Crete and the Peloponnesus; and by Pallas, and Bieberstein, along the Taurian mountains (Pers., and Steud.).

Anchusa tinctoria of the Mediterranean countries. Called in English gardens *alkanet*, in France "orcanette" (Prior), in Greece "vaphōrriza" (Fraas); and the ΑΓΧΟΥCΗC : ΘΡΙΑΑΚΗΙΑΟC enumerated as medicinal by Nicander ther. 838, — growing according to Dioscorides in fertile soil, its root reddish and staining the skin, leaves resembling those of "thrithaki ōxuphullŏ" rough and prickly, and in the added Synonyms identified with the "kataghōusan" or "arhivĕlliōn" or "ōnŏphullōs" or "ōnŏklĕian," is referred here by writers: the "ōnŏklĕias" is mentioned also by Galen fac. simpl. v. p. 311: A. tinctoria was observed by Sibthorp, Chaubard, and Fraas, frequent from the Peloponnesus to Cyprus. Westward, the "aghōusa" or "kataghōusa" or "livukēn" is identified in Syn. Diosc. with the "vōuinĕsath" of the Numidians; and "anchusa" root is mentioned by Pliny xxii. 23 as used for dyeing wool: A. tinctoria is termed "buglossum radice rubra sive anchusa vulgatior floribus cæruleis" by Tournefort inst. 134; was observed by Lenz in Italy; is known to grow in Barbary and Southern France (Pers.), and yields the alkanet dye of commerce (see Lithospermum tinctorium).

Celsia arcturus of Hindustan. Verbascum-like, called in Bengalee "kukshĭma" (Drur.); and the ΑΡΚΤΙΟΝ Nicander ther. 840, — of Dioscorides, identified with the "arktōurōn" in Syn. Diosc., Pliny xxvii. 16, Galen, and Oribasius xiv. 33, is referred here with hesitation by Honorius Bellus: C. arcturus was observed by him on Crete (Spreng.); by Sibthorp, along walls on Crete and Cyprus; is described by Pona bald. pl. 44, Columna ecphr. ii. pl. 82, Alpinus exot. pl. 122; and is termed "blattaria perennis cretica incana" by Tournefort inst. 148. Eastward, was observed by Law as far as Bombay, "common in the bed of almost every river," by Lush "wild about Dapooree" (Graham). "C. Coromandeliana," from early times employed medicinally in Hindustan, and observed by Roxburgh, Waring pharm. ind., and Drury, "on the banks of rivers and still waters" and often "a common weed in gardens," is regarded by Graham as probably not distinct.

Teucrium montanum of the mountains of Europe and the adjoining portion of Asia. The ΧΑΜΗΔΡΥΣ : ΠΙΤΥΝ of Nicander ther. 841 and alex. 56, — identified by the scholiast with the "ōnōgurŏs" or "sithēritis" or "iŏnia agria," may be compared; also the "ajuga idaeae" of the Antidote of Antipater as translated by Scribonius Largus 167: the "ĕtĕra hamaipitus" of Dioscorides, having incurved branches a cubit long, white flowers, and the odour of pine, is referred here by Sprengel: T. montanum was observed by Sibthorp on mountains from Delphi to Athos and the Bithynian Olympus. Westward, the account by Pliny xxiv. 20 of the kind with "cubitalibus ramis" seems taken from Dioscorides: T. montanum is described by Gesner hort. germ. f. 273, and Matthioli (Spreng.); is termed "polium lavandulæ folio" by Tournefort inst. 206; was observed by Gussone in Sicily, and is known to grow in dry mountainous situations as far as Ratisbon and Paris (Pers., and A. Dec.), but whether employed medicinally is not stated. "T. supinum," termed "polium montanum repens" by Tournefort inst. 206, and the flowers white (Pers.), is regarded by Sibthorp as not distinct. (See Ajuga iva).

Ajuga Chia of the East Mediterranean countries. Called in Greece "agriŏ livanŏ" (Fraas) or "livanōhōrtōn" or "thōthĕkanthiē" (Sibth. emend.); and possibly the ΧΑΜΑΙΠΙΤΥC of Nicander alex. 56? — the "hamaipitus tritē" of Dioscorides, a little herb having the odour of pine with slender hairy leaves and yellow flowers, is referred here by Fraas, and Lenz: the "hamaipitus" in the theriac of Andromachus corresponds to the "chamæfitos" in the Egyptian theriac copied by Alpinus, and "chamæpithys" was seen by Forskal mat. med. in the drug-shops of Egypt: A. Chia is termed "c. chia lutea folio trifido flore magno" by Tournefort cor. 14; was observed by Sibthorp, Chaubard, and Fraas, from the Peloponnesus to Asia Minor and throughout the Greek islands. Westward,

the "chamaepitys" is prescribed by Celsus v. 5; is called in Latin according to Pliny xxiv. 20 "thus terrae" or "abiga;" and the "abiga" of the Italians or "ibiga" is mentioned by Apuleius Barbarus 27 (Rhod. lex. Scribon.)

Origanum onites of the East Mediterranean countries. Called in Greece "rigani" (Sibth.), and the ONOY: ΠΕΤΑΛΕΙΟΝ: ΟΡΕΙΓΑΝΟΝ of Nicander ther. 628 or ONITIC of alex. 56, having according to Dioscorides the leaves whiter and more "ussŏpŏ"-like, and the seed as if in cohering incumbent corymbs, is referred here by Matthioli, and Sibthorp: O. onites is termed "majorana cretica origani folio villosa satureiæ odore corymbis majoribus albis" by Tournefort cor. 13, and was observed by Sibthorp in Southern Greece and on the surrounding islands. Farther West, the medicinal use of the "onitin" is mentioned by Pliny xx. 67 and 69; and O. onites is known to grow in Sicily (Bocc. ii. pl. 38, Pers., and Spreng:).

Daphne alpina of the mountains of middle and Southern Europe and adjoining portion of Asia. Called in Italy "olivella" (Lenz), and the ΧΑΜΕΛΑΙΑ of Nicander al. 48, — described by Dioscorides as a shrub with branches a span long, crowded olive-like but more slender leaves, bitter, biting the tongue and purgative, mentioned also by Oribasius, and Alexander Trallianus, may be compared: the "knithĕiōn kōkkŏn" according to Dioscorides was by some supposed to be the fruit of the "hamĕlaia," and the "kōkkŏn knithiōn lĕptōn" is mentioned by Oribasius excerpt. 52 (Daremb.): D. alpina was observed by Sibthorp on Parnassus, the Bithynian Olympus, and the mountains of Crete; by Pallas pl. 35, on the Altaian mountains. Westward, the "hamĕlaia" or "aknēstōs" or "hamĕlaian mĕlainan" or "ĕrakĕiōn" or "vthĕluran" is identified in Syn. Diosc. with the "ōlĕastĕlōum" or "ōleagŏ" or "kitōkakiōum" of the Romans: the drug euphorbium was supposed by Niger to be procured from the "hamĕlaia" in Italy (Diosc. i. præf.), and an inferior kind from the "chamelaea" in Gaul is mentioned by Pliny xxv. 38; the "chamaelea" is further described by Pliny xv. 7 and xxiv. 72 as a shrub not more than a span high growing in stony places: D. alpina is described by Plukenet alm. pl. 229, is termed "th. alpina folio utrinque incano flore albo" by Tournefort inst. 594, and is known to grow on the mountains of Italy and Switzerland (Pers., and Lenz).

Chenopodium (*Ambrina*) *botrys* of the Mediterranean countries. Called in Italy "botri" (Lenz); in which we recognize the "vŏtrus" identified by Dioscorides with the "artĕmisian or "amvrōsian" of the Cappadocians, the ΑΜΒΡΟCΙΗΝ of Nicander fragm., — and further described as growing in ravines formed by torrents, a yellow herb having many branches, "kihŏriŏ"-like leaves, seeds all around the branches, and the whole so fragrant as to be placed among clothing: C. botrys was observed by Sibthorp, Chaubard, and Fraas, on the banks of rills from the Peloponnesus to Smyrna in Asia Minor; and by Gmelin on the Yaic river in Siberia. Farther South, was observed by Forskal on the upper portion of the mountains of Tropical Arabia and called "schokr el homar." Westward, the account of the "botrys" by Pliny xxvii. 31 seems taken from Dioscorides: C. botrys is described by Tragus f. 335 (Spreng.), and Dodoens pempt. 34; is termed "ch. ambrosioides folio sinuato" by Tournefort inst. 506; and is known to grow in sandy situations in Italy and other parts of Southern Europe (Pers., and Lenz). By European colonists, was carried to Northeast America, where it has become a weed in gardens and waste ground in our Middle States, was observed by Elliott at Columbia in upper Carolina, by Short in Kentucky, and by Nuttall to all appearance indigenous along the Mississippi and Missouri. "The whole plant" according to Lindley "is powerfully and agreeably fragrant," is reported "to be a valuable expectorant."

Urtica urens of Europe and the adjoining portion of Asia. A smaller kind of *nettle* called in Italy "ortica" (Lenz), in Greece "tziknitha" or "agria tziknitha" (Fraas), in Egypt "zaghlyleh" (Del.); and the ΚΑΤΑΚΝΙΔΗ: ΧΑΜΗΛΗ of Nicander ther., — and "akaluphē ětěra" of Dioscorides "lĕptospĕrmōs" and not so rough, are referred here by Fraas: U. urens was observed by Sibthorp, Chaubard, and Fraas, frequent in waste places from the Peloponnesus to Constantinople; is known to occur also in Siberia (Wats.); was observed by Delile as far as Cairo; and was received from Abyssinia by Richard (A. Dec.). Westward, the "akaluphē ětěra" is identified in Syn. Diosc. with the "ōurtika mōllis" of the Romans; and the "urtica silvestris" called "feminam" is described as "mitior" by Pliny xxi. 55: U. urens is described by Brunfels, and Tragus (Spreng.); is termed "u. urens minor" by Tournefort inst. 535; was observed by Lenz frequent in Italy; and is known to occur in waste and cultivated ground throughout middle and Northern Europe as far as Lapland (fl. Dan. pl. 739, Pers., Fries, and Wats.). By European colonists, was carried to Northeast America, where it continues about dwellings in our Atlantic and even our Southern States (Chapm.), observed also by Nuttall on the Arkansas; to Buenos Ayres in Austral America (Commers., and Pers.); to Austral Africa, the Mauritius Islands, and New Zealand (Drège, Boj., and Raoul); and perhaps to the Hawaiian Islands, for a species seemingly wild there appeared to me identical. "U. membranacea" of Poiret, known to occur in Portugal, Spain, Barbary, and Egypt (Brot., Desf., and Pers.), observed by Chaubard, and Fraas, in Greece, by Forskal at Barah in Yemen, is regarded by Chaubard as perhaps not distinct.

Scolopendrium officinarum of Northern Climates. Called in Italy "lingua cervina" or "fillitide" (Lenz), in which we recognize the "phullitis" of Dioscorides, perhaps the ΠΤΕΡΑΛΙΤΙC of Nicander ther. 864: — the "phullitis" is described by Dioscorides as growing in gardens and shaded places, stemless and having neither flower nor fruit, six or seven leaves resembling those of dock but longer and more verdant, upright, smooth in front with something like distant slender worms behind; and is identified in the added Synonyms with the "phullis" or "akaulōn" or "lapathōn agriōn:" S. officinarum was observed by Forskal growing in the streets of Constantinople, and by Sibthorp, and Fraas, in mountain defiles and shaded situations in Greece, and called at present "glossa." Westward, according to Cremutius, a tree on which the "phyllis" suspends itself never flourishes (Plin. xvi. 45); S. officinarum is described by Matthioli p. 606 (Spreng.), and is known to grow in Italy and throughout middle Europe as far as Britain (Curt. lond. i. pl. 67). Farther West, was discovered by Pursh in 1807 in North America, on limestone rocks at Onondaga South of Lake Ontario.

Agaricus campestris of Northern climates. Called in Greece "manitari," in which we recognize the MYKHTAC: AMANITAC of Nicander, — Athenaeus ii. 56, and Galen fac. alim. ii. p. 655: A. campestris was observed by Sibthorp around Athens. Westward, is called in Italy. "pratajolo" or "pratolino" (Lenz), in which we recognize the "pratensibus optima fungis" of Horace satir. ii. iv. 20; is described by Tournefort inst. 556, and is known to grow throughout middle Europe (Schaeff. i. pl. 33, and Sowerb. pl. 305). Farther West, is frequent in North America in grass-grown clearings and around dwellings, seems as yet almost our only *edible mushroom*, is sometimes artificially multiplied, and the spores if not originally brought from Europe have doubtless in some instances been imported.

"135, March 23d" (C. Ptol., Blair, and Clint.), "a little after midnight on the 29th of Mechir, in the forty-third year of the Third Calippic period," the *Vernal equinox* observed on Rhodes by Hipparchus.

"134 B. C. = 1st year of the 'youan-kouang' of Wou-ti" (Chinese chron. table). "In the reign of Wou-ti" (Gaubil), books written in the obsolete Chinese character, including a copy of the Chou-king, discovered in the ruins of the family mansion of Confucius. The copy was written on *bamboo;* and was certainly not less than a century old.

"The same year" (Liv., and Clint.), commencement in Sicily of the Servile war. — The war continued two years.

One hundred and twenty-fifth generation. Sept. 1st, 134, mostly beyond youth: the Syrian writer Maribas: the Greek philosophers, Cleitomachus, Apollodorus the Epicurean, and Hecaton the Stoic; the historians, Dionysius Scytobrachion; the grammarian Herodicus of Babylon: the Latin writers, Sextus Turpilius the dramatist, L. Attius the tragic dramatist, the two historians Coelius Antipater and P. Sempronius Asellio, M Antonius the orator, and M: Aemilius Scaurus statesman and orator.

The same year (= 103 y 2 mo. + "29 years" of Abyss. chron., and M. Russel p. 99 and 109), accession of Menilec as king of Abyssinia. As he is termed "son of Solomon," was accompanied by "the twelve doctors of the law that form the right-hand bench in judgment," and by an officer carrying "the Ten commandments and holy water," this may mark the commencement of Jewish ascendancy in Abyssinia.

"133 B. C." (Liv., Blair, and Clint.), Numantia captured and destroyed by P. C. Scipio Africanus the younger. And in Asia Minor, the kingdom of Pergamus bequeathed by Attalus III. to the Romans.

"The same year" (Clint. iii. p. 331), after nearly a year's siege, Jerusalem captured by Antiochus Sidetes, the usurping king of Syria.

"130 B. C." (Diodor., Liv., and Clint. iii. p. 389), Ptolemy VII. of Egypt, on account of his cruelties, compelled by popular indignation to take refuge in Cyprus.

"In or about this year" (Percev. i. 183), birth of Adnan, twenty-first progenitor of Mohammed, and the earliest descendant of Ishmael — known to the Arabs.

"129 B. C." (Clint. iii. p. 346), return of Demetrius II. from captivity among the Persians.

"128 B. C. = 1st year of the 'youa-choua' of Wou-ti" — (Chinese chron. table).

"March 22d" (C. Ptol., Blair, and Clint.), "about sunset on the 1st of Phamenoth, in the fiftieth year of the Third Calippic period," the *Vernal equinox* observed on Rhodes by Hipparchus. Afterwards, the star Cor-leonis was observed by him to be "29° 50′ from the Summer solsticial colure."

"127, May 2d" = "35 years" after his first Astronomical observation (C. Ptol., and Clint), an Observation made on Rhodes by Hipparchus. And on "July 7th," another Observation.

About this time (Thaalebi, and Percev. i. 61), Dhou-Sadad succeeded by Harith-Erraich, of the "sixteenth" generation from Himyar, and now first tobba of reunited Yemen. The new dynasty is distinguished as the "Himyarite Dynasty." — Homerites are first mentioned in the expedition of Aelius Gallus into Arabia (Strab.) "B. C. 24."

"126 B. C." (Wilford as. res. ix. p. 40), the Chinese general Tchang-kiao sent by the emperor Wou-ti to visit the Western countries, as Khorasan and Meru-al-nahar. Hearing of India, — he proceeded there also, and returned to China "in 115."

As early perhaps as this year, the Sanscrit medical writer Charaka. He preceded — Dhanvantari, according to the Vishnu purana iv. 8 (H. H. Wils., and Royle antiq. hind. med. 63).

Emblica officinalis of Tropical Eastern Asia. Imported *emblic myrobalans* are called in Arabic "amlaj" (. . . .), and the tree producing them in Hindustanee "amlika" or "arooli" or "aoongra," in Bengalee "amla," in Telinga "assereki," in Tamil "nelle kai" (Drur.), in the environs of Bombay "awla" or "aunlee" (Graham), in Burmah "hzee-phyu" (Mason); in which we recognize the "amvlĕg" of Chariton (Charaka), — and Zosimus Panopolitanus, the "empelilez" of Actuarius; the "emblicis" of "Xarcha indus" or "Scarac indus" mentioned by Rhazes, Serapion, Avicenna (Royle), and the "amlaj" of Rhazes, and Mesue: importation of myrobalans by the way of Aden is mentioned by Edrisi; and the medicinal use of emblic myrobalans was witnessed by Alpinus iv. 13 in Egypt, and by C. Bauhin pin. 445 in Europe. Eastward, "amalaka" fruit is mentioned in the Avadana Asoka (Burn. i. 426); "amluka" fruit by Valmiki ram. i. 4; and the "an-mo-lo-ko" or "o-mo-lo-kia" seen by the Chinese traveller Hiouen-Thsang in Hindustan, is referred here by Stanislas Julien: E. officinalis is described by Rumphius vii. pl. 1; was observed by Rheede i. pl. 38 in Malabar; by Graham, "in gardens" and "wild throughout both the Concans and Deccan," its fruit "eaten by the natives;" by Ainslie, Roxburgh, Wight, and Drury, as far as Travancore and Bengal; its strongly astringent bark used both medicinally and for tanning; by Mason v. 458, "very abundant in the jungles from Mergui to Toungo" and "bearing an intensely sour plum;" by Bontius, wild on Java. By European colonists, was carried to the Mauritius Islands, where it continues under cultivation (Boj.).

Terminalia belerica of Tropical Hindustan and Burmah. Imported *belleric myrobalans* are called in Arabic "be-ley-ley," in Persian "be-ley-leh," and the tree producing them in Bengalee "buhira," in Sanscrit "vibhituka" (Lindl.), in Tamil "tani-kai," in Telinga "tadi" or "toandee" (Drur.), in the environs of Bombay "buhira" or "bherda" (Graham), in Burmah "ban-kha" (Mason); in which we recognize the "vĕlilĕg" of Chariton (Charaka), — Zosimus Panopolitanus, and the "bellirĭcis" of "Xarcha indus" mentioned by Serapion, and Mesue (Royle antiq. hind. med.): T. belerica was observed by Rheede iv. pl. 10 in Malabar; by Graham, "a very large tree" "common along the foot of the Ghauts" as far as Bombay; by Buchanan, Ainslie, Roxburgh, Royle, Wight, and Drury, as far as Mysore and Bengal, its nuts used medicinally, the kernel "said to intoxicate if eaten in any great quantity, and its timber white and durable; by Mason v. 491, in Burmah, "indigenous but not very abundant," its fruit "dried and sold among the drugs." By European colonists, was carried to the Mauritius Islands, where it continues under cultivation (Boj.).

Terminalia chebula of Tropical Hindustan and Burmah. A large tree called in the environs of Bombay "heerda" (Graham), in Telinga "kadukar," in Hindustanee "hur" or "haruā," in Sanscrit "haritaka" (Lindl.); and probably included in the account of myrobalans by Charaka — quoted by Serapion, and Mesue: the three kinds, black, yellow, and chebulic, compose a medicine called in Sanscrit "tirphalā" (Shakesp. dict.), in which we recognize the "tryphalā" or "tryphera parva" of Actuarius. Eastward, the "triphala" is mentioned in the Amara-cosha, and by Susrutas (see Royle antiq. hind. med. 36, and Balanites Aegyptiaca): T. chebula was observed by Graham, "pretty common" at Mahableshwur and "all along the Ghauts," its fruit yielding blacking for harness makers; by Retz v. 31, Roxburgh, and Wight, as far as Bengal, the galls powerfully astringent, fit for making ink, and yield the best and most durable yellow of the chintz painters on the coast of Coromandel; by Mason v. 509 indigenous but "not very abundant" throughout Burmah, its fruit furnishing "all the native ink," some of which "in the course of a dozen years" has been found to fade.

"125 B. C." (Clint. iii. p. 346), Demetrius II. slain by his wife Cleopatra; and succeeded by Antiochus VI. Grypus, thirteenth Greek king of Syria.

"The same year" (Chinese hist., and Schlegel journ. asiat. 1828), the Greco-Bactrian kingdom overthrown by the Tartars and Scythians or Sacæ.*

The Buddhist hymns of the Lalita vistara probably adopted at the Council under Canishca, Tartar king of Cashmere — (Burnouf, and Foucaux). The first translation into Chinese was made about 76 A. D. (bibl. or. ii. p. 37).

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* *Ficus excelsa* of Tropical Hindustan. Called in Malabar "attimeralloo" (Drur.); and a tree "traditionally reported to be two thousand years old" — growing twenty miles Southeast of Cochin, "fifty feet in circumference" when seen by Rheede iii. pl. 58: F. excelsa was observed by Graham in the environs of Bombay, "a tree with altern te bifarious leaves" and "fruit size of a gooseberry;" by Roxburgh, and Wight, in other parts of Hindustan, the root in decoction powerfully aperient in visceral obstructions.

Carissa carandas of Tropical Hindustan. A thorny shrub called in Sanscrit "avigna" or "avimga" or "crishnapacap'hala" or "sushenas" or "caramardaca" (W. Jones), in Tamil "kalapa" (Drur.), in Telinga "wakay," in Bengalee "kurumchee," in Hindustanee "kurunda" (Drur.), in the environs of Bombay "corinda" (Graham), in which we recognize the "kourounda" flowers presented to a Buddhist in the Lalita vistara 6: — C. carandas is described by Rumphius vii. pl. 25; was observed by Graham very common "throughout the Concans and on the Ghauts," its fruit "sold in the bazars" and "has somewhat the taste of the blueberry;" by myself, wild on the Ghauts; by Roxburgh, Wight, and Drury, as far as Coromandel, common everywhere, the berries universally eaten by the natives, black when ripe, when scarcely so employed to make tarts preserves and pickles. Farther East, was observed by Mason v. 455 "exotic" in Burmah, cultivated by European residents for the "berries, which taste when stewed like currants" and are called *Bengal currants*.

"124 B. C." (Liv., and Sm., b. d.), C. Cassius Longinus and C. Sextius Calvinus consuls for this year: a Roman army at the request of the people of Massilia (Marseilles), having been sent against the Salyes, a neighbouring Ligurian tribe; Calvinus completed the subjugation of the Salyes, — whom he sold in the following year, their king Teutomal with other chiefs taking refuge among the Allobroges, a people higher up the Rhone. The Romans thus acquiring foothold in France.

Myriophyllum spicatum of Northern climates. Called in Britain *water milfoil*, in which we recognize the "millĕphŏlĭoum" of the Romans identified in Syn. Diosc. with the "vĕlĭoūkanthas" of the Gauls, — and "muriophullon" of the Greeks; growing in wet places according to Dioscorides; its stem single and tender, surrounded with numerous "marathrŏ"-like leaves whence the name, and referred here by writers: M. spicatum was observed by Sibthorp frequent in Greece. Westward, the "muriŏphullon" or "mullŏphullon" or "stratiŏtikē" or "ahillĕiōs" is further identified in the Syn. Diosc. with the "sōupĕrkiliōum vĕnĕris" of the Romans; by Pliny xxiv. 95 with the "millefolium" growing "in palustribus" and "magnifici usus ad vulnera," but his account seems chiefly taken from Dioscorides; M. spicatum is described by Matthioli p. 812; is termed "potamogeton foliis pennatis" by Tournefort inst. 233; and is known to grow in Italy, Sicily, Sardinia, Algeria, the Canary Islands, and throughout Europe as far as Lapland, the Orkney Islands, and Iceland (Hook., Desf., Guss., Moris, Webb, Fries, Wats., A. Dec., and Lenz). Eastward from Greece, is known to grow throughout Siberia as far as the Angara and Lake Baikal (Gmel., and Ledeb.): and farther East, from Bear Lake in North America and "Lat. 54°" to Arkansas and Lat. 41° on the Atlantic (Drumm., Nutt., Pursh, and myself).

Sambucus ebŭlus of Europe and the adjoining portion of Asia. Called in Britain *dwarf elder* or *wale-wort* or *danewort* (Prior), in France "hièble" (Nugent), in Germany "zwerg-holunder," in Italy "ebbio" or "sambuco erbale" (Lenz), in Greece "vōuzia" (Sibth.): the "ōlma" of the Dacians or "thōukŏnĕ of the Gauls — is identified in Syn. Diosc. with the "agria aktē" or "ĕlĕiōs" or "ĕuvoïkē" Euboean kind, or the "hamaiaktē" described by Dioscorides as humble and more herbaceous with the same medicinal properties: is further identified with the "ĕvōulōum" of the Romans; and the "ebulus" is mentioned by Virgil ecl. x. 27, Columella, and Pliny xxvi. 49 to 73: S. ebulus is described in Ortus Sanitatis 95, also by Brunswygk ii. 20, and Parkinson th. 208 (Prior); is termed "s. humilis" by Tournefort inst. 606; was observed by Forskal, Sibthorp, Bory, and Fraas, in hedges and mountain thickets from the Peloponnesus to Smyrna and Constantinople; by Lenz, frequent in Italy; is known to grow also in Barbary (Pers.) and throughout middle Europe, occurring in waste and cultivated ground as far as Sweden (Linn., Wahl., and A. Dec.). The "roots cathartic" (Lindl.).

Nepeta glechoma of Europe and Northern Asia. Called in Britain *ground ivy* or *gill* or *haymaids* or *heyhove* or *tunhoof* or *ale-hoof* (Prior), in Greece "kussōs:" the "halus" of the Gauls * or "cotoneam" of the Veneti, — mentioned by Pliny xxvi. 26 as "medetur lateri" and resembling "cunilae bubulae" or in the tops "thymo," sweet and alleviating thirst, "radicis alibi albae alibi nigrae," — may be compared: "eorth ifig" is mentioned in the Anglo-Saxon translation of Apul. 100; "hey howe" in the ballad of the Frere and the boye 50; and "edera terrestris" in the Ortus sanitatis pl. 163: N. glechoma is described by Brunfels i. p. 167 (Spreng.); is termed "calamintha humilior folio rotundiore" by Tournefort inst. 194; and is known to occur in waste places and along hedges throughout middle Europe (Scop., and Pers.). Eastward, was observed by Sibthorp from the Bithynian Olympus to the Peloponnesus; by Thunberg, along the margin of fields in Japan. By European colonists, was carried to Northeast America, where it continues in shady situations around dwellings in our Northern and Middle States. Used according to Prior "in fermenting beer;" and according to Lindley, "a favourite herb with country people for making a tea against pectoral and other complaints."

* *Erysimum cheiranthoides* of Northern Europe, Asia, and America. Called in France "velar" (Batard), in which we recognize the "velam" of the Gauls — mentioned by Pliny xxii. 75: E. chei-

123 B. C. = "24th year of Ptolemy VII.," inscribed at Philæ (Glid. anälect.). A petition from the priests at Philæ addressed in Greek to Ptolemy VII. — is extant. Affording the means of verifying hieroglyphic interpretations derived from the Rosetta Stone.

Hardly later than this date (Agatharch. 85), Ariston sent by Ptolemy to examine Arabia along the sea. Beginning at the head of the Laeanitic Gulf, which he consecrated to Poseidon or Neptune, there was here a tract abounding in palms, and a very ancient stone altar inscribed with unknown letters (*Sinaitic*), under the charge of a man and woman who were obliged to take shelter at night in the tree-tops. — Posidium on the Aelanitic Gulf is mentioned by Artemidorus (Strab. xvi. 4. 18).

Beyond the Gulf were the Nabatean Arabs, and along the coast three islands, one of them consecrated to Isis and having remains of ancient stone buildings and columns inscribed with barbaric letters (*Sinaitic*).

The "Thamouthēnŏn" Arabs are also mentioned — (Agatharch. 92). They dwelt in caves or rock-excavations along the Northern border, and continued known to the Greeks and Romans in the days of Diodorus Siculus, Pliny vi. 28, Claudius Ptolemy, and as late as "425 to 453 A. D." (Steph. Byz., and Percev. i. 25); but the tribe of Thamud disappeared before the time of Mohammed kor.

The "thrakōntia mĭkra" penetrating among the muscles of the inhabitants along the Red Sea — (Agatharch. quoted by Plutarch qu. conv. viii. 9. 16), are clearly the *Guinea worm*, Filaria Medinensis. The affliction is mentioned by Niebuhr?, and I found it continuing to the present day.

Elaeagnus Orientalis of Arabia. Called in the gardens of Egypt "negdeh" (Del.); and the "ĕlaiais" growing on the above-mentioned islands but differing from ours — (Agatharch. 91), or "ĕlaias aithiōpikas" yielding a "thakruōn" according to Artemidorus (Strab. xvi. 4. 18), and Dioscorides i. 136, is referred here by Sprengel: the "zakkum," mentioned by Mohammed kor. xxxvii. 60, very efficacious according to the Arabs against contusions and wounds (Maundrell, and Mariti), and offered to pilgrims on approaching Jericho, is according to Royle an oil obtained from the "olive-shaped nut" within the fruit of an Elaeagnus (Kitt. bibl. cycl. ii. 898): E. Orientalis was observed by Delile in the gardens of Egypt, according to Clot-Bey long known there; and as appears from Bieberstein (Steud.), is also cultivated in the Tauro-Caspian countries. (See E. angustifolia, and Balanites Aegyptiaca).

Lotus Forskali of the mountains of Tropical Arabia. The "lōtōn anthrōmēkē" supplying feed for cattle on the plain next to the Nabateans — (Agatharch. 89), may be compared: L. Forskali, decumbent, trifoliate, yellow-flowered, and differing from Lathyrus in the absence of tendrils, was observed by Forskal p. 140 on the middle mountain-region of Tropical Arabia; and "Lathyrus terniflorus" p. xcvii is enumerated by him as affording feed for camels, bullocks, sheep, and goats. Another species, *Lotus fruticosa*, was observed by Forskal near Musa, but no description is given.

Urtica heterophylla of Tropical Asia from Arabia to Burmah. An annual plant called in Yemen ironically "schadjaret el mehabbe" love-plant (Forsk.); and the "pōa allē" very pleasant to the eyes but its virtue transient, growing in the country of the Sabaeans — (Agatharch. 97), mentioned also by Artemidorus, may be compared: U. heterophylla was observed by Forskal p. 159 on the middle mountain-region of Yemen. Eastward, by Rheede ii. pl. 41 on mountains in Malabar; by Nimmo, and Graham, "in various parts S. Concan;" by Roxburgh, in other parts of Hindustan; by Mason, indigenous in Burmah, and called "bet-ya." The pain of the sting according to Lindley is "very severe, but not permanent."

Balsamodendron kafal of Tropical Arabia. A tree called there "kafal" (Forsk.); and the

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ranthoides is described by Gerarde p. 213; and though a weed in cultivated ground, is regarded by A. Decandolle as indigenous in middle and Northern Europe (see also Jacq. ausfr. pl. 17, and Pers.). Eastward, has not been observed in Greece; but is known to grow throughout Northern Asia as far as Kamtschatka (Ledeb.), also in the neighbouring portion of America, and in Canada (Torr.), and is regarded by A. Gray as indigenous in Illinois, Pennsylvania, and New York.

Lycopodium selago of Subarctic climates and mountain-summits farther South. The "selago" regarded by the druids of Gaul as preventive against everything deadly, the smoke curing all maladies of the eyes; — further described by Pliny xxiv. 62 as resembling "herbae sabinae," may be compared: L. selago, according to Lindley, is used medicinally by the highlanders of Scotland, taken internally and the ointment applied "to the neighbourhood of the eyes as a counter irritant;" and in Sweden, according to Linnæus, the decoction is used as a detergent lotion; and for destroying vermin on swine and other animals. The plant is known to grow throughout Northern and on the mountains of middle Europe (Engl. bot. pl. 233, and Lindl.); also in Iceland; and in North America from the Arctic sea to Lat. 54° (Hook.), and farther South on the Rocky mountains (Drumm.), and on the White mountains of New England.

"larimnan" fruit brought by the Sabaeans, exceedingly fragrant and said to possess medicinal properties — (Agatharch. 101), mentioned also by Artemidorus, may be compared: B. kafal was observed by Forskal p. 80 along the mountains of Yemen, its seeds and berries extremely fragrant, the pulp when wounded distilling balsam, the gum of the tree purgative, and the wood exported to Egypt to impregnate drinking-vessels with the smoke: at Mocha, I found water for drinking sometimes fumigated, a decided improvement where the water is brackish. Westward, a tree observed by Adanson in Senegal on the border of the Desert, is regarded by Lamarck as perhaps identical. Farther North, the "thurea virga" was known to Virgil geor. ii. 117; and specimens were brought by Arabian envoys to Rome in the days of Pliny xii. 31; the *frankincense-wood* occasionally imported into America, may also be compared.

"The same year" (Liv., Blair, and Clint.), Roman expedition under Metellus against the Balearic Islanders, "on account of their piracies;" or more probably, from these islands "settled by Phoenicians" having been in alliance with Carthage. According to Strabo iii. 5. 1, the fault of a very few individuals found in company with pirates was extended to a whole community devoted to peaceful pursuits: new cities were however built, and a colony left behind of "three thousand Romans from Spain."

"The same year" (Eutrop., Blair, and Clint.), by order of the Roman Senate, Carthage rebuilt, or rather a colony founded on its site.

"122 B. C. = 1st year of the 'youan-cheou' of Wou-ti" — (Chinese chron. table).

"In this year" (Yule cath. i. p. lxvi), return of the Chinese traveller Changkian from Bactriana.

Licualia acutifida of the Siamese countries. A small palm called in Burmah "sha-zoung," furnishing the *Penang lawyers* of commerce (Mason); possibly the walking-sticks seen by Changkian in Bactriana, brought by the way of Shintu (Hindustan) and recognized by him as like those grown in the mountains of Kiongshan — (Yule i. p. lxvi): L. acutifida is mentioned also by Royle fibr., and Drury; and is enumerated by Mason as indigenous in Burmah.

"The same year" (Liv., and Clint.), by C. Sextius Calvinus, now proconsul, Aquae Sextiae, (Aix in Provence) founded; the first settlement of the Romans beyond the Alps.

"120 B. C." (Appian, and Sm. b. d.), Mithridates V. succeeded by his son Mithridates VI. Eupator, now at the age of "eleven" years king of Pontus.

"118 B. C." (Vell., Blair, and Clint.), by the Roman consul Q. Marcius, a colony established at Narbonne in France.

Philadelphus coronarius of Central Asia. An ornamental shrub called in gardens *syringa* or *mock orange;* and the ΦΙΛΑΔΕΛΦΟΝ of Apollodorus of Artemita, used in Parthia for hedges or living fences — (Athen. xv. 29), is referred here by Bauhin and others: P. coronarius is termed "syringa" by Dodoens . .; is described also by Lobel hist., Dalechamp 355, Cæsalpinus, and Clusius hist. i. 55; was observed by Lenz seemingly wild in Italy; is known to occur along hedges in other parts of Southern Europe, is besides cultivated for its fragrant flowers, one variety having numerous petals (Pers.). By European colonists, was carried to Northeast America, where it continues frequent in gardens.

"In this year" (Burm. hist., and Mason 40), accession of Therereet, great grand-son of Khanloung, as Burmese king; a good and learned man, in whose reign religion and the arts flourished. His six distinguished teachers wrote on history and mathematics, and taught religion.

"The same year" (Raja Tarangini, and Prinsep i. 40), in Cashmere, end of the reign of Abhimanya, successor of Canishca.

"Dhanvantari is named in the "slokæ" of the Ayurvedas, medical stanzas demonstrated by him* — (Susrut. sutr. 1 to sar. 4); is mentioned also by Valmiki ram. ii. 40, and in the Vishnu purana iv. 8.

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* *Cissampelos hexandra* of Eastern Hindustan. The "sank'hini" or "sreyasi" prescribed in the stanzas of the Ayurvedas — (Susrut. sar. 2 to kalp. 3), is referred here by Hessler: C. hexandra was observed by Roxburgh in Hindustan, is described also by Fischer (Steud.).

Xylocarpus granatum of Tropical shores from Ceylon to Tongatabu. A submaritime tree called in Sanscrit "puroosha," in Bengalee "puroosha" or "puroos" or "pussoor" (J. F. Wats.), in Cingalese "kadul-gaha," in Tamil "kandalanga" (Lindl.), in Burmah "pen-lai-ung" (Mason), in Tagalo "calumpang sa lati" or "nigui" or "tabigui," in Pampango "migui" (Blanco); in which we recognize the "parusha" of the stanzas of the Ayurvedas — (Susrut. sar. 2): X. granatum was observed by Koenig, Roxburgh, and Wight, as far as the mouths of the Ganges (Drur.); by Mason v. 494 to 539, in Burmah, "common in the mangrove swamps" the falling fruit floating out upon the sea, "exceedingly astringent and regarded by the natives as a specific in cholera;" the bark and other parts, according to Drury by the Malays; is described by Rumphius iii. pl. 61; was observed by Blanco on the Philippines; by myself, along the seashore of the Feejeean Islands and as far as Tongatabu.

Acacia catechu of Tropical Hindustan and Burmah. A thorny tree, thirty to forty feet high, called in Sanscrit "khadira," in Bengalee "khira" (Lindl.), in Telinga "khadirama" or "podali-manu, in Tamil "vodalai" or "vodalam" (Drur.), in the environs of Bombay "khadera" or "kair" (Graham),

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Leea hirta of Eastern Hindustan. Called in Sanscrit "paravatu-pudee" (Roxb.); in which we recognize the "pâravatapadi" of the stanzas of the Ayurvedas — (Susrut. v. 3): L. hirta is described by Hornemann (Steud.); was observed by Roxburgh ii. 469 in Eastern Hindustan (J. F. Wats.).

Rhynchosia rufescens of Southern Hindustan. Called in Telinga "chiri-ulava" (W. Ell.); and the "chiravilva" of the stanzas of the Ayurvedas — (Susrut. iv. 5), may be compared: R. rufescens was observed by W. Elliot 43 in the Telugu districts of the Northern Circars (J. F. Wats.).

Acacia ferruginea of Southern Hindustan. A small tree called in Sanscrit "kadeera" (Ainsl.), in Tamil "shimai-velvel," in Telinga "anasandra" or "vuni" (Drur.) or "woanee" (Lindl.); and the "k'hadira" of the stanzas of the Ayurvedas — (Susrut. sar. 2 to chik. 6), is referred here by Hessler: A. ferruginea was observed by Roxburgh, and Wight, from Courtallum and the Circars to Coromandel, its very astringent bark steeped in jaggery water is distilled as an intoxicating liquor, its wood very hard and useful (Drur.).

Pongamia glabra of Tropical Hindustan and the Siamese countries. A large tree called in Sanscrit "karanja" or "naktamala" (Pidd.), in Bengalee "kurunja," in Hindustanee "kurung," in Telinga "kanoogoo," in Tamil "poongu marum" (Drur.), in the environs of Bombay "karunj" (Graham), in Burmah "tha-wen" (Mason); in which we recognize the "karanja" or "karanjaka" of the stanzas of the Ayurvedas, — "galedupe" of Valmiki ram. iii. 79 (transl. Gorr.), and "naktamala" trees of Kalidasa ragh. v. 42, and Susrutas chik. 5: the "galedupe" is mentioned by Valmiki iii. 79 (transl. Gorr.); the "karanja" or "karanjaka" of the stanzas of the Ayurvedas, "naktamala" trees by Kalidasa: P. glabra was observed by Rheede vi. pl. 3 in Malabar; by Gibson, and Graham, "very common throughout the Concans, also near rivers in the Deccan;" by Buchanan, flourishing "equally on the arid hills of the "Carnatic and the muddy banks of the Ganges;" by Roxburgh, and Wight, as far as Travancore and Bengal, the oil from its seeds applied externally by the natives in eruptive diseases, used also in lamps, its wood light and valuable, and its leaves eaten by cattle (Voight, and Drur.); by Mason v. 504 to 523, indigenous in Burmah, abounding "from Tavoy to Toungoo;" was observed by Loureiro in Anam (Steud.).

Grislea tomentosa of Tropical Hindustan and the Siamese countries. A large shrub called in Sanscrit "d'haree" (Ainsl.), in Bengalee "dhari," in Hindustanee "d'hawe-ke-pol" (J. F. Wats.) or "dhaee-phool" (Drur.), in the environs of Bombay "dhauree" or "dhaitee" (Graham); in which we recognize the "dhava" or "dhataki" of the stanzas of the Ayurvedas — (Susrut. sar. 2 to kalp. 3), and "dhura" of Valmiki ram. i. 18: G. tomentosa was observed by Gibson, and Graham, very common "throughout the jungly tracts of the Concan and along the Ghauts," its flowers "a considerable article of commerce inland as a dye;" by Roxburgh, and Wight, as far as Oude and Dheyra Dhoon, an infusion of the leaves substituted for tea among the hill tribes near Ellichpoor, and its wood used for ploughs (Drur.); by McClelland, "very common in the Prome district" of Burmah (Mason v. 512); and is known to grow as far as China (Pers.).

Pentaptera tomentosa of Tropical Hindustan. A tree called in Sanscrit "usna" or "peeata-saluka," in Bengalee "usan" or "peea-sal," in Telinga "nella-madoo," in Hindustanee "aans" (Lindl.), in the environs of Bombay "ain" or "ayeen" (Graham); in which we recognize the "asana" of the stanzas of the Ayurvedas — (Susrut. chik. 27 to kalp. 3), and "pentaptere" of Valmiki ram. iii. 79 (transl. Gorr.): P. tomentosa was observed by Gibson, and Graham, from "the jungly tracts of Guzerat" common "on the Ghauts and throughout the hilly parts of the Concan," its wood much used for "shafts to gigs," and for other purposes "where toughness of fibre is required;" by Roxburgh, Tennent, and Wight, as far as Ceylon and Oude, its bark astringent, employed medicinally, and yielding a black dye, the ashes so charged with calcareous matter as to be sometimes substituted for lime in chewing betel (Drur.).

Pentaptera glabra, by some regarded as distinct, is called in Hindustanee "urjoon" (J. F. Wats.), in Telinga "tella madoo" (Drur.), in Burmah "touk-kyan" (Mason); and the "arjuna" of the stanzas of the Ayurvedas (Susrut. iii. 2) is referred here by Hessler; P. glabra was observed by Roxburgh, and Wight, from the peninsula as far as Silhet and Monghyr, a valuable timber-tree, not touched by white ants (Drur.); by Mason v. 533, indigenous in Burmah, probably the tree affording according to McClelland "timber strong as teak," and that whose bark yields according to Berdmore a black dye used "in dyeing fish-nets."

Terminalia citrina of Eastern Hindustan. A tree called in Bengalee "hurituki" (Lindl.); and the "ab'haya" of the stanzas of the Ayurvedas — (Susrut. kalp. 3), is referred here by Hessler: the "abhea" is identified in the Taleef Shereef with the "hurr" (J. F. Wats.), an allied species: T.

in Burmah "sha" (Mason); in which we recognize the "k'hadira" or "kantaki" or "kapitana" or "mandana" of D'hanvantari — (Susrut. v. 3), the "khadira" club and staff for warriors in the institutes of Manu ii. 45 to viii. 313, and the "khadira" of Valmiki ram. i. 12: A. catechu was observed

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citrina was observed by Roxburgh ii. 435 in the forests of Bengal; its fruit according to Lindley "a common article in the Hindoo materia medica, usually employed as a gentle purgative."

Trichosanthes cucumerina of Tropical Hindustan. The *bitter gourd* is called in Sanscrit "patola," in Telinga "patolas" (J. F. Wats.) or "aduvee-putla" (Lindl.) or "chaynd-potla," in Tamil "poodel" or "pepoodel." in Bengalee "bunputol" (Drur.), in Burmah "tha-bwot-kha" (Mason); in which we recognize the "patoli" or "patolika" to be mixed in food according to the stanzas of the Ayurvedas — (Susrut. chik. 5): T. cucumerina was observed by Rheede viii. pl. 15 in Malabar; by Graham, "wild in hedges etc." in the environs of Bombay; by Roxburgh, Ainslie, and Wight, as far as Bengal, its unripe fruit very bitter but eaten by the natives in their curries, and its seeds, leaves, root, and young shoots employed medicinally; by Mason, "exotic" in Burmah, its fruit "eaten by the natives only; by Blume bijdr. 934, as far as the Malayan archipelago.

Trichothanthes dioica of Tropical Hindustan. Called in the Taleef Shereef "patole," in Hindustanee "pulvul" or "pulwul," in Bengalee "pulta" (J. F. Wats.); and the "patoli" or "patolika" or "ramyaka" of the stanzas of the Ayurvedas — (Susrut. chik. 5), is referred here by Hessler: T. dioica was observed by Roxburgh, Piddington, Royle, and Jameson, cultivated as an article of food in the region watered by the Ganges (J. F. Wats., and Drur.).

Luffa acutangula of Tropical Hindustan. A climbing Cucurbitaceous vine called in Bengalee "jhingo," in Tamil "peekun-kai" in Telinga "beer-kai," in Hindustanee "torooi" (Drur.), in the environs of Bombay "toorai" or "gosalee" (Graham), and species of Luffa in Sanscrit "kosataki" (J. F. Wats.): the "kosataki" or "koshataki" of the stanzas of the Ayurvedas — (Susrut. Chik. 5), may be compared: L. acutangula was observed by Rheede viii. pl. 7 in Malabar; by Graham, "commonly cultivated," in the environs of Bombay; by Roxburgh, and Wight, in other parts of the peninsula, in hedges and waste lands and besides cultivated, its half-grown fruit "one of the best native vegetables in India" and much used in curries (Drur.).

Randia dumetorum of Tropical Hindustan and the Siamese countries. A thorny arboreseent shrub called in Sanscrit "madana" (Ainsl.), in Telinga "mangha," in Tamil "marukarung," in Hindustanee "myn" (Drur.), in the environs of Bombay "ghelah" or "gaerah" or "peiraloo" (Graham); in which we recognize the "madana" of the stanzas of the Ayurvedas — (Susrut. iii. 2); R. dumetorum was observed by Law, Murray, and Graham, from Guzerat "throughout the Concans and Malabar," its "fruit like a crab apple," and "used for poisoning fish;" by Retz, Roxburgh, Wight, and Drury, as far as Mysore and Coromandel, its fruit "very commonly used as an emetic by the poorer classes;" was observed by Mason in Burmah; by Blume bijdr. 981, as far as the Malayan archipelago.

Embelia ribes of Tropical Hindustan and Burmah. A large climbing shrub called in Telinga "vayu-velangam-chettu" (J. F. Wats.), in Tamil "vellal," in Malabar "vishaul," in Bengalee "baberung" (Drur.), in the environs of Bombay "karkunnie" (Graham): the "vid'anga" of the stanzas of the Ayurvedas — (Susrut. kalp. 3), is referred here by Hessler: E. ribes was observed by Graham at "Mahableshwur, pretty common;" by Roxburgh, Royle, and Wight, as far as Silhet, its berries used medicinally, and sometimes fraudulently intermingled with black pepper, being almost indistinguishable and withal somewhat pungent (Drur.); by Mason, indigenous in Burmah.

Ichnocarpus frutescens of Tropical Hindustan and Burmah. A twining Apocynous plant called in Sanscrit "syama" (J. F. Wats.), in Malabar "paal-vully," in Telinga "palla-tiga," in Bengalee "shyama-luta" (Drur.) or "syama-lata" (W. Jones); in which we recognize the "syama" of the stanzas of the Ayurvedas — (Susrut. iv. 6 to 37), mentioned also in the Amara-cosha, and by Kalidasa: I. frutescens was observed by Law, and Graham, in the Southern Mahratta country; by Wight, and Drury, as far as Travancore, "common in hedges;" by Burmann zeyl. pl. 12, on Ceylon; by W. Jones as. res. iv. 261, Roxburgh, and Royle, as far as Bengal, used sometimes medicinally (Lindl.); by Mason, indigenous in Burmah. (See Villarsia Indica).

Rottlera tinctoria of Tropical Hindustan and Burmah. A tree called in Sanscrit "punnaga," in Bengalee "poonnag," in Telinga "punnagamu" (J. F. Wats.) or "vassuntagunda," in Tamil "capilapodi," in Hindustanee "kamal," in the environs of Bombay "shendree" (Graham), in Mysore "cornuga-mungi-maram" *monkeys-face tree* from monkeys reddening their faces by rubbing against the fruit (Buchanan); in which we recognize the "punnaga" of the stanzas of the Ayurvedas — (Susrut. sar. 4), "poonnaga" of Valmiki ram. i. 25, the ape besmearing his female's face with flowery dust in Bhavabhuti mal. 9, and bees abandoning the trees in Kalidasa ragh. iv. 57: R. tinctoria was observed by Rheede v. pl. 21 in Malabar; by Graham, on "hills throughout the Concans, the "mealy powder" on the fruit "used by the natives to dye red;" by Roxburgh, Royle, and Drury, "common

by Gibson, and Graham, "common in Kandesh" and "in some parts of the Northern Concan," giving employment to a "curious tribe of people called Kuttoorees" (Mackintosh bomb. geogr. soc. 1838); by Ainslie, Roxburgh cor. ii. pl. 175, Royle, Wight, and Drury, from Malabar to Delhi and Bengal,

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almost everywhere" as far as Madras, its dye called *kamila* used besides as a vermifuge; by Mc Clelland, and Mason v. 512 to 543, indigenous in Burmah, and the powder on its fruit "sold in the bazars." (See Calysaccion longifolium).

Macaranga Roxburghii of Tropical Hindustan and Burmah. A peltate-leaved Euphorbiaceous tree called in Canarese "chanda" (Bedd.), in the environs of Bombay "chanda" (Graham); and the "chanda" of the stanzas of the Ayurvedas — (Susrut. iii. 10) may be compared: M. Roxburghii was observed by Graham 1284 on the Ghauts and "in both Concans," the capsule "size of a pea" and together with the young shoots "covered with a clammy substance having a strong turpentine smell;" by Beddome 55, as far as Madras; by Roxburgh iii. 755, in Eastern Hindustan; and by Mason 589, in Burmah. Farther East, is perhaps the species seen by myself in wild situations in the Malayan archipelago, and frequent in abandoned clearings on the Feejeean, Tongan, and Samoan Islands.

Ficus (Covellia) glomerata of Tropical Eastern Asia. A large tree called in the environs of Bombay "oombur" (Graham); and the "oudoumbara" of the stanzas of the Ayurvedas — (Susrut. chik. 7), furnishing a staff for merchants in the Institutes of Manu ii. 45, mentioned also in the Saddharma pundarika (Burn. ii. 25 to 37), is referred here by writers: the "ou-tan-po-lo" seen by the Chinese traveller Hiouen-thsang 3. in Hindustan is also referred here by Stanislas-Julien: F. glomerata is mentioned in the Ramayana i. 4 (transl. Carey and Marshm.); is described by Roxburgh cor. pl. 123; was observed by Graham "generally by the banks of water-courses throughout the Concans" and hence called "water tree" by the natives, who sometimes eat its fruit, outwardly "much like the common fig," but "in clusters from the large branches;" by Powell, in the Punjaub, its bark and root employed medicinally (Drur.). Farther East, by Blanco on the Philippines, and called in Tagalo "tibig na lalaqui," in Bisaya "haguimit" or "aimit," water for drinking procured by cutting the root, and on Zebu in times of drought many of the inhabitants have no other resource.

Colocasia macrorhiza of the Malayan archipelago. The *large taro* is called on the Hawaiian Taheitian and Samoan islands "ape," on the Marquesas and Rarotongan islands "kape," on Tongatabu "kabe" (Hale); in Sanscrit "hasti-carni" (Pidd.), and the "hastikarna" is mentioned in the stanzas of the Ayurvedas — (Susrut. iii. 2): C. macrorhiza was observed by Hermann parad. 73 on Ceylon (Pers., and Spreng.); is known in Hindustan, and in the fresh state "is employed by the natives as an external stimulant and rubefacient" (Pharm. of ind., and Drur.). Eastward, was observed by myself under cultivation on the Feejeean, Tongan, Samoan, Taheitian, and Hawaiian Islands, its long large root the growth of several years, serving therefore as a safeguard against famine; by Rich, and Hale, on the Vaitupan and Tarawan coral-groups. By European colonists, was carried to the Mauritius Islands, where according to Bojer it has become naturalized.

Curcuma reclinata of Eastern Hindustan. Called in Bengalee "kurboor" (Pidd.); and the "karbura" of the stanzas of the Ayurvedas — (Susrut. iii. 2), may be compared: C. reclinata is described by Roxburgh, as observed by him in Eastern Hindustan (Steud.).

Cyperus juncifolius of Hindustan. Called in Northern Hindustan "mutran" (Honigb.), and this or C. pertenuis in Sanscrit "musta" (Pidd.); possibly therefore the "musta" of the stanzas of the Ayurvedas — (Susrut. v. 3): C. juncifolius was observed by Honigberger 387 in Northern Hindustan (J. F. Wats.).

Panicum frumentaceum of Tropical Hindustan. A kind of millet called in Sanscrit "shyamaka" (Pidd.), in the environs of Bombay "shamoola" (Graham); in which we recognize the "syamaka" of the stanzas of the Ayurvedas — (Susrut. chik. 5); P. frumentaceum was observed by Graham "cultivated in the Deccan;" by Sykes, Roxburgh, and Drury, under cultivation in other parts of the peninsula.

Raphis acicularis of Tropical Eastern Asia. A low troublesome grass called in Malabar "kadira pullu" (Rheede), in Burmah "gnung-myeet" (Mason): the "sank'hini" or "chorapushpi" or "chanda" or "kesini" or "sveta" of the stanzas of the Ayurvedas — (Susrut. sar. 10), is referred here by Hessler; and the "sankhapushpi" of the Institutes of Manu xi. 147 is referred here by Deslongchamps: R. acicularis was observed by Rheede xii. pl. 43 in Malabar; by Graham, in the environs of Bombay; by Retz, and Roxburgh, in Eastern Hindustan; by Mason v. 477, in Burmah, "the most common grass on the coast;" by Loureiro, in Anam; by myself, throughout the Malayan archipelago, but not in wild situations; by Blanco, everywhere known to the natives on the Philippines under a Spanish name "amores secos." By Polynesian colonists, was carried throughout the Tropical islands of the Pacific, from the Feejeean and Tongan to the Taheitian and Hawaiian groups, observed by myself abounding in clearings along the coast and around native dwellings, but not seen on the widely-detached coral-islands.

yielding *terra japonica* or *catechu*; articles made of its wood used according to Stevenson pref. vi. by Brahmans to the present day in Vedic ceremonies. Farther East, was observed by Mason v. 487 to 525 "indigenous" in Burmah, and "so abundant on the Eastern side of the mountains" that the inhabitants of a "village of two hundred and fifty houses" were all "constantly engaged in making *cutch* for the Shan market," to be taken with betel. From transported specimens, is described by Plukenet pl. 329; and by European colonists, was carried to the Mauritius Islands (Boj.); also to Jamaica, where it has become frequent (Macfad., and Lindl.).

Coccinia grandis of Equatorial Africa. A Cucurbitaceous vine called in Sanscrit "jivaka" or "vimbika" or "vimba" (J. F. Wats.); in which we recognize the "jivaka" of the stanzas of the Ayurvedas, — "bimba" fruit of the Saddharma pundarika (Burn. ii. 273 to 617), "vimba" of Valmiki ram. v. 18, its fruit compared with lips by Kalidasa kum. iii. 67 to ragh. xiii. 16, and the "vimbika" of Susrutas sutr. 16 to chik. 22: C. grandis was observed by Rheede viii. pl. 14 in Malabar; by Graham, "common in every hedge and on old walls about Bombay during the rains," its fruit "when ripe red;" by Roxburgh, and Wight, in other parts of Hindustan, and by Burmann pl. 19 on Ceylon; by Mason, seemingly wild in Burmah. Westward, by Grant in Unyoro on the Nile, garlands made of its leaves by the Waganda.

Mimusops kauki of the Siamese countries. A tree called in Sanscrit "ksheerike," in Bengalee "ksheerni" (J. F. Wats.); in which we recognize the "kshirika" or "kshiri" of the stanzas of the Ayurvedas — (Susrut. sar. 4): M. kauki was observed by Rheede iv. pl. 25 in Malabar, cultivated according to Drury on account of its acid and esculent fruit; by Powell, in the Punjaub, the leaves bark and seeds employed medicinally; by Roxburgh, in other parts of Hindustan; but in the environs of Bombay, was seen by Graham only in gardens of European residents. Eastward, was observed by Mason v. 463 indigenous in Burmah, and raised besides from a dried fruit imported by Chinese from Singapore; is according to Drury "extensively cultivated in China;" was observed by Rumphius iii. pl. 8 around dwellings on Celebes, commonly planted for the elegance of its form and the grateful shade. Westward from Hindustan, a single tree brought from abroad and having no Arabic name, was seen by Forskal p. 82 at Beit el fakih in Yemen.

Plumbago Zeylanica of Tropical Arabia and Hindustan. Perennial and suffruticose, called in Yemen "hamsched" (Forsk.), in Sanscrit "chitruka" or "pathin" or "vuhni," in Bengalee "agnee" or "chitra," in Hindustanee "chita" (J. F. Wats.), in Tamil "chitramoolum" or "kodivaylie" (Drur.), in Guzerat "cheetruck" (Graham); in which we recognize the "chitraka" or "agni" or "pat'hi" or "vahni" of the stanzas of the Ayurvedas — (Susrut. sar. 3): P. Zeylanica was observed by Rheede x. pl. 8 in Malabar; by Vaupell, "common in Guzerat in hedges by the road side," by Graham, on "hills throughout the Concans," the "fresh bruized bark of the root" sometimes "used for raising blisters;" by Roxburgh, Ainslie, Wight, and Drury, as far as Travancore and Bengal, and used for other medicinal purposes; by Mason v. 432, "exotic" in Burmah and cultivated for its vesicatory root. Westward, the "khamischah" of Ebn Baitar is referred here by Sontheimer: P. Zeylanica was observed by Forskal along the base of the mountains of Yemen. By European colonists, was carried to the West Indies (Sloane i. pl. 133).

Curcuma zedoaria of Tropical Eastern Asia. Called in Sanscrit "kinarista" or "sholee" or "sholika" (Lindl.), in Hindustanee "zaranbad" or "jadwar" (D'rozar.) or "kakhura" or "kuchoora," in Telinga "kuchoora" or "kichlie-gudda," in Tamil "capoor-kichlie" or "pulang killungu," in Bengalee "shutee" (Drur.), in the environs of Bombay "kutchoora" or "katchoramu" or "satee" or "sotee" (Graham); in which we recognize the "sati" of the stanzas of the Ayurvedas — (Susrut. iii.), and "shuthi" enumerated by Carey and Marshman among the ten drugs in the "survoushudhee" of Valmiki ram. ii. 1: C. zedoaria was observed by Rheede xi. pl. 7 in Malabar; by Graham, as far as Bombay, producing "the real *zedoaria* of the Materia Medica;" by Ainslie, Roxburgh cor. iii. pl. 201, Wight, and Drury, as far as Ceylon and Chittagong, its root used medicinally, and an ingredient in the red powder thrown about by the Hindus during the licence of the Hooly festival. Farther East, is known to occur on "the Asiatic islands" and as far as China (Rumph. v. pl. 68, and Lindl.). Westward, the imported drug "zedoar" is mentioned by Macer Floridus 71; "zadawar" or "jadwar," by Rhazes, Ebn Sanhum, Avicenna, and Ebn Baitar; and "zedoar" was seen in Egypt by Alpinus.

"117 B. C. = 6th year of the 'youan-tcheou' of Wou-ti" (Chinese chron. table), beginning of the Forty-third cycle.

The Hawaiian Islands colonized "from Taheiti" "sixty-seven generations" before our visit; the colonists being acquainted with the largest Samoan island Savaii, whose name was transferred to a new island corresponding in relative size and in being actively volcanic, its North point receiving the name of the second Samoan island Upolu; while "a small rocky islet" was called Lefuka, — its current name "Lehua" being the form the word "would take in the Hawaiian language." Communication was regularly kept up with the Marquesas Islands, two of which, Nukuhiva and Fatuhiva,

are mentioned in traditionary Hawaiian songs among the places visited by voyagers (Ellis tour 287 to 313, and Hale ethnog. expl. exp. 129). Of the "sixty-seven generations" of Hawaiian kings, the names of the last forty-five kings are regarded by Hale as authentic.

Evidence is also found in the names of accompanying plants, *Jambosa Malaccensis* being called on Taheiti "ahii," on the Hawaiian Islands "ohia," but on the intermediate Nukahivan or Marquesas Islands "kahika" (Hale), clearly from having been brought from Taheiti.

In like manner, *Colocasia macrorhiza* on the Hawaiian Islands has preserved its Taheitian and Samoan name "ape," but is called "kape" on the Nukahivan and Rarotongan Islands, and "kabe" (Hale) on Tongatabu.*

Tacca pinnatifida of wooded Tropical shores from East Africa throughout the Malayan archipelago. The *East Indian arrow-root* is called in Telinga "cunda," in Tamil "carachunay," and its root in Travancore "chanay kalungoo" (Drur.), in Burmah "touk-ta" (Mason), in Ylocano "panarien" and its farina "gaogao" (Blanco), on Tongatabu "mahoa," on the Samoan Islands "masoa," on the Rarotongan Taheitian and Nukahivan Islands "pia," a name continued on the Hawaiian Islands — (Hale): was observed by myself seemingly indigenous on the Hawaiian Taheitian Tongan and Feejeean Islands, but unknown on secluded coral-islands, and by the Samoans regularly cultivated; is termed "tacca littorea" by Rumphius v. pl. 114; was observed by Blanco frequent in Ilocos and Zambales on the Philippines; by myself, apparently indigenous on the Mangsi coral-islets; by Mason v. 106, "indigenous" in Burmah, "abounding along the sea shore the islands and especially at Mergui," where a "kind of arrow root has long been made" from its tuberous roots; by Ainslie, Roxburgh, and Drury, in Hindustan as far as Travancore; by Nimmo, and Graham, "throughout the Concans" to and beyond Bombay; by myself, to all appearance wild on Zanzibar.

Dioscorea bulbifera of Tropical Eastern Asia. A climbing herbaceous vine called on Madagascar "voua-couviki" (Boj.), in the environs of Bombay "caroo carunda" (Graham), in Malabar "katukatsjil" (Drur.); on Taheiti "hoi" (Bertero), a name retained on the Hawaiian Islands — (Gaud.): observed by myself abounding in neglected clearings on Metia, Taheiti, the Samoan and Tongan Islands, its root not considered edible. Westward, "kurenga" yam in Feejeean (Hale) and "kuri" yam on Tobi (between Gilolo and the Pelew Islands) may be compared with "kuri" in Rarotongan and Mangarevan and "kiri" in Tarawan, names for dog: D. bulbifera is termed "ubium pomiferum" by Rumphius v. pl. 124, was observed by him, and Blume 20, seemingly wild in the Malayan archipelago (A. Dec.); grows wild in Nepal and Silhet (Kunth); was observed by Rheede vii. pl. 36 in Malabar; by Graham, in "both Concans" to and beyond Bombay, its flowers and roots "eaten by the poorer classes," the "very bitter" roots after "being covered over with ashes and steeped

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* *Casuarina equisetifolia* of the Moluccas and neighbouring islands as far as the Feejeean: A pine-like tree called in Tagalo and Pampango "agoho," in Bisaya "agoho" or "malabohoc," in Ylocano "agoo" or "aro" or "caro" (Blanco), on Taheiti "aito" (Bertero) or "toa," on the Marquesas, Samoan and Tongan Islands "toa" (Hale), and on the Hawaiian Islands in the absence of the tree the name "toa" is continued, perhaps from imported war-clubs: — C. equisetifolia was observed by myself naturalized and forming groves on the Taheitian and Samoan Islands, under cultivation on Tongatabu, to all appearance indigenous on the Feejeean Islands, and a single planted tree on the Mangsi coral-islets North of Borneo; by Blanco, frequent in Ilocos and other localities on the Philippines; is described also by Rumphius iii. pl. 57. By European colonists, was carried to the Mauritius Islands (Boj.); to Brazil, observed by myself planted for ornament at Rio Janeiro.

Dioscorea pentaphylla of Tropical Eastern Asia. A *kidney-rooted yam* called in the environs of Bombay "oolsee" or "shendorvail-chand" (Graham), in Malabar "nureni-kelangu," in Bengalee "kanta-aloo" (Drur.), in Tagalo "limalima" (Blanco), on the Feejeean Islands "kawai" (C. P., compare "kywæ" the Burman name of D. dæmona); on the Hawaiian Islands "pia" (C. P.), and carried there possibly by the first colonists: — observed by myself, often in wild situations, and its root said to be eaten in times of scarcity, naturalized also on the Taheitian and Samoan Islands, but on the Feejeean sometimes cultivated. Westward, by Rumphius v. pl. 127 abundantly cultivated on Amboyna, and by him, and Blume, "wild" in other parts of the Malayan archipelago (A. Dec.); by Blanco, common in Malinta and Bisayas on the Philippines, its root eaten by the natives; by Rheede vii. pl. 35, in Malabar; by Davies, and Graham, "common in the Ghauts and in both Concans" to and beyond Bombay, its male flowers "sold in the bazar and eaten," together with its large tubers which are "dug up in November;" by Roxburgh, in other parts of Hindustan, never cultivated so far as observed by Wight, though Drury "always found the natives dig the tubers whenever they had an opportunity to dress and eat them." (See D. aculeata).

in cold water" becoming edible, and there is a variety which is "naturally sweet." Farther West, was observed by Böjer growing spontaneously on Madagascar (see also Griseb. fl. bras. v. 28); by Grant, in "plantain-groves 2° N." on the Nile, its "bulbs Brazil-nut size and shape, eating pleasantly boiled."

"The same year" (Liv., and Clint.), Dalmatia conquered by the Romans under L. Caecilius Metellus.

"The same year" (Porphyr., and Clint. iii. p. 399), in Egypt, Ptolemy VII. succeeded by Ptolemy VIII. Lathyrus: his mother Cleopatra being the real ruler. The hieroglyphic ovals of Ptolemy VIII. occur on a propylon at Koos, on temples at Ombos and Edfu, on the temple of Athyr at Thebes, and on extensive restorations made at Medinet-abu with materials from Pharaonic ruins.

Cassia absus of Hindustan. Allied species are called in Yemen "kolkol" (Forsk.); and the ΑΚΑΚΑΛΛΙΔΑ called ΝΑΡΚΙCCOC according to Eumachus of Corcyra, — described by Dioscorides as the fruit of a shrub growing in Egypt mixed in infusion in eye-salve, mentioned also by Athenaeus xv. 27, and Paulus Aegineta, is referred here by Royle: C. absus was observed by Alpinus, Hasselquist, and Delile, in the gardens of Egypt. Eastward, was observed by Burmann pl. 97 on Ceylon; by Royle, indigenous in Hindustan and the fruit employed for the medicinal purpose described by Dioscorides.

"116 B. C. = 1st year of the 'youan-ting' of Wou-ti." (Chinese chron. table).

"Under the Han dynasty." the "Mao-mim" having their bodies "covered with hair," described in the Chinese work "San-gai-kio (Chan-hai-king)" as "inhabiting the other side of the East sea:" the earliest notice of the *Ainos* of the Northern Japan islands,* — according to the San-kokf (transl. Klapr.), and Siebold (eluc. Vries).

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* *Fucus (Alaria) esculenta* of the Northern Japan seas. A seaweed or kelp growing from the shore some fifty feet in length by a foot wide, called "kambou" or "koumbou (kuen-pou)," and eaten by the Ainos and surrounding nations: — also found drifting throughout the Sea of Okhotsk: and farther South, "generally eaten in Japan, has a very pleasant taste and is noted as being very wholesome and nutritive," and forms an important article of export to China (addit. San-kokf transl. Klapr. p. 206, and Siebold eluc. Vries p. 66 and 174): was observed by Vries along the shores of Yeso; by the Japanese traveller Toknai, along those of Krafto (Saghalien); by Erman, in the Okhotsk Sea; and is collected and dried through regular fisheries both on Yeso and the Kurile Islands (Sieb.); and farther East, is known to grow in the Arctic portion of Alaska (Rothr. and Harv. in Smith's report 1867). From transported specimens, is described by Linnæus, Agardh, and Ruprecht.

Fucus sp. Another seaweed, called by the Japanese "kouro-kouki" or black sprouts, is equally good to eat, — according to the addit. San-kokf (Klapr. transl.).

Rosa rugosa of Yeso and the neighbouring countries. Called "mau," or in Japanese "hama nasi," and the fruit generally eaten by the Ainos — (Sieb.): observed by Vries on Yeso; and by Thunberg p. 213, in Japan. Farther North, "R. Kamtschatica" whose fruit is eaten by the Kamtschatkans (Sieb.), may be compared.

Rubus palmatus of Yeso and the neighbouring countries. Called "imare fureppi," or by the Japanese "itsigo;" — and the raspberries observed by Vries on Yeso, are referred here by Siebold p. 41. Farther South, R. palmatus was observed by Thunberg in Japan. As transported to Europe, is described by the younger Linnæus suppl. 263 (Pers.).

Rubus triphyllus of Yeso and the neighbouring countries. Called in Japanese "myama asi kudasi;" — and enumerated by Siebold among the edible and useful plants of Yeso. Farther South, observed by Thunberg in Japan.

Xanthoxylon sikerebe of Yeso and the neighbouring countries. Called "wobakf," or by the Ainos "sikerebe," or by the Japanese "ki wada;" — enumerated by Siebold among the edible and useful plants of Yeso: the "woo-bek" enumerated in the San-kokf transl. Klapr. among the useful plants of the Ainos, is doubtless identical.

Juglans nesiko of Yeso and the neighbouring countries. Called "kurumi" by the Japanese, "nesiko" by the Ainos, and the nuts are called "ninum:" — enumerated by Siebold among the edible and useful plants of Yeso.

Brassica Chinensis of Yeso and the neighbouring countries. Called by the Japanese "tona;" — and enumerated by Siebold among the edible and useful plants of Yeso. Received from China by Linnæus.

Cochlearia sp. of Yeso and the neighbouring countries. Called "tsi" or "kiseseri," or by the Japanese "wasabi;" — enumerated by Siebold among the edible and useful plants of Yeso.

Vitis Yesoensis of Yeso and the neighbouring countries. Called "hats," or by the Japanese "Jeso buto:" — enumerated by Siebold as a "delicious black grape" growing on Yeso.

Among the edible and useful plants of the Ainos on Yeso, *Tilia parviflora* called "koberegeb" or by the Japanese "sinano ki," furnishing rigging and timber of good quality; *Coptis asplenifolia* called "seribano worem" by the Japanese (and observed in Japan by Thunberg); *Rubus Molucca-*

Aralia edulis of Yeso and the neighbouring countries. Called "itsijaribe" or "tsimakina," or by the Japanese "udo:" — enumerated by Siebold as growing on Yeso, and the root edible.

Apium seri of Yeso and the neighbouring countries. Called by the Japanese "seri," — and enumerated by Siebold as "a sort of cellery" growing on Yeso: "A. petroselinum" called "kin" or usually "seri," was observed by Kaempfer, and Thunberg, cultivated as a condiment in Japan.

Heracleum tsima of Yeso and the neighbouring countries. Called "tsima" by the Ainos; — and enumerated by Siebold p. 56 as edible, and as probably the "large screen plant" whose stems were collected by Vries' crew on Kunasiri near Yeso.

Sanicula elata of Yeso and the neighbouring countries. Called by the Japanese "naga sirami;" — and enumerated by Siebold among the edible and useful plants of Yeso.

Lappa edulis of Yeso and the neighbouring countries. Called "setakorokoni," or by the Japanese "kobo;" — the root enumerated by Siebold as edible.

Corylus sp. of Yeso and the neighbouring countries. Called "wohoba," or by the Japanese "hasibami:" — enumerated by Siebold as growing on Yeso, but referred to "C. Americana."

Fagus pira of Yeso and the neighbouring countries. Called "pira" by the Ainos, — and enumerated by Siebold as growing on Yeso.

Polygonatum Japonicum of Yeso and the neighbouring countries. Called "amatokoro" by the Japanese, and the root used: — enumerated by Siebold among the edible and useful plants of Yeso.

Allium uliginosum of Yeso and the neighbouring countries. Called "heroni," or by the Japanese "nira;" — and enumerated by Siebold among the edible and useful plants of Yeso. From transported specimens, described by Don.

Gen. Graminac. untsja of Yeso and the neighbouring countries. An edible grass called "untsja" by the Ainos, and "makomo" by the Japanese, — enumerated by Siebold as growing on Yeso.

Pteris? of Yeso and the neighbouring countries. An edible fern called "toha," or by the Japanese "warabi," — enumerated by Siebold as growing on Yeso.

Gen. Musc. of Yeso and the neighbouring countries. An edible moss called "ikkimaimai," or by the Japanese "koke," — enumerated by Siebold as growing on Yeso.

Boletus kuruma of Yeso and the neighbouring countries. An edible mushroom called "kuruma" by the Ainos, — enumerated by Siebold as growing on *Quercus beroni* on Yeso.

Betula beitats of Yeso and the neighbouring countries. Called "beitats" by the Ainos, and the bark used by them, — the "tatsbi" birch also furnishing good timber (Sieb. p. 41 and 170).

Betula asada of Yeso and the neighbouring countries. Called "asada" by the Ainos, and the bark used by them — (Sieb. p. 170).

Quercus beroni of Yeso and the neighbouring countries. Called "beroni" or "bironi" by the Ainos, — and the wood enumerated by Siebold p. 41 among the kinds especially fit for shipbuilding.

Acer sp. of Yeso and the neighbouring countries. Called "tobeni," or by the Japanese "kaide," — and according to Siebold p. 41 and 163, "sugar is prepared from the juice," and the wood is of good quality.

Acer fusini of Yeso and the neighbouring countries. Called "fusini" by the Ainos, and furnishing good timber, — according to Siebold p. 41 and 162.

Pinus pauciflora of Yeso and the neighbouring countries. Called "tsikafupp" or "inekereni," or by the Japanese "gojo mats," the wood used for houses — and masts (Sieb.). The "sapin à cinq feuilles acereuses" (Strobus) enumerated in the San-kokf transl. Klapr. among the useful plants of the Ainos, may be compared.

Abies Yesoensis of Yeso and the neighbouring countries. Called by the Ainos "fuppo," by the Japanese "Jeso mats," the wood — enumerated by Siebold among the kinds especially fit for shipbuilding, and supplying masts.

Phalaris sp. of Yeso and the neighbouring countries. A species with an ovoid pendulous panicle — enumerated by Siebold as used for roofs.

Smilacina bifolia of Subarctic climates. Called "maidsur" by the Japanese: — Described by Matthioli pl. 709 (Spreng.); observed by Gerarde in two localities in Britain; known to abound in the Scandinavian peninsula, and as far as Northern France and Germany, becoming rare as the forests become more restricted (fl. dan. pl. 291, and A. Dec.); was observed by Gmelin frequent throughout Siberia; by Pallas, between the Yenisei and Lake Baical; by Chamisso, in Kamtschatka. Westward, by Lapylaie in Newfoundland; by Michaux, in Canada; by myself, from 45° to 40° along the Atlantic, frequent in the forest; by Chapman, on "high mountains of North Carolina;" by Short, in Kentucky; and by Drummond, at 54° on the Saskatchewan.

nus? called in Japanese "fuju itsiigo;" *Cannabis sativa* called "asakara" or by the Japanese "asa," for sewing thread; *Trapa incisa; Castanea vesca* called "jam," or by the Japanese "kuri;" and *Sagittaria sagittifolia* called "womo daka" by the Japanese, the root, — are enumerated by Siebold. And in the San-kokf transl. Klapr., "*Galium tuberosum* (houang-thsing);" the "kakouma-kousa" (in Chinese "houang-lian," *Chelidonium majus*, whose Japanese name is however given by Siebold as "kusanowo"); and the "pin de Yeso" (. . . . .), the wood very beautiful, employed for making utensils.

Among plants growing on Yeso, *Ervum tetraspermum* called "susume no Iento" by the Japanese; *Spiræa aruncus* called "sjoma" or "torino asikusa" by the Japanese; *Lythrum salicaria* called "mizo hagi" by the Japanese; *Geranium pratense* called "dai furoso" by the Japanese; *Euphorbia lathyris* called "portoso" by the Japanese; *Alsine media* called "hakobe" by the Japanese; *Viola canina* called "komeno asume" by the Japanese; *Capsella bursa-pastoris* called "nats na" by the Japanese; *Draba hirta; Thlaspi arvense* called "gunbai utsiwa" by the Japanese; *Papaver rhoeas* called "bizinso" by the Japanese; *Anemone parviflora; Caltha palustris* called "jen ko so" by the Japanese; *Cornus Canadensis* called "kakka," or by the Japanese "gozen tatsi bana;" *Hedera helix* called "ki dsuta" by the Japanese; *Vaccinium Chamissonis?* called "isusuka;" *Primula farinosa* called "konzumui," or by the Japanese "juki ware so;" *Veronica anagallis* called "kawatsisa;" *Physalis alkekengi* called "hokisei," or by the Japanese "hotsuki," and observed by Thunberg in Japan; *Physalis totorep*, called "totorep" by the Ainos; *Solanum Carolinense?* called "katakina;" *Solanum*, a species growing on Krafto; *Calystegia soldanella* called "hama hirugaho" by the Japanese; *Brunella vulgaris* called "utsubo kusa" by the Japanese; *Clinopodium vulgare* called "kuruma bana" by the Japanese; *Lamium amplexicaule* called "hotokeno so" by the Japanese; *Jasminum præcox* called "obai" by the Japanese; *Apocynum Venetum* called "basikuromun;" *Calendula officinalis* called "urajenekina," or by the Japanese "kin sen kwa;" *Gnaphalium confusum* called "hahako gusa" by the Japanese; *Taraxacum dens-leonis* called "inemuni," or by the Japanese "tan bobo;" *Plantago major* called "ohobako" by the Japanese; *Polygonum aviculare* called "niwa janagi" by the Japanese; *Rumex crispus?* called "stakamaro," or by the Japanese "kizigizi;" *Chenopodium* album and *rubrum* called "sirusikina," or by the Japanese "aka sa;" *Populus dero* called "dero" by the Ainos; *Salix toisjusju* called "toisjusju" by the Ainos, "inokoro janagi" by the Japanese; *Salix toppikara* called "toppikara" by the Ainos, "kojanaki" by the Japanese; *Humulus Japonica* called "kana mugura" by the Japanese; *Alnus incana* called "hanoki" by the Japanese, "nitats' kene" or in general "kene" by the Ainos; *Alnus jaja kene* called "jaja kene" by the Ainos; *Thuya? retinospora?* called "kara hiba," or by the Ainos "sjungu;" *Typha angustifolia* called "sikina," or by the Japanese "gama;" *Dendrobium catenatum* called "sekikok" by the Japanese; *Convallaria majalis* called "setakito," or by the Japanese "kimikakeso;" *Paris quadrifolia* called "tsume tori gus-a" by the Japanese; *Polygonatum latifolium?* called "bebeukkina;" *Smilacina racemosa* var. *Yesoensis* called "juisasa;" *Narcissus tazetta* called "suizen" by the Japanese; *Uvularia sessilifolia* called "hotsjak" by the Japanese; *Iris Sibirica* called "ajame" by the Japanese; *Luzula campestris* called "ritenmuni," or by the Japanese "suzumeno jari;" *Hordeum jubatum;* and *Imperata pedicellata* called "nupkausi," or by the Japanese "tsigaja," — are enumerated by Siebold. And in the San-kokf transl. Klapr., "matricaires de printemps à fleurs blanches" (called in Chinese "tchhun-kiu," in Japanese "soungikf" or sometimes "Korei-gikf" from having been introduced from Corea); "lys à fleurs noires" (*Fritillaria?*); "baton de tigre" fifteen to sixteen feet high (. . . .); and "espece de bugle" called in Japanese "fouki," in Chinese "khouon-toung," with leaves attaining the dimensions of "ten" square feet (*Nardosmia Japonica?* called "makaje" or "korkoni," or by the Japanese "fuki").

Vyasa may have been at this time collecting the Vedas. — The Burmese king Ronmokkha is said to have been "skilled in the Vedas" (Mason 40).

Justicia ecbolium of Tropical Arabia and Hindustan. A shrubby erect plant called in Malabar "carimcurim" (Rheede), in the environs of Bombay "oodoo jatee" (Graham), in Yemen "kossæjf" or "chasser" (Forsk.); and the "oudodjas" of the Rig Veda viii. 5. 3.* — may be compared: J. ecbo-

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**Barleria cristata* of Tropical Hindustan. An unarmed shrub, "very beautiful" when in flower (Graham): the "serya" of the Rig Veda ii. 5. 8 — is referred here by Langlois, and "sairiya" or "sairiyaka" prescribed by Susrutas chik. 15 to 25 is referred here by Hessler: B. cristata was observed by Graham "in gardens Bombay," flowers "of a blue colour with a dash of purple, appear in the rains;" by Roxburgh, in Eastern Hindustan. Probably carried to Manila, where it was observed by Blanco; was observed in Eastern Asia by Osbeck trav. pl. 8 (Pers.). Transported to Europe, is described by Morison iii. 11. pl. 23.

Vallisneria octandra of Hindustan. A grass-leaved aquatic called in Sanscrit "janalili" or

lium was observed by Forskal p. 5 among the mountains of Yemen; by Graham, on "hills throughout the Concans" to and beyond Bombay, its flowers "greenish or azure-coloured;" by Rheede ii. pl. 20, in Malabar; by Roxburgh, and Wallich rar. iii. pl. 108, in other parts of Hindustan, and according to Lindley "said to be diuretic."

Saccharum munja of Tropical Hindustan. A reed called in Hindustanee "munja" (Drur.); in which we recognize the "moundja" used for removing impurities from drink according to the Rig Veda ii. 3.4; "munja" cincture of Brahmans, mentioned in the Institutes of Manu ii. 42,—and by Kalidasa kum. v. 10; and "munja" grass of the Sutta Samanna Phala (Burn. ii. 477), Susrutas chik. 17 to 19, and the Vishnu purana iv. 6: S. munja was observed by Roxburgh, and Royle, growing abundantly along the banks of the Ganges at Benares, its leaves twisted into strong tow-ropes by boatmen, and used besides for rigging on the Indus (Drur.).

The "risya" or white-footed antelope (A. nilgau), and the "gavaya" (gayal ox), mentioned in the Yajur Veda (Colebr. as. res. p. 500).

In the Sama Veda adhy. 12 and 22 Jamadagni, and Vrihaspati, are mentioned, also Kasyapa (prapath. i. 9), and the descendants of Angiras (adhy. i. 4).

The rishis or poets, whose stanzas are quoted in the prapathaka, are Puruhanman, Ahi, Virupa Vasu, Yata, Atri, Jeta, Kasyapa, Medha, Sumedha, Nrimedha, Trimedhas, Jamadagni, Prayaga, Mada, Gaupayana, Satya, Satyadhriti, Gopavana, Kanwa, Praskanwa, Trayukil, Upastuta, Vrihadukta, Vemada, Trisiras, Budhagarishti, Ullovatayana, Yutadakshna, Sakti, Ibhi, Devaja, Garbha, Puruchchhesa, Nodha, Twishta, Sasoka, Godha, Sahago, Gauriviti, Vena, Devajamya, Saya, Garga, Dwaita, Vasuyava, Puru, Gritsamada, Payu, Dirghatama, Trita, Trimati, Rigiswana, Haryata, Gauri, Tarkshya, Rinu, Vrismatilhi, Saunaka, Niranyaslhupa, Sumitra, Nandhasa, Kaleya, Ritu, Suhotra, and Kula:

Also Usana or Ushana, represented as reciting in adhyaya i. 10 to viii. 1, Bharadwaja, Medhatithi, Vatsa, Vamadeva, Madhuchhanda, Vasishtha, Saubhari, Viswamitra, Vatsapriya, Gautama, Gotama, Srutakaksha, Trisoka, Irimi, Sukaksha, Irisni, Soka, Kusidina, Priyamedhas, Pragatha, Sanyu, Purumidha, Rebhas, Kali, Miri, Devatithi, Aswina. Taurasravasa, Kutsa, Dyutana, Tiraschi, Viswamanas, Narada, Parvata, Sunahsepha, Bharga, Trinpani, and Manu.

Sarcostemma viminale of Tropical Arabia and Hindustan. A leafless ascending many-branched Asclepiaceous plant called in Yemen "milæb" (Forsk.), in Telinga "tiga tshomoodoo," in Bengalee "bramee" or "shomluta" (Drur.); and the "soma," leafless according to the prapath. vi. 7. 12, its prepared juice first obtained by Ushana celebrated throughout the Sama Veda,—mentioned also in the Puranas, is referred here by writers; S. viminale was observed by Lush on the "isle of Perim," by Graham, and myself, "throughout the Deccan," and, according to Gibson, water impregnated with the stems and common salt is employed by the natives to destroy white ants in sugar-cane fields; by Roxburgh, and Wight, as far as Coromandel, its milky juice so mild that travellers suck the tender shoots to allay thirst (Drury). Westward, was observed by Forskal p. 50 near mount Melhan in Yemen, eaten by cattle; by Alpinus pl. 190, in Egypt. By European colonists was carried to Brazil, observed by myself naturalized at the base of the Organ mountains.

Butea frondosa of Tropical Hindustan and Burmah. Called in Sanscrit "pulasa," in Bengalee "pulas," in Telinga "maduga" (Lindl.), in Hindustanee "palas," in Tamil "porasum" (Drur.), in Burmah "pouk" (Mason); in which we recognize the "palasa" named with honour in the Vedas,—

"saivala" (W. Jones) or "sivala" (Pidd.); and the "sipala" of the Rig Veda viii. 27, driven by the wind from the surface of the water,—is referred here by Langlois: the "shivula" is mentioned by Valmiki ii. 3; the "saivala" by Bhavabhuti mal. 6, and is prescribed medicinally by Susrutas sutr. 45 to chik. 18: V. octandra was observed by Nimmo, and Graham, on "margins of tanks throughout the Concan;" by W. Jones as. res. 275, and Roxburgh cor. ii. pl. 165, as far as Bengal.

Vallisneria alternifolia of Hindustan. Included apparently in the "sipala"—and "shivula" above-mentioned: observed by Nimmo, and Graham, "in tanks throughout the Concans," and "used for refining sugar;" by Roxburgh, and Wight, in other parts of Hindustan.

Vallisneria spiralis of both continents. Included apparently in the "sipala"—and "shivula" above-mentioned: observed by Nimmo "in tanks" in the environs of Bombay (Graham); by Roxburgh, Gardner, and Wight, in other parts of Hindustan; and known to grow as far as Australia (Graham). Westward, was observed by Ledebour iv. 46 in the Volga; by Micheli gen. pl. 10, in Italy; by La Peyrouse pyr. 594, in the Aude and Garonne, and is known to grow in the Rhone and other waters of Southern France (Pers., and A. Dec.). Farther West, was observed by Pursh in the Oswego river; by myself, from Lat. 40° along the Atlantic; is known to grow as far as the St. John's river in Florida and the Mississippi (Willd., and Pers.); was observed by Short in Kentucky; and by Nuttall, from Lake Michigan to Arkansas.

and Institutes of Manu (W. Jones), and whose brilliant red flowers are celebrated by Kalidasa kum. iii. 29: Agni's "sacred wood illuminating" is mentioned in the Sama Veda v. 4, and the "sacred fire" of the Brahmans was found by Stevenson fed exclusively with the wood of B. frondosa; the same "venerable and holy tree gave its name to the celebrated plain of Plassey in Bengal" (asiat. res. iii. 469 to iv. 229): B. frondosa was observed by Rheede vi. pl. 16 and 17 in Malabar; by Graham, "common both in the Concans, Kandesh, and Goozerat," its flowers "used to dye with," applied also "to indolent tumours," and furnishing a powder that "enters into the composition of goolal;" by Roxburgh cor. i. pl. 21, and Wight, on the Circars and in other parts of Hindustan; yields according to Royle antiq. med. 41 and fibr. ind. the "pulas" or "dhak" fibre of commerce, and its ashes containing *carbonate of potash* are often commended by Hindu and Arab medical writers: its ruby-coloured exudation, also employed medicinally by the natives (Drur.), was recognized by Guibourt as the "original kino which had entirely disappeared from commerce and was once so much valued;" is now distinguished as *pulas kino*, and according to Drury "is an efficient substitute for the real kino." Farther East, B. frondosa was observed by Mason v. 485 abounding in the forests of Burmah; and by M'Clelland, in Pegu.

The Institutes of Manu hardly earlier than this date, mention being made of Budhist nuns (Weber, and Buns. iv. 7. 3), and of "Tchinas" China (a name unknown before the Thsin dynasty according to Klaproth). Manu speaks of the "three Vedas," but elsewhere names the Atharvana or fourth (Colebr. as. res. viii), and is himself mentioned in the Sama Veda prapath: i. 9 and 10 * (transl. Stev.).

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* *Sapindus detergens* of Eastern Hindustan. A species of *soapnut* called in Bengalee and Hindustanee "reetha" (Drur.); and the bruised fruit of the "savonier" used according to the Institutes of Manu v. 120 for cleansing woollen rugs from Nepaul, — may be compared: S. detergens was observed by Roxburgh ii. 280 in Bengal, a tree twenty feet high, the pulp of its fruit used by the natives for washing linen (Drur.).

Careya arborea of Tropical Hindustan. A large tree called in Tamil "poottatanni-marum" or "ave-mavoo," in Telinga "kumbi," in Malabar "pelou," in Hindustanee or Bengalee "pilu" (Drur. index), in the environs of Bombay "koombah" or "kumba" (Graham); in which we recognize the "pilou" of the Institutes of Manu ii. 45, furnishing a staff for merchants: — C. arborea was observed by Rheede iii. pl. 36 in Malabar; by Gibson, Auld, and Graham, from Bombay to Kandesh and Guzerat; by myself, frequent in the forest on the Ghauts; by Roxburgh, and Wight, in other parts of Hindustan as far as Coromandel, its wood used by the cabinet-makers of Monghyr, also for hoops, and its bark twisted into cords for matchlock men (Drur.).

Rubia cordifolia of Subtropical Eastern Asia. Distinguished as *Indian madder*, and called in Hindustanee "munjittee," in Bengalee "munjith" or "aroona," in Tamil "manjittee" or "sawil codie," in Telinga "mandastie" (Drur.); and the madder-tinted garb of the military student is mentioned in the Institutes of Manu, — and by Bhavabhuti uttar. 4 (transl. Wils.): embalming and cloth dyed with "manjistha" are mentioned in the Kasi khanda, practises according to Wilson (note Vishn. pur. iv. 5) that would be thought impure at the present day: the mandjuchakas is mentioned in the Saddharma pundarika (Burn. ii. 4), and the "manjisht'ha" or "manduka" or "mandukaparni" or "kala" by Susrutas sar. 10 to chik. 16: R. cordifolia was observed by Graham "common at Mahableshwur;" by Ainslie, Roxburgh, and Wight, from the Neilgherries to Dindigul, cultivated according to Drury in Assam and Nepaul, but seems chiefly produced in Kuchar, the root "in great demand in the adjacent countries for dyeing coarse cloths and stuffs red," and exported even to London. Farther East, R. cordifolia was observed by Wallich along the Irawaddy (Mason v. 512); by Thunberg, in different parts of the Malayan archipelago; by him, and Kaempfer, in Japan, growing spontaneously and used for dyeing; by Pallas trav. iii. pl. 50, as far as the border of Siberia; is known to occur also in China (Pers.). By European colonists, was carried to Austral Africa (Thunb.), and to Majorca (Pers.).

Vernonia anthelmintica of Tropical Hindustan and Ceylon. Annual, and called in Sanscrit and Bengalee "somraj" (Lindl.), in Hindustanee "buckche," in Telinga "adavie-zeela-kura," in Tamil "caat-siragum" (Drur.); and the "sami" of the Institutes of Manu viii. 247 — is referred here by Deslongchamps: the "somaraji" or "somavriksha" or "syama" is mentioned by Susrutas sutr. 46 to chik. 25 and kalp. 7: V. anthelmintica was observed by Rheede ii. pl. 24 in Malabar; by Graham, "in waste places" around Bombay; by Hamilton, Roxburgh, and Wight, in other parts of Hindustan as far as Bengal; and by Burmann pl. 95, on Ceylon; the seeds according to Drury "very bitter" and "considered powerfully anthelmintic and diuretic," an ingredient also "of a compound powder" given in snake-bites.

Bassia latifolia of Tropical Hindustan. The *mowhra* tree is called in Sanscrit "madhaca," in

Crotalaria juncea of Tropical Hindustan. The *sunn-hemp* is an annual plant called in Bengalee "sunn," in Tamil "wuckoo" or "janupa nar," in Telinga "shanamoo" (Drur.), in the environs of Bombay "tag" or "ambaree" (Graham), in Burmah "pan" or "paik-hsan" (Mason); and the "sana" of the Institutes of Manu ii. 44, furnishing the sacrificial thread of the Kshatrya caste, — is referred here by writers: C. juncea was observed by Graham in the environs of Bombay, "much cultivated for the sake of its fibres;" by Burmann, Roxburgh cor. pl. 193, Royle fibr. i, and Wight, under cultivation in other parts of Hindustan; and the exported fibres and "goni" or gunny-bags made of them have become well known in commerce. Farther East, the plant was observed by Mason v. 519 in Burmah, in "large fields" near the native villages.

Cordia latifolia of Tropical Hindustan. A small tree called in Sanscrit "shleshmatuka" (J. F. Wats.), in Bengalee "buro-buhooari," in Hindustanee "bhokur" or "buralesoora" (Drur.), in Guzerat "burgoond" or "vurgoond," in Arabic and Persian "pistan" or "sepistan" (Vaupell); in which we recognize the "slechmataka" of the Institutes of Manu vi. 14, whose fruit should not be eaten: — the "sibistan" is mentioned by Honain, Ishak Ben Amran, Mosih, Elthabiri, Avicenna, and other Arab writers (meaning probably in most instances the allied C. myxa): C. latifolia is mentioned by Valmiki ramayan. vi. 74 (transl. Gorres.); was observed by Vaupel "common through-

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Bengalee "mahwa" or "muhooa" or "muhoola," in Telinga "ipie" (Lindl.), in Hindustanee "moola," in Tamil "caat-elloopei" (Drur.); in which we recognize the "madhuka" yielding according to the Institutes of Manu xi. 94 one of the three kinds of intoxicating drink, — mentioned also by Valmiki ramayan. ii. 43, Jayadevi, yellow garlands of its flowers by Kalidasa kum. vii. 14 to ragh. vi. 25, and prescribed medicinally by Susrutas: B. latifolia was observed by Gibson "very common in Guzerat," by Graham "throughout the Concans," by myself in the central portion of the Deccan, by Malcolm in Malwa; by Roxburgh cor. i. pl. 19, Hamilton, and Ainslie, from Mysore to the Circar mountains and Bengal, its flowers dried for food in quantities by the forest-tribes or Bheels, yielding besides the intoxicating spirit called *mowhra*, and the oil from its seeds used by the poorer classes in lamps and for frying (Drur.). By European colonists, was carried to the Mauritius Islands, where it continues in gardens (Boj.).

Strychnos potatorum of Tropical Hindustan and Burmah. The *clearing-nut* is called in Tamil "tettankotta," in Telinga "induga," in Bengalee and Hindustanee "nirmulee" (Lindl.), in the environs of Bombay "nirmulla" or "gagra" (Graham); and the "kataka" clearing water according to the Institutes of Manu vi. 67, — pale-leaved and yielding a powder according to Kalidasa ragh. iv. 55 to vi. 17, and prescribed medicinally by Susrutas chik. 1 to 20, is referred here by W. Jones as. res. iv. 128: S. potatorum was observed by Law, and Graham, on the "hilly parts of the Concans" and "the Ghauts generally," a "middle-sized tree;" by Gibson, as far as the "Adjunta jungles;" by Retz, near Madras (Pers.); by Ainslie, and Roxburgh cor. i. pl. 5, in other parts of the peninsula, the ripe seeds used for clearing muddy water, the pulp of the fruit eaten by the natives, but the pulverized dried fruit "reckoned emetic" (Drur.). Farther East, was observed by Mason v. 497 in Pegu and Toungoo, the use of its seeds being well known to the Burmese.

Cordia obliqua of Tropical Hindustan. A tree called in Sanscrit "selu" (J. F. Wats.); in which we recognize the "selu" of the Institutes of Manu v. 6, whose fruit should not be eaten: — C. obliqua was observed in Hindustan by Ainslie 183 to 228, and Balfour 87. From transported specimens, is described by Willdenow phytog. i. pl. 4 (Pers.).

Antiaris toxicaria of the Siamese countries and Malayan archipelago. The *bohun upas* is a large forest-tree, sometimes called "antsjar" (Lindl.); and knowledge of its exudation seems implied in the prohibition against poisoned arrows in the Institutes of Manu vii. 90 — (Elphinst. i. 2): clasping the poison-tree, is mentioned by Bhavabhuti i. (transl. H. H. Wils.): A. toxicaria is known to grow as far as Lat. 19° in the neighbouring portion of Burmah, and its exudation continues to be "used by the Karens to poison arrows" (Thomson, and Mason v. 489 to 876). Farther South, a tree in the Malayan archipelago according to Jordanus (transl. soc. Hakl.) is said when "in flower" to "kill every man that cometh near;" an account not strictly true, but A. toxicaria has been shown by Rumphius ii. pl. 87, Leschenault de la Tour, and Blume, to be virulently poisonous; is known to grow particularly on Java, Baly, and Celebes (Aepnel., and Lindl.).

Saccharum sara of Tropical Hindustan. A reed called in Bengalee "shur" or "saro" (Drur.); in which we recognize the "sara" of the Institutes of Manu viii. 247, to be planted for marking boundaries: — S. sara was observed by Roxburgh, Royle, and Stewart, from the lower part of the Punjaub along the Ganges, its leaves twisted into strong tow-ropes by boatmen, made also into mats, its stems used for wicker-work and for rafting heavy timber, and the delicate pith towards the summit eaten by the poor; writing-pens from these stems are besides exported from Madras, chiefly to Bombay (Drur.). The "bhooroo" reed "of which the native pens are made" was observed by Graham "common in the Concans." (See S. spontaneum.)

out Guzerat," its young tender fruit "pickled, also eaten as a vegetable by the natives" (Graham); by Colebrooke as. res., and Roxburgh, as far as Silhet, its fruit larger and more mucilaginous than that of C. myxa (Lindl., and Drur.).

Achyranthes aspera of Tropical Asia. A weed called in Egypt "næajm," in Yemen "uokkes" or "höllem" or "mahot" (Forsk.), in Hindustanee "chikra", or "chirchira," in Bengalee "opang," in Tamil "na-yurioi," in Telinga "utta-reni" or "antisha" or "apa-margamu" or "pratyak-pushpi" (Drur.), in Tagalo "libai" or "docotdocot" or "hangor hangot," in Bisaya "hangor," in Pampango "angud" (Blanco); and the "kubdja" or "kubdjaka" of the Institutes of Manu viii. 247 — is referred here by Deslongchamps: the "taruna" or "apamarga" or "pratyakpushpi" is prescribed medicinally by Susrutas sutr. 16 to 36 and chik. 18: A. aspera was observed by Rheede x. pl. 78 in Malabar; by Graham, "a common weed" around Bombay, appearing "during the rains;" by Ainslie, Buchanan, Roxburgh, Wight, from Mysore to Bengal and Oude, and by Burmann Zeyl. pl. 50 on Ceylon, its seeds and flowering-spikes given in hydrophobia, scorpion-stings, and snake-bites (Drur.). Farther East, was observed by Mason in Burmah; by Blanco, and myself, on the Philippines; by myself, from the Feejeean throughout the Tropical islands of the Pacific as far as Clermont-Tonnerre coral-island, in some instances having an indigenous aspect. Westward from Hindustan, was observed by Forskal p. 48 in Tropical Arabia; by Drége, in Austral Africa (E. Meyer); by Grant, "about huts 4° 18′ S. to 7° N." on the Nile; is known to occur also in Abyssinia and Senegal (Moq., and A. Dec.); was observed by Webb on the Cape Verd Islands; by Forskal, and Delile, around Cairo in Egypt; by Boccone pl. 9, and Sibthorp, in Sicily (Pers.); by Schousboe, in Morocco; and is termed "amaranthus siculus spicatus radice perenni" by Tournefort inst. 235. Probably by European colonists was carried to the Mauritius Islands, where according to Bojer it has become naturalized (A. Dec.); to Jamaica (Pers.), St. Croix (West), and other islands in the West Indies. (See Agrostis alba).

"114 B. C." (Burm. hist., and Mason 40), Thereeet succeeded by Tæpah as Burmese king.*

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* *Melanorrhœa usitatissima* of Burmah. A Terebinthoid tree called "theet-sæ" (Mason), yielding the *Burmese black varnish* celebrated from early times, used besides by the natives for a vermifuge, and mixed with bone ashes to stick glass on boxes and images; the timber also of fine quality, resembling lignum-vitæ, and affording a red dye: — observed by Wallich, Berdmore, and Mason v. 511 to 514, indigenous in the forests, and sometimes cultivated.

Bauhinia purpurea of the Siamese countries. A Leguminous tree called in the environs of Bombay "dewa kunchun" (Graham); in Burmah "ma-ha-hlæ-ga-nee" (Mason), and from early times familiarly known: — observed by Mason v. 771 indigenous in Burmah. Westward, is termed "b. triandra" by Roxburgh ii. 320; was observed by Rheede i. pl. 33 in Malabar; by Graham, in "gardens Bombay," its "fragrant flowers of a deep rose colour;" by Wight 915, in other parts of peninsular Hindustan. (See B. variegata.)

Pterocarpus Indicus of the Siamese countries and Malayan archipelago. A majestic ornamental Leguminous tree called in Burmah "pa-douk" (Mason), and from early times familiarly known: — observed by Mason v. 405 indigenous there, but "propagated by simply planting large branches in the ground:" described also by Rumphius ii. pl. 70 (Pers.), and Roxburgh.

Acacia rugata of Burmah. The *soap acacia*, its dry pods from early times a substitute for soap in cleansing the hair, and its leaves with turmeric affording a beautiful green dye: — observed by Mason v. 515 to 517: described also by Buchanan.

Bruguiera eriopetala, *Carallia lucida*, and *Ceriops Roxburghianus*, of the shores of Bengal and Burmah. Mangroves or tide-water shrubs and trees, from early times familiarly known, — their bark according to Mason v. 515 abounding "in tannic acid," suitable therefore for making leather.

Morinda bracteata of Burmah. A woody Cinchonaceous plant called "yai-yo," its fruit from early times a great favourite with the Burmese, served up in their curries: — enumerated by Mason v. 463 as indigenous, though "often seen" near native dwellings. Described also by Roxburgh.

Psychotria sp. of Burmah. A handsome Cinchonaceous shrub, known from early times for the bright *yellow dye* obtained from its root: — observed by Mason v. 414 to 512.

Diospyros mollis of the mountains separating Tavoy from Siam. A tree said to grow wild there, called by the Sgau Karens "ma-kleu," and the *Shan black dye* obtained from its fruit celebrated from early times: — the living tree observed by Mason v. 509 "in the gardens of Tavoy and Maulmain."

Daphne? hsæ-læ of the forests of Tenasserim. A large woody creeper, its bark from early times made by Tavoyers into a coarse paper thick as paste-board, which when blackened is written upon with a *steatite* pencil: — observed by Mason v. 521.

Arum furfuraceum of Burmah. Its esculent root known from early times, — and by McClelland termed *scaly yam* (Mason v. 465).

Coleus aromaticus of Tropical Asia. A shrubby Labiate plant, delightfully fragrant, and called in the environs of Bombay "pathur-choor" (Graham), in Bengalee "pathoor-choor" (Drur.); in Burmah "pen-bu" (Mason), and from early times in common use as a potherb: —observed in Burmah by Mason v. 474; by Loureiro 452, in Anam, employed in asthma, chronic coughs, epilepsy, and other convulsive affections; is termed "marrubium album Amboinicum" by Rumphius v. pl. 102. Westward, was observed by Roxburgh, and Long, in gardens in Bengal, the leaves eaten, used besides medicinally by the natives in colic and dyspepsia (Drur.), and a good substitute for borage when put into beer and other drinks; was observed by Law, and Graham, "common in gardens" as far as Surat. The "zatarhendi villosum" observed by Forskal p. cxv to 110 wild among the mountains of Yemen, exceedingly fragrant, and said to be edible and to please monkeys, may be compared.

As early perhaps as this date (Avadan. asok.) Vrihaspati succeeded by Vrichasena, now king at Pataliputra on the Ganges. — He is called Somasarman in the Puranas (Burn. i. 430 to ii. 778).

"113 B. C." (Clint. iii. p. 346), in Syria, withdrawal to Aspendus of Antiochus VI.; and Antiochus Cyzicenus associated with him in the government.

"In this year" (Liv, and Clint), invasion of the Cimbri and Teutones; crossing the Alps into Illyria and Italy.

112 B. C. = "6th year of Ptolemy VIII.," in a papyrus showing that he had attained his majority and was now sole ruler of Egypt (C. Mull. geogr. min. i. p. lvii.).

About this time (Sm. b. d.), the orator L. Licinius Crassus as Roman quaestor visiting Asia, where he heard Metrodorus of Scepsis. On his return, he received instruction from the philosopher Charmidas at Athens. — He died "B. C. 91."

Larix Europæa of the mountains of middle Europe. Called in Britain *larch*, in Germany "lärche" (Prior), in France "mélèze" (Nugent), in North Italy "larice" (Lenz); and clearly the "picea" tree called according to Metrodorus of Scepsis "padus" by the Gauls, abounding at the source and giving its name to the river Padus, — in the Ligurian language called "Bodincum" (Plin. iii. 20, compared Cerasus padus): the "larix" is mentioned by Vitruvius ii. 9, Isidorus xvii. 7, and is described by Pliny xvi. 19 and 81 as a resin-bearing tree with pungent leaves and strong very durable wood: L. Europæa is described by Miller, is known to grow in Switzerland and Germany, and according to Lindley yields *Venice turpentine*. Eastward, this product imported from Subalpine Gaul where it is called "larika" is enumerated by Dioscorides i. 92; and to the present day the living tree continues unknown in Greece (Fraas, and others). By European colonists, L. Europæa was carried to Northeast America, where in our Northern States it continues sparingly cultivated for ornament.

"111 B. C." (Liv., and Clint.), war commenced by the Romans against Jugurtha in Numidia. — The war lasted five years.

"The same year" (Strab, and C. Mull. geogr. min. i. p. lvii), return of Eudoxus of Cyzicus from his voyage down the Red Sea to the Indian Ocean. The ship's prow surmounted with a carved horse's head found by him on the East coast of Africa, may be regarded as evidence of *commercial intercourse* with Hindustan (see below Socotra). — At the Braminical city of Toka on the Godaveri, I found river-barges having a figure-head of this pattern.

The "nēsŏi thĕ ĕuthaimŏnĕs" fortunate isles (Agatharch. 103) is a translation of the Sanscrit "dvipa sukhatara," — and hence the name Socotra, according to Bochart and others (C. Mull. geogr. min. p. 191). The Dioscoridis Island of the Greeks, is identified by writers; is said to have been colonized with Greeks by one of the Ptolemies (Cosm. Ind. iii. 179); contained a mixed population of Indians, Arabs, and Greeks in the days of the author of the Erythraean periplus p. 16; is mentioned also by Pliny vi. 32, and Claudius Ptolemy viii. 22; and Cosmas Indicopleustes conversed with some of the inhabitants speaking Greek, but did not land there.

That ships from the "mouth of the Indus" visited Socotra as early as this date, may be inferred from what has been above stated; and the "white cattle with the females hornless" on the "ĕuthaimŏnĕs" isles; — are regarded by Ritter, and C. Muller, as the *zebu* or Indian variety: cattle imported by Hindu merchants, were observed by myself in Southern Arabia.

As early possibly as this date, Hindu merchants proceeding farther Westward across the Desert to Meroe on the Nile. — There or in other localities along the river in Upper Nubia, "a figure unknown in Egypt" having "three lion's heads and four arms," was observed by Lepsius eg and sin. p. 156 to 178 (probably Braminical); also "tanks;" a "small temple, with riders on elephants, lions, and other strange barbarous scenes;" and at Soriba, "Indian work in ebony."

"110 B. C. = 1st year of the 'youan-foung' of Wou-ti" — (Chinese chron. table).

In or about 109 B. C. (see Clint. iii. p. 535, and C. Mull. p. liv.), Agatharchides in his old age writing his account of the Erythraean Sea.

The ΚΡΟΚΟΤΤΑΣ of East Africa described by Agatharchides 77 — is clearly the *spotted hyena*, H. crocuta.

Already in the time of Agatharchides 61, *circumcision* practised by the East African tribes; and in some instances among the Troglodytæ, total excision. "Blood and milk" also mixed together for food by the pastoral tribes; — as to the present day a little farther South among the Galla.

Beyond the agricultural Ethiopians bordering Egypt, the Rhizophagi on the Astaboras, are described by Agatharchides 50 as living on roots of ΚΑΛΑΜΩΝ growing in great abundance in the marshes: — *Phragmites communis*, eight feet high and called "matætæ," was observed by Grant "from 4° 55′ N. to 9° N. the banks of the Nile to the horizon are a sea of this *reed*," and farther South, made into flutes by the Waganda, "said to grow arm-thickness at Lake N'yassa," used for huts.

Herminiera elaphroxylon of Tropical Africa. The *pith-tree* is a Leguminous tree called "ambash" (Grant); and the ΥΛΗC: ΑΠΑΛΗC grasped according to Agatharchides 30 by the Ethiopians inhabiting the marshes, — may be compared: H. elaphroxylon was observed by Grant from "3° to 8° N.," its light logs used by the natives in swimming across the Nile, and the tree growing "so rapidly that in three years it almost choked up the channel of the r. Bahr-el-Gazelle." Westward, was observed by Guillemin and Perrotet in Senegambia.

Beyond the Rhizophagi, according to Agatharchides 51, the Spermatophagi and Hylophagi much resemble each other; the Spermatophagi living in summer on spontaneous fruits falling from the trees, and during the remainder of the year on an herb ΒΟΤΑΝΗC growing in shady valleys and having a stem like that of ΒΟΥΝΙΑCΙΝ.

Blepharis edulis of Nubia and Tropical Arabia. A Ruellioid plant called in Yemen "zogaf" (Forsk.); and possibly the ΒΟΤΑΝΗC in question: — B. edulis was observed by Grant, the only vegetation "on the firm sand desert behind Meroe, 16° 50′ N.;" by Forskal p. 114, about Lohaja and Mor in Yemen, the leaves "sapida," eaten crude; is known to grow as far as Persia (Burm. ind. pl. 42, and Pers.).

Ruellia sp. of Eastern Equatorial Africa. Included perhaps in the "vōtanēs" eaten by the Ethiopians: — observed by Grant "about 2° N." on the steep banks of the Nile, and eaten by his attendants "at Chogwe hills," in 5° 30′ S.

Sclerocarya birrea of Eastern Equatorial Africa. A forest tree called "m'choowee" (Grant); and its fruit probably included among those eaten by the Spermatophagi: — observed by Grant from "5° S. to 3° 15′ N." on the Nile, the kernels of its fruit eaten, and its wood used for grain-mortars. Received from Africa, and described by Hochstetter.

Anacardiaceæ ?? of Eastern Equatorial Africa. A tree called "m'soowee" (Grant); and its fruit probably among the kinds eaten by the Spermatophagi: — observed by Grant from Turah nullah 5° S. to "Madi 3° N." on the Nile, its bullet-sized plums eaten, and its wood used for grain-mortars.

Detarium sp. of Eastern Equatorial Africa. A Leguminous tree called "bootoo" (Grant); and its pods probably included among the fruits eaten by the Spermatophagi: — observed by Grant at "3° 15′ N." on the Nile, its fruit eaten.

Syzygium Guineense of Equatorial Africa. A small Myrtaceous tree called "m'sawa" (Grant); and its fruit probably among the kinds eaten by the Spermatophagi: — observed by Grant in "3° N." on the Nile, its fruit eaten. Westward, was received by Decandolle from Guinea.

Terminalia sp. of Eastern Equatorial Africa. A large tree called "m'foof'oo" (Grant); and its nuts probably included among the fruits eaten by the Spermatophagi: — observed by Grant from Unyanyembé to Gani, 5° S. to 3° N. on the Nile, its nuts eaten, and its wood used for building and for tinting bark-cloth yellow by the Wanyamuezi.

Rubiac. of Eastern Equatorial Africa. Called "m'koolookootoot'oo" (Grant); and its fruit probably included among the kinds eaten by the Spermatophagi: — observed by Grant in Madi on the Nile, its drupe pleasant-tasting.

Carissa sp. of Eastern Equatorial Africa. Resembling an orange tree, thorny and called "m'fombwah" (Grant); and its fruit probably among the kinds eaten by the Spermatophagi: — observed by Grant in "3° N." on the Nile, its fruit eaten, and its roots used to remedy coughs by the Wanyamuezi.

Vitex sp. of Tropical Africa. A very handsome umbrageous tree called "m'foo" (Grant); and its fruit probably among the kinds eaten by the Spermatophagi: — observed by Grant in "forests 3° 58′ S. to 2° 30′ N." on the Nile, its fruit eaten, and wood made into drums: by Livingstone no. 5, observed farther South; received also from Africa and described by Don.

Ficus sp. of Eastern Equatorial Africa. A large tree (Grant); and its fruit probably among the kinds eaten by the Spermatophagi: — observed by Grant, "Jan. and Feb.," Madi to Gondokoro "4° 54′ N." on the Nile, its figs half an inch in diameter, sweet.

Rhamnus sp. of Eastern Equatorial Africa. A shrub called by the Wanyamuezi "m'quætæquætæ" (Grant); and its fruit possibly among the kinds eaten by the Spermatophagi: — observed

by Grant growing by water at "3° N." on the Nile, its berries sweet; and a mash of them and its leaves used to bring fish to the surface.

On the other hand, the Hylophagi according to Agatharchides ascend trees in whole families, and eat ΑΠΑΛΩΤΑΤΗΝ: ΥΛΗΝ the tender parts of the extreme branchlets, and both men and women go entirely naked.

Crataeva Adansoni of Tropical Africa. A Capparideous tree; and its young shoots probably included among the ΑΠΑΛΩΤΑΤΗΝ: ΥΛΗΝ eaten by the Hylophagi: — observed by Guillemin and Perrotet in Senegambia; by Grant, in "3° 15′ N." along the Nile, its "fresh shoots made into spinage and young branches into tooth-scrubbers."

Capparis tomentosa of Tropical Africa. Called in Madi "kowangwee" (Grant); and its leaves probably included among the "apalŏtatēn ulēn" eaten by the Hylophagi: — received by Lamarck enc. 606 from Senegal (Pers.); observed by Grant on "Madi plains" on the Upper Nile, in famines spinage made from its leaves.

Afzelia Petersiana? of Eastern Equatorial Africa. A forest tree called "makola" (Grant); and its young leaves probably included in the "apalŏtatēn ulēn" eaten by the Hylophagi: — observed by Grant from Uzaramo opposite Zanzibar to "Madi 3° N." on the Nile, its young leaves eaten as spinage, and its wood used for quivers drums and door-planks.

Leptadenia lancifolia? of Tropical Africa. An Asclepiaceous plant; and its flowers and tender shoots included perhaps in the "apalŏtatēn ulēn" eaten by the Hylophagi: — observed by Grant in "3° N." on the Nile, spinage made of its flowers and tender shoots. "Cynanchum lanceolatum" was received from Africa by Poiret, and is termed "c. hastatum" by Persoon (Steud.).

Protea sp. of Eastern Equatorial Africa. A low tree called in the Kinyoro language "m'zaza," in the Kihiyow "king'eezee" (Grant); and its leaves perhaps included in the "apalŏtatēn ulēn" eaten by the "Hylophagi: — observed by Grant in "Madi woods" on the Upper Nile, the leaves eaten as spinage in dearths, and where it abounds the natives say "copal is also found."

Zizyphus melanogona of Eastern Equatorial Africa. A species resembling Z. jujuba is called in the Kinyoro language "kalembo," in Suahili "m'konazee" (Grant); and the ΠΑΛΙΟΥΡΟΥ: ΚΑΡΠΟΝ mixed according to Agatharchides 34 in pounded fish by the Ichthyophagi along the sea-coast, — may be compared: also the "grape tree" with "fruit having a stone," seen by Ebn Batuta 9 at Makdashu on the African coast: observed by Grant in Ugani, and common everywhere, its branches made into fences, and its fruit mashed and thrown into the water to bring fish to the surface; observed by myself, a single tree planted on Zanzibar, the leaves glaucous beneath, and clearly the same species in Hindustan, planted around villages on the Deccan. *Z. melanogona* was observed by Bojer, a tree growing on Mombas Isle, and specimens were carried to the Mauritius Islands and cultivated.

Zizyphus spina Christi of the Sahara or Great Desert and its continuation in Arabia. Called in Egypt "sidr" or "nabk" (Forsk.) and its fruit "nabqah" (Del.), in Yemen "sidr" or "ghasl" or "ælb," but the straight-branched variety "ardj" or "ŏrredj" (Forsk.); and possibly furnishing the withs ΠΑΛΙΟΥΡΩΝ: ΛΥΓΟΙC used according to Agatharchides 63 by the Troglodytes (Galla) in binding up corpses: — Z. spina Christi is termed "z. africana" by Miller (Steud.); was observed by Alpinus pl. 19 in Egypt; by Forskal, in gardens at Cairo, the fruit eaten; and again by Forskal p. 204, in Tropical Arabia; is known to grow in Aethiopia, and as far as Palestine (Pers.). Westward, was observed by Desfontaines fl. atlant. in Algeria (Del.); is perhaps the species seen by myself not exceeding the dimensions of a shrub on the Cape Verd Islands.

Bassia Parkii of Tropical Africa. The *shea butter tree* is called "meepampa" (Grant); and the drink according to Agatharchides 61 made from a flower for the Troglodyte chiefs, and resembling poor must ΓΛΕΥΚΕΙ, — may be compared (sugar and an intoxicating liquor being obtained from the flowers of other species of Bassia in Hindustan): B. Parkii was observed by Grant only at "3° N." on the Nile, its thick bark cut away to cause the exuding of a hard white insoluble gum, but its wood too hard for the iron tools of the natives. Westward, was observed by Park in Senegambia, and is described by G. Don. According to Burnett, much of the *palm oil* of commerce is yielded by species of Bassia or other Sapotaceæ (Lindl.).

Salvadora Persica of Nubia, Abyssinia, and Tropical Arabia. Called in Nubia "rak" (Del.) or "arak" (Grant), in Yemen "rak" or "redif," or the tree "örk" and its fruit "kebath" (Forsk.); and the ΚΑΡΔΑΜΟΥ of incredible size, growing according to Agatharchides 84 on the plains extending from the extreme promontory of the Troglodytes (beyond the Red Sea) back to the Psebaean mountains, — may be compared: the "mustard-tree" of the parable (Matth. xiii. 31, Mark iv. 31, and Luke xiii. 19), or the "chardal" of the Talmudists affording timber "sufficient to cover a potter's shed," is referred here by Royle (Kitt. bibl. cycl.); and "rahŏus" are mentioned by Pausanias ii. 32: "rack-trees" were observed by Bruce on the Taranta mountains in Abyssinia; S. Persica, celebrated in Arab song as an antidote against poison, was observed by Forskal p. 32 along the base of the mountains in Yemen; its fruit eaten, and bruised leaves applied to tumours; by Grant,

on the "Nile banks in any quantity at 7°," its wood used for tooth-scrubbers; by Delile, on mount Ghareb in Upper Egypt; by Irby and Mangles, at the Southern extreme of the Dead Sea; and is known to occur in the low valley of Engedi (J. D. Hook., and Sm. bibl. dict.). Farther East, "grows to be a very large tree" in Scinde and Northern Hindustan (Drur.); is called in Northern Hindustan "kharjal" (Royle) or "miswak" toothbrush tree (pharm. Ind.), in Telinga "ghoonia" or "pedda-warago-wenki," in Tamil "ooghai" (Drur.); was observed by Roxburgh cor. i. pl. 26, Ainslie, and Wight, on the Circars and in peninsular Hindustan; by Graham, "near the sea, both Concans," but by myself, a large tree planted around villages on the Deccan; the berries according to Stewart punj. are sweetish and much eaten, the seed according to Royle having an aromatic pungency and substituted for mustard; and according to Lindley, and others, the bruised bark of the root is often used by the natives for raising blisters.

Mimusops kummel of Abyssinia. A tall tree called there "kummul" (Bruce), on the Nile "m'nyemvee" (Grant); and probably included by Agatharchides 84 among the various fruits unknown to the Greeks and having a feeble ΝΩΘΡΑΝ taste, growing in this region: — M. kummel was observed by Bruce xii. pl. 54 in Abyssinia; by Grant, at "3° 15′ N." on the Nile, in the bed of a rocky stream, common.

Raphia vinifera of Equatorial Africa and Madagascar. A lofty palm called on Madagascar "raffia" or "ruffia" (Boj.), on the Upper Nile "nakhl-el-Faraoon" Pharaoh's date-palm (Schweinf.); and a ΦΟΙΝΙΚΟC of incredible size is mentioned by Agatharchides as growing in this region: — R. vinifera was observed by Beauvois pl. 45 frequent along the banks of streams in Oware and Benin; by Schweinfurth v. to xiv., in Lat. 5° on the Upper Nile, its fronds "twenty-five to thirty-five feet" long, their midrib "the most popular building material throughout Central Africa," and observed by myself substituted for house-ladders on Zanzibar; growing also according to Bojer in marshes along the East coast of Madagascar. By European colonists, was carried to the Mauritius Islands, where it continues under cultivation and growing spontaneously (Boj.). From transported specimens is described by Jacquin fr. pl. 4 (Pers.).

Thespesia populnea of Tropical shores from Africa to the Samoan Islands in the Pacific. The *bendy* or *portia* tree is called in Hindustanee "parspippu," in Bengalee "poresh," in Canara "boogooi," in Telinga "ghengheravie," in Tamil "pooarasoo" or "porsung" (Drur.); and the ΜΑΛΑΧΗC of incredible size, growing according to Agatharchides 84 in the region in question, — may be compared: T. populnea was observed by myself planted in a court-yard in Mocha, its leaves used medicinally as a cooling application, while at Zanzibar the tree was growing wild along the seashore; is known to occur also in Guinea (Graham). Eastward, was observed by Rheede i. pl. 29 in Malabar; by Graham in the environs of Bombay, but by myself only under cultivation there; by Roxburgh, Ainslie, Wight, and Drury, in other parts of peninsular Hindustan and as far as Bengal, remarkable for its easy growth from cuttings and frequently used for roadside avenues, its wood making pretty furniture, and selected for purposes where closeness of grain is required; by Mason, "exotic" in Burmah; by myself, to all appearance indigenous in the Malayan archipelago; by Blanco, on the Philippines, and called in Tagalo "boboi gubat;" and is figured by Rumphius ii. pl. 74 (Pers.). Farther East, was known to the first colonists of New Zealand, for its Polynesian name "miro" (Hale) was retained for a New Zealand tree (see Podocarpus ferruginea); was observed by myself submaritime and indigenous along the shores of the Feejeean, Tongan, and as far as the Samoan islands; by Rich, on the Tarawan coral-islands; but clearly by Polynesian colonists, had been carried to the Hawaiian Islands, where it continued under cultivation.

The "Isles of the Chelonophagi," — described by Agatharchides 47. as low, very numerous, and abounding in *sea-turtle*, seem to be the Laccadive and Maldive Islands; this being the earliest Greek notice of *coral-islands*. The Chelonophagi are also mentioned by Artemidorus, Pomponius Mela, Pliny, Solinus, Claudius Ptolemy, and Marcianus.

The absence of *twilight* in this low latitude, and the disappearance during a portion of the year of the constellation Great Bear, — are mentioned by Agatharchides 104.

The "Isles of the Chelonophagi" (Maldive Coral-islands) continuing devoid of useful plants in the days of Agatharchides, the American coast visited by Polynesians hardly earlier than this date.

Cocos nucifera of islands along the Pacific side of the Panama Isthmus. The *cocoanut palm* is called in Mexico "coyolli" (Hernand), at Taheiti the fruit "nia" and the palm "ari" (Forst. esc. 49), throughout the Polynesian islands "niu," but also at Taheiti "ha'ari," by the Pomotuans "herei," by the Mangarevans "erei," by the Marquesans "eei," by the Rarotongans "akari" (Hale), throughout the Philippines "niog" in Tagalo and Ylocano and Camarines, but in Pampango "ngoñgot" (Blanco), in Malay "nyor" (Crawf.), in Burmah "ung" (Mason), in Sanscrit "narikela," in Telinga "nari kudum" (A. Dec.), in Bengalee "narikel," in Hindustanee "nariyal" (D'roz.), in Tamil "taynga" (Drur.), in Yemen "nardjil" (Forsk.); and known to the Polynesians, if not before colonizing the Hawaiian islands, prior at least to their colonizing New Zealand, for on leaving the Trop-

ics they yet retained its name, "kakari" — in New Zealand signifying "feast:" C. nucifera throughout the Pacific occurs only on those islands to which it has been carried by the natives, a fact well known to traders; was observed by myself only under cultivation throughout the islands of the Pacific and the Malayan archipelago. Farther West, three hundred and sixty different uses of a "phoinikos" are enumerated in a Persian poem (Strab. xvi. 1. 14); nuts were seen by Apollonius of Tyana in Hindustan, such as in the days of Philostratus iii. 5 were kept as curiosities in the temples of Greece (Beckm.); the "karuon megiston ton inthikon," is mentioned in pseudo-Callisthenes iii. 8, "karuston to megiston to inthikoun" by Palladius brachm. 5 (C. Mull. fragm. Ctes.); "argellia" were growing on the Maldives and Laccadives in the days of Cosmas Indicopleustes xi. 336; "na-lo-k'i-lo" were seen in Hindustan by the Chinese traveller Hiouen-Thang; the cocoanut palm is fully described by Ebn Wahab, and Abu Zaid, who speak of a class of devotees planting it on uninhabited islands (a seeming explanation of its presence on the Mauritius Islands. "two centuries" before the time of Marcgraf); and imported nuts are mentioned by Rhazes, Haly Abbas, Avicenna, and Mesue: C. nucifera was observed by myself along the seashore of Western Hindustan and Eastern Equatorial Africa, cultivated for its crude sap or "toddy;" at Musqat, was said to be cultivated "in the Interior country; at Mocha, a locality given by Forskal, I found only one or two young shoots; but in Egypt, nuts in quantities imported by the way of Mecca and the Thebaid. Eastward from the Polynesian islands, nuts were seen by Columbus on his fourth voyage, in Central America (Churchill coll.); the living C. nucifera is said by Oviedo to abound "in the province of the cacique Chimam," on the Pacific side of the Isthmus; by Dampier, to grow not on the main land but on outlying islands; was observed by Wafer, and Vancouver, covering the uninhabited not far distant Cocos Island. By European colonists, was carried to the West India islands in the life-time of Petrus Martyr i. 148 (Sloane ii. 9); afterwards to Brazil (Marcgr. and Pis. 65 to 138); to Congo and Benguela (Marcgr. 138, and Mart. 125); and to the Cape Verd Islands, observed there by myself.

Paritium tiliaceum of wooded Tropical shores around the Globe. A straggling interlaced tree of medium size called in Malabar "paroottee," in Bengalee "bola" (Drur.), in Burmah "lyee-nya-sha" (Mason), in Tagalo and Pampango "balibago," on Cebu "malabago" and Dagami "raguindi" (Blanco), on the Feejeean Islands "vau," on the Tongan Samoan and Nukahivan Islands "fau" (Hale), by the Mosquito tribe of Honduras "maho" (Damp.), in Carib "onagneii." (Descourtilz); and except on secluded coral-islands familiarly known to the Polynesians: — observed by myself forming groves along the seashore from the Hawaiian Islands and Metia to the Feejeean Islands and the Malayan archipelago, its bark everywhere used by the natives for making cordage, coarse and fine; by Blanco on the Philippines, and by Rumphius ii. pl. 73, used for the same purpose; by Mason v. 520 in Burmah, one of the three trees from which "ropes are more frequently made;" by Rheede i. pl. 30, in Malabar; by Roxburgh, Wight, and Drury, in other parts of the peninsula; but by Graham, under cultivation only in the vicinity of Bombay. Westward, was observed by Drège in Austral Africa; is known to grow along the Atlantic in Equatorial Africa (R. Brown, Hook., and A. Dec.); was observed by Lerius, and A. Saint-Hilaire, in Brazil; by Sloane, Macfadyen, and Descourtilz, in the West Indies; by Dampier in Honduras, its bark furnishing cords and fishing lines. "P. tricuspe," a single tree observed on Taheiti, appeared to me only a remarkable deviation in the form of the leaf. *P. macrophyllum*, distinguished in Burmah and called "bet-mwæ-shau," is enumerated by Mason v. 520 as another of the three trees from which "ropes are usually made."

Siegesbeckia Orientalis of Tropical and Subtropical Australia? A weed called in the environs of Canton "chimag" (Osb.); and known to the Polynesians as early probably as this date: — received from Mexico (Pers.); observed by myself in cultivated and fallow ground on Metia, Taheiti, Tongatabu, New Zealand, and seemingly indigenous on the tide-water flat of the Hunter river in Australia; observed by Thunberg, in Japan; by Osbeck, in the vicinity of Canton; by Roxburgh, and Wight, in peninsular Hindustan; by Graham, and Lush, "common in the Deccan," but no native name is given; by Forskal p. 151, in Tropical Arabia; and received from the Caspian countries by Buxbaum cent. iii. pl. 52, and Bieberstein (Steud.); was observed by Bojer on Madagascar and the Comoro Islands. Probably by European colonists was carried to the Mauritius Islands, where it has become naturalized (Boj.).

Ageratum conyzoides of Tropical America. A weed carried to the islands of the Pacific as early perhaps as this date: * — observed by myself abounding seemingly indigenous on the Hawaiian

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* *Adenostemma viscosum* of Tropical America? An herbaceous weed carried to Taheiti as early possibly as this date: — observed there by Forster prodr. 284; by myself, there and on the Hawaiian, Samoan, and Feejeean Islands, frequent in neglected clearings, also in the Malayan archipelago; by Thunberg, in Japan; by Burmann pl. 42, on Ceylon; by Rheede x. pl. 63, in Malabar; by Graham, "a common weed" as far as Bombay.

Bidens pilosa of Tropical and Subtropical America. A white-rayed species carried to the islands

Islands, and naturalized on the Taheitian and Feejeean; by Blume bijdr. 906, on Java; by Mason, in Burmah; by Hermann par. 161 (Spreng.), and Gardner soc. hort. iv. 40, on Ceylon; by Roxburgh, in Hindustan, but devoid of a Sanscrit or any ancient name (A. Dec.); by Law, and Graham, "one of the commonest weeds in gardens at Belgaum," also "in Bombay, and generally everywhere;" by Bojer, on Madagascar; by myself, on Zanzibar; by Grant, "common near fields 2° N." on the Nile; is known to occur as far as the Atlantic at Cape Verd (Perrottet) and Congo (R. Brown). Westward, was observed by Sloane i. pl. 152 in the West Indies; by myself, in Southern Brazil; and is known to grow from S. Lat. 37° in Chili along the Western coast as far as the Galapagos Islands (Beech. voy. 30, and J. D. Hook.) and Mexico (Kunth). By European colonists, was carried to the Mauritius Islands, where it has become naturalized (Boj.); to Austral Africa (Drège); to St. Helena and Madeira, observed by myself; to the vicinity of Savannah in Georgia (Torr. and A. Gray, and Chapm.). Transported to Europe, is described by Plukenet phyt. pl. 88.

Ipomoea pes-capræ of sandy Tropical shores around the Globe. A spreading prostrate vine called in Malabar "schóvanna-adamboe," in Hindustanee "dopate-luta," in Bengalee "chagul-khooree" (Drur.), in the environs of Bombay "dobutee-luta" or "chagul-koon" (Graham), in Burmah "pen-lay-ka-zwon" (Mason), in Tagalo and Bisaya "catangeatang" or "lagairai" or "lampayong," in Ylocano "lambayong" (Blanco); and, except on secluded coral-islands, familiarly known to the Polynesians all the way to the shores of America: — observed by myself in loose seaside sand from the Hawaiian Islands and Metia to the Feejeean Islands; by R. Brown, as far as the shores of Australia; is described by Rumphius v. pl. 159; is known to grow in China (Graham); was observed by Blanco frequent on the seashore of the Philippines, its leaves regarded by the natives as having the remarkable property of removing excrescences in wounds; by Mason v. 479, in Burmah, its leaves applied externally for medicinal purposes; by Rheede xi. pl. 57, in Malabar; by Roxburgh, and Drury, in other parts of Hindustan; by Graham, "common on sandy beaches as far as Bombay, its leaves boiled by the natives and applied externally in colic;" by myself, on Zanzibar. Westward, is known to grow on the Atlantic side of Equatorial Africa (R. Brown cong., and Benth. fl. nigr.); was observed by myself on the seashore of Southern Brazil; is known to grow also in the West Indies and as far as St. Augustine and N. Lat. 31° on Cumberland isle (N. A. Ware, J. Read, Ell., and Chapm.); also from La Guayra to Porto Bello on the Panama Isthmus; and was observed by J. D. Hooker on the Galapagos Islands. Transported to Europe, is described by Hermann hort. lugd. pl. 175.

Physalis angulata of Tropical America. Called in Malabar "inota inodien" (Rheede), in Burmah "pung-ben" (Mason), in Ylocano "tuttullacac" (Blanco), on Taheiti "tamani" (Bertero), on the Hawaiian Islands "kamani" (. . . .); and carried to the islands of the Pacific as early perhaps as this date? — observed by Bertero on Taheiti; by myself, a weed only, diminutive and smooth, on the Hawaiian, Taheitian, Samoan, Tongan, and Feejeean Islands, and the Malayan archipelago; by Blanco, on the Philippines; by Thunberg, in Japan; by Mason, in Burmah; by Grant, its "leaves used as a vegetable, by huts 2° N." on the Nile. Eastward, was observed by Ruiz and Pavon ii. 42

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of the Pacific as early perhaps as this date: — observed by Mann on the Hawaiian Islands; by myself, a weed on the Taheitian, Samoan, Tongan, and Feejeean Islands; by Forster, on the Tongan Islands; and by him, and Lesson, on New Zealand (A. Dec.). Eastward, was observed by myself in the environs of Valparaiso and Lima; by Aublet 794, in Guayana; by Maycock, in the West Indies; and by Chapman, in "South Florida." By European colonists was carried to the Bay of San Francisco, where I was informed by Spanish residents it gave the name "Herba Buena" to the landing-place on the South side (now the city of San Francisco); was also carried to the Canary Islands (A. Dec.), Cape Verd Islands and neighbouring coast of Guinea (Webb in fl. nigr. 142), and to the Mauritius Islands (Dec.). Transported to Europe, is described by Dillenius pl. 43 (Pers.).

Dracontium (*Arisæma*) *polyphyllum* of Tropical America. Called in Guayana "labaria," being one of the remedies against the bite of the labarri snake (Lindl.), observed by Descourtilz wild in the West Indies: carried to the Polynesian islands as early possibly as this date: — cultivated on the Society Islands and its roots eaten in times of scarcity, also in Japan where a medicine is prepared from them (Drur.); observed by myself frequent in cultivated ground on the Samoan Islands, rare on the Feejeean. Farther West, is called in Tamil "caat-karnay" or "caat-carnaykalung," in Telinga "adivie-kanda," in Hindustanee "junglai-kandi" (J. F. Wats.); was observed in Hindustan by Ainslie, Piddington, Speede, and R. N. Brown, the prepared root regarded as antispasmodic, a valuable remedy in asthma, and used by the natives in hæmorrhoids (Drur.).

Canna angustifolia? of Tropical America. A low yellow-flowered species that may have been introduced into the Hawaiian Islands as early as this date: — observed by myself only on Oahu, abundantly naturalized in the valley leading inland from Honolulu.

in Peru; is known to grow in the West Indies (Pers.); was observed by Baldwin as far as N. Lat. 30° in Florida, by Chapman in "fields and waste ground Florida and Northward," and by Elliot as far as Savannah. Transported to Europe, the "helicacabum" of Camerarius hort. med. pl. 17 is referred here by Sprengel, and P. angulata is described by Dillenius elth. xiii. pl. 12. "P. minima" observed by Rheede x. pl. 71 in Malabar, described also by Hermann lugd. pl. 571 (Pers.), "a common annual" around Bombay and "covered with clammy hairs" is yet regarded by Graham as probably not distinct.

Euxolus viridis of Tropical America. A weed called in Brazil "caruru" (Lindl.); and known to the Polynesians as early perhaps as this date: — observed by Lay and Collie on the Taheitian Islands; by myself, on Metia and the Samoan Islands; is known to grow on Java (Moq.); was observed by Roxburgh in Hindustan; by Graham, as far as Bombay, "a common weed in gardens and cultivated grounds," but he gives no native name; is known to occur also near dwellings in Abyssinia, North Africa, and as far as Europe and the Canary Islands. Eastward from the islands of the Pacific, was observed by Marcgraf and Piso 241 before 1658 in Brazil, where it continues to be used "for emollient poultices" (Lindl.); was received from Brazil and the West Indies by Moquin (Dec. herb. and prodr.).

Canna Indica of Tropical America. The scarlet-flowered *Indian-shot* is called in Malabar "katoo-bala," in Tamil "kull-valei-munnie," in Telinga "krishna-tamarah," in Bengalee "surbo-jaya" (Drur.), in the environs of Bombay "dewa-keli" or "nana-keli" or "vana-keli" or "akulbuera" (Graham), in Burmah "bud-da-tha-ra-na" (Mason), in Tagalo "cacuentasan" or "ticas" or "ticas ticas" or "tiquis tiquis" (Blanco), in Carib "couroualy" or "balyry" or "bacuacanga" (Desc.); and known to the Polynesians as early perhaps as this date: — observed by myself cultivated by the natives for ornament on the Taheitian, Samoan, Tongan, and Feejeean Islands, and found by Rich naturalized on the Samoan Islands; is termed "cannacorus" by Rumphius v. pl. 71; was observed by myself in gardens at Manila; by Mason v. 434 to 806 "exotic" in Burmah, much cultivated by the natives "for the seeds which they use for sacred beads;" by Rheede xi. pl. 43, in Malabar; by Roxburgh, and Drury, in other parts of Hindustan, its root given to cattle that have eaten poisonous grass; by Graham, "in gardens everywhere" in the environs of Bombay, and sometimes called *Indian bead*. Eastward from the islands of the Pacific, seeds were brought to Portugal from the West Indies in the early part of the Sixteenth century (C. Bauhin); "its leaves are used to thatch houses with in Cayenne" (Graham); and the living plant was seen in the West Indies by Descourtilz; by myself, seemingly wild in the environs of Rio Janeiro. By European colonists, may have been carried to the Hawaiian Islands, where I found it only in the gardens of resident Whites. Transported to Europe, is described by Gesner, Lobel, Camerarius, and Morison iii. pl. 14; has become naturalized on Sicily (Guss., Parlat., and A. Dec.); and was observed by Forskal, and Delile, in the gardens of Egypt, its seeds sold in the drug-shops.

Kyllingia pumila of Tropical and Subtropical America. A diminutive Cyperaceous weed called in Tagalo "muthang anuang" (Blanco); and except on secluded coral-islands, long familiarly known to the Polynesians: — observed by myself in moist situations, as though accompanying taro culture, on the Hawaiian, Taheitian, Samoan, and Feejeean Islands, and in the Malayan archipelago; by Blanco, frequent on the Philippines and known to the natives; is known to occur on Timor (Decaisne); is described by Rumphius vi. pl. 8; was observed by Mason in Burmah; by Rheede xii. pl. 53, in Malabar; by Roxburgh, in other parts of Hindustan; by Graham, as far as Bombay; by Forskal, "schoenus dubius? spicar. capit. terminal." on the mountains of Yemen; by Bojer, on Madagascar and the Comoro Islands; and is known to occur in Western Equatorial Africa. (Benth. fl. nigr.). Eastward from the islands of the Pacific, was observed by myself in Peru and Southern Brazil; was received by Kunth from Caraccas; was observed by Baldwin at Bahia, and at Savannah in Georgia; by Pursh, and Elliot, in South Carolina; by Chapman, "wet places Florida to North Carolina;" by Nuttall, along the Mississippi; by Short, in Kentucky; and by Michaux, as far as the Scioto. By European colonists, was carried to St. Helena, observed there by myself; to the Mauritius Islands (enumerated by Bojer as indigenous).

Cenchrus echinatus of Tropical and Subtropical America. A spiked *bur grass* called in Yemen with other burs "hobb el adjais" (Forsk.), in Tagalo "aguingai" (Blanco), and carried to the islands of the Pacific as early perhaps as this date: — received by Cavanilles v. pl. 463 from Babao (Tongan Islands); observed by myself abundantly naturalized on the Hawaiian, Taheitian, Tongan, and Feejeean Islands; by Blanco, at Batangas, and received also from Luzon by Kunth i. 166; by Bentham from Hindustan; observed by Forskal p. 25 at Menejræ in Yemen; and known to occur in cultivated ground in Western Equatorial Africa (Benth. fl. nigr.) and Barbary (Pers.). Eastward from the islands of the Pacific, is known to grow in Mexico, Cumana, Brazil, the West Indies (Kunth); was observed by Elliot in South Carolina; by Chapman, in "fields and waste grounds Florida to North Carolina." By European colonists, was carried to the Mauritius Islands,

where it has become naturalized (Boj., and A. Dec.). Transported to Europe, is described in 1696 by Plukenet alm. pl. 92..

"108 B. C. = 4th year of the war with Jugurtha, Q. Fabius Maximus Allobrogicus and C. Licinius Geta censors at Rome" (Sm. b. d.). Not earlier than this date, the Licinian sumptuary law, assigning a limit to "the expense of eating for each particular day." The law is attributed to P. Licinius Crassus, whose brother M. Licinius Crassus — became praetor in the following year; it was abolished "B. C. 98" (A. Gell. ii. 24, Val. Max. ii. 9. 5, Blair, and Sm. b. d.).

The law is mentioned by the poet Lucilius, — who died "B C. 103" (Hieronym. chron.).

Chenopodium rubrum of Europe and the adjoining portion of Asia. Called in Britain with other species *goosefoot* (Prior), in Germany "gänsefuss" (Grieb); and the CHAENOPADAS of Lucilius, — and Macrobius, is referred here by writers: C. rubrum is described by Morison ii. pl. 31, is termed "c. pes anserinus primus" by Tournefort inst. 506, and is known to occur in waste and cultivated ground throughout middle Europe as far as Denmark (fl. Dan. pl. 1149, Curt. lond. vi. pl. 20, and Pers.). Eastward, was observed by Sibthorp along walls at Constantinople; and by Forskal around Cairo in Egypt. (Compare C. album.)

"107-6 B. C." (Porphyr., and Clint. iii. p. 399). The hieroglyphic ovals of Ptolemy IX. Alexander, occur on the monuments: but his reign is included in that of his brother Ptolemy VIII. (see below).

"105 B. C.," date of a *deed* for the sale of a piece of land (discovered in Egypt and translated by Champollion-Figeac p. 439). The deed is accompanied with evidence, of the existence already of the system of *public Registry*.

"104 B. C. = 1st year of the 'tai-tsou' of Wou-ti" (Chinese chron. table). Sse-ma-thsian about this time commencing his great historical work, called the "Sse-ki" — (Pauth. p. 246).

The same year (= "169th Ol." of Marcian peripl. Menipp. 3), Artemidorus of Ephesus writing. He had visited "gathēira" (Cadiz) and "Iĕrōu akrōtēriōū" (Cape Sagra), and describes the Spanish women as equalling the men in manliness, a point "in common with the Celts, Thracians, and Scythians," working in the fields, and not quitting even during parturition.

The East African coast beyond "Nōtōu kĕras" (Cape Gardafui opposite Socotra), unknown in the time of Artemidorus — (Strab. xvi. 4. 14).

Bambusa sp. of Equatorial Africa. A species of *bamboo* and "kalamŏn inthikŏn" used for bows on the upper waters of the Nile, is mentioned by Artemidorus: — "kalamōus" like the "inthikōis" were sent home by Bogus to his wife (Strab. xvi. 4. 9 to xvii. 3. 5): B. sp. was observed by Grant near the Eastern coast on the "Usagara hills 6° 30′ S., and not again till 3° 15′ N." on the Nile, growing in thick clumps fifteen to twenty feet high, and used for houses, baskets, bows, and spear-handles.

Dalbergia melanoxylon of Equatorial Africa. A small tree called in the Kinyoro language "m'teendeea," in the Suahili "m'pingo," at Ugogo "m'gembeh" (Grant); and the arrows "pĕpuraktŏmĕnōis" hardened in the fire, used according to Artemidorus by the same naked people — (Strab. xvi. 4. 9), may be compared: D. melanoxylon was observed by Grant "from 5° S. to 5° N." on the Nile, its hard heavy wood, impervious to insects, used for rafters, arrow-tips, wooden hammers for beating bark cloths, and its "root a cure for toothache." Westward, was observed by Guillemin and Perrotet in Senegambia.

Acacia horrida of Tropical Arabia. Called in Yemen "örfota" (Forsk.): and the "sturax" produced according to Artemidorus on the African side of the entrance to the Red Sea — (Strab. xvi. 4. 13), may be compared: A. horrida was observed by Forskal p. 177 along the base of the mountains of Yemen, its wood and "resina" employed in epilepsy as a fumigation, also in curing *Guinea-worm*, a disease called "sora" and the worm "örk." Transported to Europe, the plant is described by Plukenet alm. iii. pl. 121, and Jacquin hort. iii. 75 (Pers., and Steud.).

Ficus populifolia of Tropical Arabia. A tree called in Yemen "mudah" or "vudah," but by resident Banyans "baresch" (Forsk.); and possibly the "iĕrōn aigĕirŏna" already in the days of Artemidorus on the African side of the entrance to the Red Sea — (Strab. xvi. 4. 14): F. populifolia was observed by Forskal p. 180 among the mountains at Wadi Zebid, the dried leaves bruised and used for tanning, and matchlock cords made from the bark. Eastward, "F. cordifolia" called "pair" in the environs of Bombay (Graham), and "nyoung-gyat" in Burmah, where it is usually substituted for F. religiosa near "religious edifices" (Mason), may be compared. (See F. religiosa.)

Laurus (Oreodaphne) cupularis of Madagascar and the Mauritius Islands. A very large tree called in commerce "cinnamon of the Isle of France" (Lindl.) or by French residents "bois de canelle" (Aubl.); and the ΨΕΥΔΟΚΑCΙΑΝ attributed by Artemidorus to the African side of the entrance to the Red Sea — (Strab. xvi. 4. 14), may be compared: O. cupularis is known to grow in woods on the islands of Mauritius and Bourbon (Aublet i. 363, Lam., and Pers.), and on Madagascar, its wood "strong scented" (Lindl.).

Saccharum? sp. of Eastern Equatorial Africa. A grass five feet high (Grant); and the "phlōun" abundantly produced according to Artemidorus by a river on the African side of the entrance to the Red Sea — (Strab. xvi. 4. 14), may be compared: Saccharum? sp. was observed by Grant from the "Equator to 2° N." on the Nile, used by the Uganda and Unyoro for thatch (no flowers).

Pennisetum Benthami of Equatorial Africa. A reed ten feet high, called "maweengo-weengo" (Grant); and possibly the "phlōun" in question: — P. Benthami was observed by Grant "by water, Equator to 3° N., etc.," used in Uganda for fences and walls of houses, and slips as knives to cut meat. Received from Africa, and described by Steudel.

The *river porpoise* of the Ganges, Delphinus Gangeticus, mentioned by Artemidorus (Strab. xv. 1. 72): also, the presence there of crocodiles (the slender-beaked species, *C. Gang.?*).

"102 B. C." (Liv., Blair, and Clint.), the Teutones defeated at Aquæ Sextiae (Aix in Provence) by the Roman army under Marius.

Descriptions of plants by Cratevas, Dionysius, and Metrodorus, were accompanied by figures — (Plin. xxv. 4). Plants of late painted "nĕographa" are mentioned by Meleager cor. i. 55.

Corydalis tuberosa of Europe. The "mithridatiam" named after Mithridates by Cratevas, its root giving out two "acantho"-like leaves and between them a stem bearing "roseum florem" — (Plin. xxv. 26), may be compared: C. tuberosa is described by Cæsalpinus vi. 75; has two leaves and a simple stem and purple flowers (Spreng., and Lindl.), and is known to grow in shady woods in France (Dec. fl. fr. iv. p. 627, and Pers.). The root according to Lindley is "hollow" also "very bitter and rather acrid," and with that of the next species constitutes the "radix aristolochiæ" of the shops, "principally employed as an external application to indolent tumours."

Corydalis fabacea of middle and Northern Europe. Sold with the preceding under the name "radix aristolochiæ" (Lindl.), and perhaps the "aristolōhia" prescribed against gout by Cratevas, — and Gallus, further described in the addition to Diosc. iii. 4 and identified with the "arariza" or "mĕlĕkaprōum" or "ĕphĕstiōs" or "lĕstitis" or "puxiōnux" or "tharthanōs" or "iōntitis" of the Greeks, and "sōpitis" of the Dardanians. Farther South, with the "sōphŏĕph" of the Egyptians. Westward, with the rustic "apsiathiōn" of the Dacians, "thĕximōn" of the Gauls, "hamaimēlōn" of the Sicilians, and "tĕrrai mala" of the Italians: the external application of "pistolochiam" root was prescribed against gout by Celsus, and the "plistolochia" is distinguished from the "aristolochia" by Pliny xx. 14 and xxv. 55 and 90: C. fabacea is termed "pistolochia intermedia" by Bernhardi; is described also by Retz, and Ehrhart; and is known to grow in shady mountainous situations in Germany and other parts of middle Europe as far as Sweden (fl. Dan. pl. 1394, Pers., and Wahl.). The root according to Lindley is "solid," but like that of the preceding species "very bitter and rather acrid."

Papaver argemone of middle Asia. Called in Greece "agria paparōuna" (Fraas): the "argĕmŏnē" of Cratevas, — and Dioscorides, resembling "agria mĕkŏni," but the leaves multifid "anĕmŏnē"-like, the flower scarlet, capsule longer than in "mĕkŏni rōiathi" and enlarged at the summit, and the plant or root exuding a yellowish acrid juice, is referred here by writers: P. argemone was observed by Sibthorp, and Chaubard, in cultivated ground from the Peloponnesus to the Greek islands; by Bieberstein, in the seaside sand of the Crimea. Westward, the "argĕmŏnē" or "ōinŏnē" or "anthĕmis" or "anthŏs pĕthinōn" field flower or "ōmōnōia" is identified in Syn. Diosc. with the "kōrna" of the Gauls, and "liyōrnia" or "kōgkōrthialis" or "pĕrgalia" of the Romans: the "argemonia" is described by Pliny xxv. 56, and as occurring in cultivated ground in Italy: P. argemone was already in Britain in the days of Gerarde (Wats., and A. Dec.); is termed "p. erraticum capite oblongo hispido" by Tournefort inst. 238; and is known to occur in grain-fields and sandy soil in Southern and middle Europe as far as Denmark (fl. Dan. pl. 867, and Pers.).

Nasturtium armoracia of the Uralian plains. Called in Britain *horseradish* (Prior), in Germany "meerrettig" (Grieb), in Russian "chren" (Moritzi), in old French "moutarde des Allemands" and in current French "cran" or "cranson" (A. Dec.), in Italy "armoraccio" or "rafano rusticano" (Lenz), by the Greeks of Constantinople "kranōs" (Fraas), in which we recognize the kind of ΘΛΑCΠΙ called ΠΕΡCΙΚΟΝ: CΙΝΗΠΙ described by Cratevas as having broad leaves and a great root which is mixed in washes for sciatica — (Diosc. ii. 185): the account is copied by Pliny xxvii. 113: N. armoracia was observed by Pallas trav. i. 308 on the Lower Volga; by Belon, at Constantinople; by Grisebach, seemingly wild in European Turkey; is known to grow wild from Finland to Astrakhan and the Desert of Cuman (Ledeb., and A. Dec.). Westward, is regarded by A. Decandolle as introduced into Britain prior perhaps to the visits of Romans; is described by Petrus Placentius, Fuchsius 660, Matthioli, and T. Johnson, and is known to occur cultivated and naturalized in Italy and throughout middle Europe as far as Norway and Sweden (Pers., Fries, and Lenz). By European colonists, was carried to Northeast America, where it continues under cultivation and

has become naturalized, occurring in wild situations in New England. The root according to Lindley "is stimulant, diaphoretic, and diuretic, and externally rubefacient: it is used in paralysis, rheumatism, dropsy, and some cutaneous affections."

Verbena officinalis of the Galapagos Islands and neighbouring continental America. Called in Britain *vervain* or *pigeon's grass* (W. Coles, and Prior), in Sweden "jernört," in Germany "eisenkraut" (Spreng.), in France "verveine" (Nugent), in Italy "berbena" (Targ.), in Greece "staurōvōtani" (Sibth.) or "agria hamanthrua" (Fraas), in Japan "komatsutsura" or babinso" (Thunb.); and the ΠΕΡΙΣΤΕΡΙΩΝΟΣ of Cratevas, its leaves divided in such a manner as to resemble a dove's foot — (schol. Nicand. ther. v. 860) may be compared: V. officinalis is figured in the illustrated ms. Diosc. at Vienna, also in Ort. Sanitat. pl. 486; is described by Braunsweig dist. f. 102, Brunfels, Fuchsius 593, Belon, Matthioli, Lobel; is termed "v. communis cæruleo flore" by Tournefort inst. 200; is known to occur in waste places from Sweden to Italy, Algeria, and the Canary Islands (fl. Dan. pl. 628, Pers., and Fries); was observed by Forskal near Marseilles; by Sibthorp, Chaubard, and Fraas, frequent around villages from the Peloponnesus throughout the Greek islands; by Delile, and myself, in Egypt; is known to occur in Abyssinia (A. Dec.), around Caucasus (Ledeb.), and in Nepal (Schauer in Dec. prodr.); was observed by Forskal in the mountainous portion of Yemen; by Graham, "in gardens" at Bombay; by Mason, "exotic" in Burmah; by Beechey 205 to 268, in Southern China; and by Thunberg, in Japan. Farther East, "virbena similar to that of Spain" was seen by Oviedo xi. 2 in the West Indies; and V. officinalis, if not indigenous, may have been carried Northward by the aboriginal tribes, remaining sparingly along "roadsides" in our Atlantic States (A. Gray, and Chapm.); was observed by Beechey in Mexico; by J. D. Hooker, on the Galapagos Islands; by A. Saint-Hilaire, in the outskirts of inland towns in Southern Brazil, and is known to occur as far as Buenos Ayres (Schauer). Clearly by European colonists, was carried to the Cape Verd Islands, Austral Africa, and Australia (A. Dec.; see V. supinà, Prasium majus, and Sisymbrium officinale).

Lithospermum callosum of the Egyptian Desert. A bristly-leaved hoary plant called in Egypt "halamæ" (Forsk.); and the Egyptian ΕΛΕΝΙΟΝ of Cratevas, growing on hillocks and in places near the sea, its branches a cubit long thrown out upon the ground, leaves like those of the lentil, root as thick as the little finger and attenuated downwards (clearly a Desert plant), may be compared: L. callosum is termed "echium ægyptium asperius incano folio" by Lippi, "l. niveum" by Poiret; is described by Delile as branching from the base so as to form rounded tufts a foot to a foot and a half in diameter; was observed by him, Lippi, and Forskal p. 39, on sand-hills near the sea at Aboukir and Rosetta, also around the Pyramids and in other parts of the Desert about Cairo. (See Thymus incanus).

Echinops sphærocephalus of the Mediterranean countries. Called in English gardens *globe thistle* (Prior); and the ΚΡΟΚΟΔΕΙΛΙΟΝ resembling according to Cratevas ΜΕΛΑΝΙ: ΧΑΜΑΙΛΕΟΝΤΙ, its long acrid root having an odour like ΚΑΡΔΑΜΩ, — an account repeated by Dioscorides, is referred here by Lobel: E. sphærocephalus was observed by Sibthorp, and Chaubard, from the Peloponnesus frequent in Greece, the leaves in the wild plant more deeply incised. Westward, the account of the "crocodilion" by Pliny xxvii. 41 seems taken from the Greek: E. sphærocephalus is described by Lobel adv. 363 and obs. 481 (Spreng.); is termed "echinopus major" by Tournefort inst. 463; and is known to occur in waste ground as far as France (Lam. fl. fr., and Pers.).

Gnaphalium sanguineum of the East Mediterranean countries. The ΑΓΑΡΟΝ of Cratevas — is referred here by Anguillara 27 (Spreng.): G. sanguineum was observed by Rauwolf in Syria; is described also by Barrelier pl. 34; and was received by Linnæus from Egypt.

Camphorosma Monspeliaca of the Mediterranean countries and middle Asia. Called by the Kirghis "jouschanu" (Pall.): the third kind of "alimon" having according to Cratevas its leaves longer and "hirsutioribus," with the odour of cypress "cupressi," and used medicinally — (Plin. xxii. 33), may be compared: C. Monspeliaca is termed "chamaepeuce" by Anguillara p. 202 (Spreng.); is described also by Buxbaum i. pl. 28; is known to grow in Spain and Southern France; was observed by Gittard in the Peloponnesus; by Pallas trav. i. 600, on the Yaik, supplying feed for cattle in winter.

Fucus palmetta of European seas. The ΘΕΡΗΤΙΔΙΟΝ of Cratevas, growing on shells and rocks in the sea, — is referred here by Anguillara 171 (Spreng.).

101 B. C. (= 543 — "441 y. 9 mo. 10 days" in the Mahavamsa xxxiii.), Callona succeeded by his brother Walakan-abha, now king of Ceylon. — He caused "the three precepts of the doctrine Trepitteka" to be committed to writing, and reigned "twelve years and five months."

One hundred and twenty-sixth generation. B. C. 100, Jan. 1st, mostly beyond youth: the Greek poets, Licinius Archias; the philosophers, Zenon the Epicurean, Diotimus the Stoic, and Philon of Larissa; the astronomer Geminus; the mathematician Theodosius of Tripoli; the historians, Alexander Polyhistor, and Apollodorus of Artemita; the geographer Scymnus of Chios; the grammarian

Dionysius Thrax; the rhetors, Hermagoras, Athenaeus, Apollonius of Allabanda, Apollonius Molon, Dionysius of Magnesia, Menippus of Caria, Aeschylus of Cnidus, and Xenophanes of Adramyttium; other Greek writers, Athenodorus Cordylio: the Latin writers, Pomponius Bononiensis the dramatist, Quinctius Atta the comic dramatist; the historians, Cornelius Sisenna, Claudius Quadrigarius, and Valerius Antias; the orators, Rutilius Rufus, and M. Antonius; the grammarians, Aelius Lanuvinus, Servius Claudius, and Aurelius Opilius; the rhetors, Plotius Gallus, and Otacilius.

In this year (= "170th ol.," Sm. b. d.), the Greek poet Meleager collecting the Anthologia. He wrote the epitaph of an elder contemporary poet Antipater of Sidon.

Centaurea cyanus of the mountains of Sicily. Called in Britain *bluebottle* or *corn-flower* (Prior), in Germany "kornblume" (Grieb), in France "aubifoin" or "bluet" (Nugent), in Italy "fior-d'aliso" or "battisecola" or "ciano" (Lenz), in Greece "kuanōs" (Scarlat.), in which we recognize the KYANOC of Meleager coron. i. 40, — unknown in the time of Alexander according to Pliny xxi. 24, and discovered by and named from the colour of the flowers by Greeks: C. cyanus was observed by Sibthorp, and Fraas, in the Peloponnesus; and is known to occur sparingly as far as Caucasus (Bieb.). Farther South, the "libah" of Ebn Baitar is referred here by Sontheimer; and C. cyanus is enumerated by Clot-Bey as recently introduced by way of France into Egypt. Westward, the "cyanus" is mentioned by Pliny xxi. 39 as occurring in Italy: C. cyanus has been found in the debris of ancient lake-villages in Switzerland; is termed "flores frumentorum" in the Ortus Sanitatis (Prior), "cyanus segetum flore cæruleo" by Tournefort inst. 446; is extensively cultivated in Italy (Ten., and Poll.); occurs as a weed in grain-fields from Algeria and Sardinia throughout Europe as far as Denmark (fl. Dan. pl. 993, Munby, Moris, and Boiss.); but seems indigenous only in sunny mountainous situations in Sicily, where it was observed by Gussone ii. p. 509 (A. Dec.). By European colonists, was carried to Northeast America, where it continues as a garden flower, and has besides been found along roadsides and in waste ground (Darl., and A. Gray); was also carried to Hindustan, where it was observed by Law "in gardens" (Graham).

Hardly later than this date, Armenia Minor ceded by its ruler Antipater to Mithridates VI.: who grown to manhood extended his conquests Eastward and Northward, over the whole of Colchis and even beyond Caucasus over wild tribes along the Tanais. — His protection sought in consequence by Paerisades king of Bosporus and by the Greek cities of Chersonesus and Olbia, and through his generals Diophantus and Neoptolemus, the barbarians of the North, Sarmatians and Roxolani, were defeated; a success marked by "a fortress called the tower of Neoptolemus at the mouth of the river Tyras" or Dniester (Strab., and Sm. b. d.).

"The same year = 1st year of the 'thian-han' of Wou-ti" — (Chinese chron. table).

"98 B. C." (Clint.), Lusitania (Portugal) conquered by the Romans under L. C. Dolabella.

"About the beginning of the first century B. C." (Gal. antid. ii. 8, and Sm. b. d.), an antidote composed by Zopyrus of Alexandria, and communicated by letter to Mithridates VI.

Clinopodium Plumieri of the East Mediterranean countries. The "zōpurōn" — or "ōkimōeithēs" or "klēōnikōn" identified in Syn. Diosc. with the "klinōpōthiōn" of Dioscorides, growing upon rocks and two span high, with flowers resembling the leg of a bedstead, is referred here by Fraas: the account by Pliny xxiv. 87 of the "zopyron" or "ocymoides" or "cleonicion" or "clinopodion," though disagreeing on some points, seems taken from Dioscorides: C. Plumieri was observed by Fraas on the high mountains of Greece.

Matthiola fenestralis of the East Mediterranean countries. The OΘONNA of Zopyrus — (Orib. xiv. 45), growing according to Dioscorides in the part of Arabia facing Egypt, yellow-flowered, its leaves "ĕuzŏmŏ"-like but often perforated, growing in Syria according to Pliny xxvii. 85, may be compared: M. fenestralis is described by Miller dict. 10, and Linnæus dec. pl. 16; was observed by Sibthorp on the maritime rocks of Crete.

Brassica incana of Sicily and Southern Italy. The KPAMBH : AΓPIA of Zopyrus — (Orib. xiv. 65), growing according to Dioscorides mostly in maritime and precipitous places, and resembling the cultivated kind but whiter and more hairy and bitter, identified in the added Synonyms with "vrassika rōustika" of the Romans, is referred here by Sprengel, and Fraas: B. incana is described by Tenore, and is known to be not uncommon in Sicily and the neighbouring portion of Italy (Spreng.).

Hypericum hircīnum of Crete and the neighbouring portion of continental Greece. The TPAΓION of Zopyrus — (Orib. xiv. 65), growing according to Dioscorides only on Crete, exuding a gum-like juice, and resembling the "shinŏ" in leaves branches and fruit but all smaller, is referred here by Belon i. 17. p. 23 (ed. Clus.), and Honorius Bellus: H. hircinum was observed by them, and Sibthorp, along streams in Crete; and by Chaubard, in the Peloponnesus, though rare. Westward, the "tragion" was known to Pliny xiii. 3 as occurring only in Crete; H. hircinum termed "h. fœtidum frutescens" by Tournefort inst. 225, is known to grow not unfrequently in Calabria and Sicily (Dillen. elth. pl. 151, Pers., and Spreng.).

Orobus tuberosus of Europe and the adjoining portion of Asia. Called in Britain *heath pea* (Prior), and the ΑCΤΡΑΓΑΛΟC of Zopyrus — (Orib. xiv. 62), growing according to Dioscorides in shaded breezy and snowy situations and abounding around Pheneum in Arcadia, having "ĕrĕvinthŏ"-like leaves and branches, small purple flowers, and a large rounded root with implicated appendages, is referred here by Sprengel: the name "astragalōs" continued extant in Greece in the days of Anguillara p. 267 (Spreng.): O. tuberosus was observed by Sibthorp in woods near Constantinople. Westward, the "astragalōs" or "ōnux" or "gatalēs" or "hamajsukē" is identified in the Syn. Diosc. with the "phikōum tĕrrai" or "glanthōulam" or "pinōum triviōum" or "tiōum" or "nŏnarian" of the Romans, and the account of the "astragalus" by Pliny xxvi. 29 is not altogether taken from Dioscorides: O. tuberosus is termed "o. sylvaticus foliis oblongis glabris" by Tournefort inst. 393; was observed by Viviani in Italy (Steud.); and is known to grow throughout middle and Northern Europe, the root according to Sprengel eaten in Sweden and forming an article of commerce (fl. Dan. pl. 781, and Curt. lond. i. pl. 53).

Pimpinella tenuis of Syria and Crete. The ΨΕΥΔΟΒΟΥΝΙΟΝ of Zopyrus — (Orib. xiv. 50), a span high in Crete according to Dioscorides, with leaves and branches "vōunĭŏ"-like and acrid, is referred here by Sprengel: the "pseudobunion," on Crete "laudatissima" of the best quality, is mentioned by Pliny xxiv. 96: P. tenuis is described by Sieber, as observed by him on Crete; and farther East, "Tragium eriocarpum" of Russel is regarded as probably identical (Steud.).

Trinia dioica of Europe and the adjoining portion of Asia. The "psĕudōvōuniōn" of Zopyrus, — and Dioscorides, is referred here by Lobel, and Fraas: T. dioica was observed by Sibthorp, Bory, Grisebach, and Fraas, on high mountains from the Peloponnesus and Albania to Macedonia and the Bithynian Olympus; is known to grow also on the Taurian mountains (Bieb.), but has not been observed on Crete. Westward, is described by Lobel pl. 745 (Spreng.); is termed "fœniculum minimum patulum" by Tournefort inst. 312; and is known to grow in Italy and throughout middle Europe (Thuil., Lam. fl. fr., Jacq. austr. pl. 28, Steud., and Lenz).

Cressa Cretica of the shores of the Red Sea and neighbouring portion of the Mediterranean. Called in Greece "almurithra" (Fraas): the ΑΝΘΥΛΛΙC of Zopyrus — (Orib. xiv. 62), saltish to the taste according to Dioscorides and growing in sunny sandy places, its branches straight a span long with soft lentil-like leaves, is referred here by Alpinus exot. p. 156, and others: C. Cretica was observed by Sibthorp, Chaubard, and Fraas, on the seashore around the Peloponnesus and Greek islands. Farther South, was observed by Forskal, and Delile, at the head of the Red Sea and called at Suez "nadaoueh" dewy; and by Forskal, along the Arabian shore as far as Lat. 16°, where it is called "ghorara." Westward, the "anthullis" or "anthullōn" is identified in the Syn. Diosc. with the "sōlastrōum" of the Romans; the account by Pliny xxi. 103 and xxvi. 51 of the "anthyllion" or "anthyllum" seems taken from Dioscorides; C. Cretica is described by Fuchsius p. 885 (Spreng.), and Plukenet alm. pl. 43; is termed "quamoclit minima humifusa palustris herniariæ folio" by Tournefort cor. 4; and is known to grow along the Mediterranean as far as Tunis, Malta, and France (Forsk., Desf. atl. i. p. 220, Lam. fl. fr., and Pers.).

Orobanche grandiflora of the Mediterranean countries. Called in Greece "lukōs" (Fraas), in which we recognize the "lukōs" identified in Syn. Diosc. with the ΟΡΟΒΑΓΧΗ of Zopyrus — (Orib. xiv. 62), and others, described by Dioscorides as edible, leafless, and suffocating "ōsprĭŏis" different kinds of pulse; also identified in the Synonyms with the "kunōmōriōn" or "lēonta," and therefore probably the "ōsprōlĕōnta" of Sotion, and Paxamus (geopon. ii. 42): O. grandiflora is described by Chaubard, as observed in the Peloponnesus; and was found by Fraas the most frequent kind in Greece. Westward, the "lupum salietarium" is enumerated by Pliny xxi. 50 among the edible plants of Italy; and O. grandiflora is known to grow on the nearest portion of the Pyrenees (Bory).

Orobanche caryophyllacea of Europe and the adjoining portion of Asia. Also called in Greece "lukōs" (Sibth.), and perhaps included in the "ōrōvaghē" of Zopyrus, — and Dioscorides: O. caryophyllacea was observed by Sibthorp, and Chaubard, in cultivated ground in Greece and the neighbouring islands, according to Walpole mem. p. 244 fastening on bean plants and with difficulty eradicated. Westward, the account by Pliny xxii. 80 of the "orobanche" or "cynomorion" seems taken from Dioscorides: O. caryophyllacea is termed "o. major garyophyllum olens" by Tournefort inst. 176; and is known to grow in Italy and throughout middle Europe (Pollich, Pers., and Lenz).

Phelypaea lutea of Arabia and North Africa. Called in Egypt "haluk" (Forsk.), the origin possibly of the name "lukōs" given in Greece to the above allied plants; — P. lutea was observed by Forskal, and Delile, along the Mediterranean border of Egypt; and farther South, by Forskal p. 112 at Mor in Tropical Arabia, and called "hŏdar" or "zybb alkaa." Westward, was observed by Desfontaines atl. in Barbary; but though termed "p. lusitanica flore lutea" by Tournefort cor. 47, its presence in Portugal is questioned (Pers.).

Salvia disermas of the East Mediterranean countries. The ΕΛΕΛΙCΦΑΚΟC: ΛΕΥΚΟC of Zopyrus — (Orib. xiv. 65) may be compared: S. disermas is described by Barrelier pl. 187; is termed "sclarea syriaca flore albo" by Tournefort inst. 179; is known to grow in Syria, the odour grateful (Pers.); and was observed by Sibthorp in the environs of Constantinople.

Cytinus hypocistis of the Mediterranean countries. Called in Italy "ipocistide" or "ipocisto" (Lenz), in which we recognize the ΥΠΟΚΙCΤΙC of Zopyrus — (Orib. xiv. 61), Themison, Servilius Damocrates, and Andromachus, described by Dioscorides as leafless, yellowish and white, growing on the roots of "kistou:" C. hypocistis was observed by Sibthorp, and Chaubard, on the roots of different woody species of Cistus in Greece and Crete; and "hypocistis" juice from "Syria," was found by Forskal in the drug-shops of Egypt. Westward, the "upōkistis" or "kutinōs" or "thruvēthrōn" is identified in Syn. Diosc. with the "phullĕsathĕ" of the Numidians; the "hypocistis" is mentioned by Celsus, and is identified with the "orobethron" by Pliny xxvi. 31; C. hypocistis is termed "h. flore luteo" by Tournefort cor. 46; and is known to grow in Italy, and as far as Portugal (Brot., Pers., and Lenz).

Euphorbia chamaesyce of the Mediterranean countries and middle Asia. Called in Greece "hamotrivla" (Fraas): the ΧΑΜΑΙCΥΚΗ of Zopyrus — (Orib. xiv. 62), having according to Dioscorides prostrate branches full of juice and small lentil-like leaves upon the ground, identified in the added Synonyms with the "sukēn" or "mĕkŏna aphrŏthē," is referred here by writers: E. chamaesyce was observed by Sibthorp, Chaubard, and Fraas, in arid stony situations from the Peloponnesus throughout Greece and the Greek islands; is known to grow also in Mesopotamia and Siberia (Pers.). Westward, the account by Pliny xxiv. 83 of the "chamaesyce" seems chiefly taken from Dioscorides: E. chamaesyce is described by Morison x. pl. 2; is termed "t. exiguus . . . . nummulariæ folio" by Tournefort inst. 87; and is known to grow in Italy, Southern France, and Spain (Lam. fl. fr., Pers., and Lenz).

Equisetum fluviatile of Europe and the adjoining portion of Asia. Called in Greece "pōlutrihi" (Sibth.), in Italy "seola" or "setola" (Lenz), in which we recognize the "equisetum pinus foliis similem" called also "hippurin" or "ephedron" or "anabasin" according to Pliny xxvi. 83: the ΙΠΠΟΥΡΙC of Zopyrus — (Orib. xiv. 61), growing according to Dioscorides in watery places, its stems hollow roughish and rigid, of joints inserted one in another, and around them numerous slender rush-like leaves, identified in the added Synonyms with the "ĕphĕthran" or "anavasis" called by the Romans "ĕkunalis," is referred here by Sprengel: E. fluviatile was observed by Sibthorp, and Bory, in watery places around Constantinople and in the Peloponnesus. Westward, is described by Tragus f. 264; is termed "e. palustre longioribus setis" by Tournefort inst. 533; and is known to grow in Italy and throughout middle Europe as far as Britain (Engl. bot. 2022).

Peltidea aphthosa of Europe and the adjoining portion of Asia. The ΛΕΙΧΗΝ on rocks of Zopyrus — (Orib. xiv. 62), adhering according to Dioscorides to dewy rocks and by some called "vruōn," applied to stop hemorrhage, also healing cutaneous eruptions, is referred here by Sprengel, and Lindley: P. aphthosa was observed by Sibthorp around Athens and on mount Athos. Westward, the account by Pliny xxvi. 10 of the "aliud genus lichenis" adhering throughout to rocks like "muscus," seems in part taken from Dioscorides: P. aphthosa is termed "lichenoides digitatum læte virens verrucis nigris notatum" by Dillenius pl. 28. f. 106; and is known to grow throughout Europe as far as Britain (Engl. bot. pl. 1119), according to Lindley on "moist shady alpine rocks among moss," and "said to be purgative and anthelmintic."

Peltidea canina of Europe and the adjoining portion of Asia. Called in Britain *ground-liverwort* (Prior), yet regarded by Sprengel as possibly included in the "lĕihēn" of Zopyrus, — and Dioscorides: P. canina was observed by Sibthorp from the Peloponnesus to Constantinople, growing upon the ground. Westward, P. canina is termed "l. pulmonarius saxatilis digitatus major cinereus" by Tournefort inst. 549, "lichenoides digitatum cinereum lactucæ foliis sinuosis" by Dillenius pl. 27. f. 102; and is known to grow throughout Europe as far as Britain (Engl. bot. pl. 2299).

Lecanora parella of Europe and the adjoining portion of Asia. The "lĕihēn" of Zopyrus, — and Dioscorides, is referred here by Fraas: L. parella was observed by him, and Sibthorp, frequent on stones from the Peloponnesus to the Greek islands and Constantinople. Westward, is termed "lichenoides leprosum tinctorium scutellis lapidum cancri figura" by Dillenius pl. 18. f. 10; and is known to grow throughout Europe as far as Britain (Engl. bot. pl. 727).

"97 B. C." (Jap. centen. comm. 88), accession of Sujin, now tenth dairo of Japan. He is said to have placed "the *sword* of Amateraszu-on-kami, the heavenly ancestress of the actual dynasty," together with her "mirror and a rounded stone" in "the Shintoo temple of Ise."

"In or about 97 B. C." (Percey. i. 186), birth of Maadd, son of Adnan and twentieth progenitor of Mohammed.

"96 B. C. = 1st year of the 'tai-chi' of Wou-ti" — (Chinese chron. table).

New Zealand discovered and colonized by Polynesians after the introduction of the *cocoa-palm* into the islands of the Pacific, — but before the peopling of the Marquesas or Nukahivan Islands (Hale ethn. expl. exp. 148).

Phormium tenax of New Zealand. The *New Zealand flax*, from its abundance and the great strength of its fibre, doubtless attracted the attention of the first colonists: — P. tenax was observed by Cook and Forster ii. pl. 96 in New Zealand in 1773; by myself, frequent there in the Northern district, and much used by the natives. Transported to Europe, is described by the younger Linnæus 204; has been cultivated with more or less success, and according to Clot-Bey was introduced by the way of France into Egypt. From Europe, was also carried to Northeast America, where it continues in greenhouses.*

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* *Barringtonia speciosa* of wooded Tropical shores from the Malayan archipelago to Metia and the Marquesas Islands. A showy flowering tree called in Tagalo "botong" or "botongbotong," in Bisaya "botong" or "bitung" or "bitoon" (Blanco), in Taheitian and Nukuhivan "hutu" (Hale); known to the first colonists of New Zealand, for missing the accustomed material for seine-floats, they transferred the Polynesian name "hutu" to a kind of pine, *Phyllocladus trichomanoides*. — B. speciosa is known to grow on the Marquesas Islands (Pers.); was observed by myself along the seashore from Metia to the Feejeean Islands and Sulu, under cultivation on Tongatabu, and staked around and reserved on the Feejeean Islands, its large buoyant fruit universally used by the natives for seine-floats; by Blanco, frequent along the seashore of the Philippines, its fruit used as buoys on fishing-nets; by Rumphius iii. pl. 114, and Sonnerat, on the Moluccas; and is known to grow as far as China (Pers.).

Inocarpus edulis of wooded Tropical shores from the Moluccas to Taheiti. The *Taheiti nut* is a large tree called on Taheiti "lata?" or "rata" (Hale); was known to the first colonists of New Zealand, for in its absence they transferred the Polynesian name to *Metrosideros robusta*. — I. edulis was observed by Cook and Forster n. gen. 33 on Taheiti; by myself, clearly indigenous near the sea throughout the Taheitian, Samoan, Tongan, and Feejeean Islands, planted besides in some instances; is known to grow also on the New Hebrides and New Guinea, where "the natives smear the heads of their arrows with the expressed resinous juice" (Don); and was observed by Rumphius i. pl. 65 indigenous on the Moluccas. By European colonists, was carried to the Hawaiian Islands, young stocks "brought from Taheiti" seen by myself in the garden of a resident White; to Hindustan (Roxb. cor. iii. pl. 263), and by Nimmo in 1833 to the environs of Bombay (Graham).

Tetragonia expansa of New Zealand. The *New Zealand spinach*, herbaceous spreading and broad-leaved, doubtless met with by the first colonists: — observed in New Zealand by Forster, and termed "t. halimifolia;" by myself, frequent there along the seashore exclusively maritime, but I did not learn that any use was made of it by the natives. In the Northern Hemisphere, was seen by Thunberg in Japan (Pers., and Steud.). Transported to Europe, is described by Scopoli del. i. pl. 14, and Pallas hort. demid. pl. 1; and by European colonists was carried to Hindustan, observed by Graham "in gardens Bombay, rare," forming "a much better spinach than the Amaranthaceæ in common use among the natives."

Artocarpus incisa of the Malayan archipelago. The *breadfruit* tree is called on Taheiti "maiore" (Bertero), in Taheitian Mangarevan and Paumotuan "maiore," in Hawaiian "aeiore," in Nukahivan Mangarevan Tarawan and Tongan "mai?" or "mei?" (Hale); known to the first colonists of New Zealand, for they transferred the name "mai" to the edible cones of a tree of the pine kind. — A. incisa was observed by Mendana in 1598 on the Nukahivan or Marquesas Islands (Dalrymp., and hist. coll. Am. iv. 238); by Forster, on other Polynesian islands; by Dampier, and Anson, on Tinian and the Ladrone Islands; by Sonnerat pl. 57 to 60, on New Guinea; by Rumphius i. p. 112, on Celebes and the Moluccas (A. Dec.): the seedless variety, by myself under cultivation on the Hawaiian, Taheitian, Samoan, Tongan, and Feejeean Islands; a variety, with leaves less-incised and large seeds that are "not known to ripen," under cultivation also on the Samoan and Feejeean Islands. Farther West, the "intercised" leaves and seedless fruit erroneously attributed by Nicolo Conti to the jack-tree may belong to the breadfruit: a tree growing wild on Banda is regarded by Rumphius i. pl. 34 as the origin: and a variety, "full of seeds" and "of no value," was found by Mason v. 462 "exotic" in Burmah, cultivated "in a few gardens at Tavoy and Maulmain." By Bligh "in 1793," the seedless breadfruit was carried from the islands of the Pacific to the West Indies; by Sonnerat voy. 100, to the Mauritius Islands; by Europeans also, to the environs of Bombay (Graham, and myself); to Bengal (Roxburgh); and to Burmah, "cultivated at Penang, and has recently been introduced into Mergui" (Mason).

Podocarpus ferruginea of New Zealand. A Coniferous or pine-like tree that soon attracted the

"The same year" (Clint. iii. p. 346), death of Antiochus VI.; his colleague becoming Antiochus VII. Cyzicenus, fourteenth Greek king of Syria.

"The same year" (Liv., and Clint.), Cyrene bequeathed to the Romans by Ptolemy Apion, an illegitimate son of Ptolemy VII.

"95 B. C." (Clint. iii. p. 346), death of Antiochus VII., the last Syrian king having the "years of the Seleucidæ" on his coins. War for the succession ensued, between his son Antiochus Eusebes and the five sons of Antiochus VI. — The war continued "twelve" years.

As early perhaps as this date (Graha Munjari tables, Puranas, and Bentl.), Sudharma reigning in Hindustan. Puchyadharman about this time king at Pataliputra on the Ganges — (Avadan. asok.) called Satadhanvan in the Puranas (Burn. i. 430 to ii. 778).

"94 or 93 B. C. (= 17th year of king Tæpah" of Burmah, confirmed by Ceylon hist., Mason 40), the doctrines of Gaudama or Budha committed to writing in Ceylon. The transaction is referred to about this date by Mahanama, and in the Sara-sangraha (Max. Müll. p. xix).

The Mulamuli, written originally in Pali, possibly as early as this date. — It has been translated into Shan, and thence in "A. D. 1768" into Talaing (Mason 593).*

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notice of the first colonists, for missing the *Thespesia populnea*, they transferred here its Taheitian name "miro." — (See Hale).

Piper methysticum of the Papuan archipelago? The *kava pepper*, upright and branching, is called on Taheiti "ava irai" (Bert.), on the Hawaiian Islands "awa" (Gaud.), in Hawaiian Taheitian and Samoan "'ava," in Nukahivan Raratongan and Tongan "kava," the beverage from its root "kava" (Hale): known to the first colonists of New Zealand, for they transferred its name to *P. excelsum*, remarkable for being the only known species growing beyond the Tropics. — P. methysticum was observed by Forster esc. 76 on the Hawaiian Taheitian and Tongan Islands, by Gaudichaud on the Hawaiian Islands, and by Bertero on Taheiti; by myself, under cultivation on the Hawaiian and Samoan Islands, and stored roots and stems on the Tongan and Feejeean Islands. In the account of Magellan's voyage by a Genoese pilot "hava" was procured at the Moluccas, and according to the Lisbon comments "hava" or "ava" drink is known there.

Dracæna terminalis of the Papuan archipelago. Called in Burmah "kwon-len-net" (Mason), in Tagalo "varas hari" or "varas ni Jose" or "toncod obispo" (Blanco), on the Hawaiian Islands and Taheiti "ti" (Gaud., and Bert.), universally by Polynesians "ti," and the cincture of its leaves in Samoan and Tongan "titi" (Hale): known to the first colonists of New Zealand, for in its absence they transferred its name "ti" to another species, *D. Australis*. — D. terminalis was observed by myself, an inedible sweet-rooted variety naturalized on the Hawaiian Islands and not seen elsewhere, an edible farinaceous-rooted variety naturalized on Taheiti and perhaps cultivated on Metia, some twenty varieties mostly edible distinguished and cultivated by the natives of the Samoan Islands, and one yellow-leaved variety furnishing the cinctures generally worn, one variety in cultivated ground on Tongatabu, and a very large-leaved banana-like variety on the Feejean Islands, near dwellings and also in wild situations: var. ferrea, the red-leaved variety, was first met with on Manua (the most secluded of the Samoan Islands), afterwards on the Philippines, where according to Blanco it is planted by the natives for ornament; is termed "terminalia rubra" by Rumphius iv. pl. 34; is known to occur in China (Pers.); was observed by Mason 420 to 814 "exotic" in Burmah, planted by the natives; by Roxburgh, in Hindustan; by Graham, as far as Bombay, "common in gardens, introduced from China." Transported to Europe, is described by Jacquin ic. ii. pl. 448, and Redouté liliac. pl. 91; and from Europe was carried to Northeast America, where it continues in greenhouses.

Bambusa nov. sp. of the Samoan Islands. The *Polynesian bamboo* is called in Feejeean "mbitu," by Polynesians "kofe" or "kohe" or "koe" or "'ofe" or "'ohe," a knife made from it in Tikopian "kofe," and an arrow in Taheitian "ohe" (Hale): known to the first colonists of New Zealand, for they retained its name "kohe" as the word for knife: — observed by myself near a plantation on the Feejeean Islands, in wild situations on the Hawaiian and Taheitian, and to all appearance indigenous in the deep forest on Savaii: the universal use of its stems as a substitute for water-casks, and its easy propagation, suggest the mode of transport from island to island. From growing in beds and its brittle stem, may prove a peculiar species, but I did not meet with it flowering.

* *Hopea parviflora* of Southern Hindustan. A large Dipterocarpous tree called in Malabar "irubogam" (Drur.); and the lone "hopea," under which according to the Mulamuli the good man took up his abode — (Mason 598), may be compared: H. parviflora was observed by Beddome pl. 6 in Malabar and Canara, in moist and dry forests as far as the elevation of "thirty-five hundred feet," and in south Canara its timber much valued for temple buildings (Drur.).

Hopea Wightiana of Southern Hindustan. A large tree called in Tamil "kongoo" or "kong"

"93 B. C." (Sm. b. d.), the two sons of Ariarathes VI. having been successively driven from the throne of Cappadocia by Mithridates VI.; through Roman influence, Ariobarzanes elected king by the Cappadocians.

Salvia verticillata of Europe and the adjoining portion of Asia. Called in Greece "plēmōnōhortōn;" and the "chiliodynamam" of the Cappadocians called "polemoniam" or "philetaeriam" from kings contending for the discovery — (Plin. xxv. 27), described by Dioscorides as growing in rough mountainous situations and having its root a cubit long and above the leaves corymbs in which are black seeds, by Apsyrtus hipp. as resembling "kalaminthē tē platēiā" but more hoary and having a heavy odour, may be compared: S. verticillata was observed by Sibthorp, and Chaubard, frequent from Constantinople to the Peloponnesus. Westward, the "polemonium" is mentioned by Varro: S. verticillata is described by Rivinus monop. pl. 38; is termed "horminum sylvestre latifolium verticillatum" by Tournefort inst. 178; and is known to grow in Austria, Germany, and Switzerland (Pers.).

"92 B. C." (Liv., and Clint.), in Cappadocia, ambassadors received by Sulla from Arsaces king of Parthia; the first public transaction between the Romans and Parthians.

"In this year" (Sm. b. d.), at Rome, Rutilius Rufus on his return from Asia accused unjustly and banished. He retired to Smyrna, accompanied by his friend Opilius Aurelius.

Coriaria myrtifolia of the Mediterranean countries. The NAVTEA-HERBA bearing black berries and used by curriers, mentioned by Opilius Aurelius, — Pompeius Festus, and Paulus Diaconus, may be compared: C. myrtifolia is described by Duhamel pl. 73, and Linnæus; is known to grow in Barbary, Spain, and Southern France (Pers.). Eastward, was observed by Chaubard in the Peloponnesus. The fruit according to Lindley is "a dangerous poison," and "senna adulterated with the leaves equally dangerous."

Sempervivum tectorum of Western Europe. Called in Britain *aye-green* or *sengreen* or *houseleek* (Prior), in Welsh "dislog" (A. Dec.), in France "joubarb," in Italy "erba da cali" or "sopravvivolo" or "semprevivo maggiore" (Lenz), in which we recognize the "sempervivum" identified by Pliny xix. 58 and xxv. 102 with the "aizoum" or "sedum" in whose juice seeds are soaked to prevent destruction by vermin: the "sedum" is identified by Pompeius Festus with the SESVVIVM planted on roofs of Opilius Aurelius, — and its seeds are commended for the above purpose by Columella ii. 9. 10 to xi. 3. 61, and Palladius x. 3. 2: the "iovis barba" of Isidorus etym., the capitularia of Charlemagne, Platearius, and the Ortus sanitatis 57, is referred here by writers; S. tectorum is termed "sedum majus vulgare" by Tournefort inst. 262; is known to grow wild as far as Luga in Russia (Gorter) and rocks on the Lower Loire; and is regarded by A. Decandolle as introduced into Britain probably before the Roman Conquest. Eastward, was observed by Sestini on roofs at Constantinople (Sibth.). By European colonists, was carried to Northeast America, where it continues to be cultivated for ornament. According to Lindley, "the leaves are cooling when applied externally and frequently renewed." (See S. arboreum.)

91 B. C. = "27th year of" Ptolemy VIII.), possibly the date of the Second inscription at Adulē. The author speaks of pacifying nations on the border of his kingdom and capturing "Gazē, Agamē" (possibly Agamia in Tigre), and "Siguēn;" also "Awa, Tiamō, sometimes called Tziamō" (Tzama in Tigre), "Gamvēla, Ziggavēnē, Aggavē, Tiama, Athagaōus, Kalaa, and the Sēmēnai dwelling on snowy mountains beyond the Nile" (Samen beyond the Atbara branch); then "Lasinē, Zaa, and Gavala" (Galla?) "dwelling on mountains that emit hot springs; Atalmo, and Vēga; the Taggaitas as far as the Egyptian border, thereby opening a path from my kingdom to Egypt; then Apninē; and Mētinē; Sēsēa dwelling on a very lofty mountain;" also, "Rausōn an inland nation of livanōtōphōrōn varvarōn" (Berbera), and the "Sōlatē to whom I committed the charge of the seacoast;" also, "sending a fleet and army across the Red Sea I subdued the Aravitas and Kinaithōkōlpitas, and compelled their kings to pay tribute and keep the travel safe by land and sea, extending my conquests from Lēukēs kōmēs to Savēōn" (Azab); and "of all my predecessors being the first and only king who has subjected all these nations I give thanks to the great god Mars, my father, by whose assistance I have extended my authority over all neighbouring nations from the East to the 'livanōtōphōrōu' country, and from the West to Aithiōpias and Sasōu;" and "peace being established, I have come

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(Drur.); and possibly the "hopea" in question: — H. Wightiana was observed by Wight, and Beddome, common in the western forests at Tinnevelly, its timber very valuable and similar to that of the preceding species (Drur.).

Vatica en-khyen of Burmah. A Dipterocarpous tree, in a grove of which according to the Burmese books Gaudama died, — believed also by the natives to have furnished "much of the petrified wood" along the Irawaddy (Mason 528 to 737): V. en-khyen was observed by Mason in Pegu and Tenasserim, "though not very abundant."

down to Athoulēn to sacrifice to Jupiter, Mars, and Neptune on account of mariners, and here in the presence of all my military forces I dedicate this carved seat to Mars in the twenty-seventh year of my reign" (Cosm. Ind. ii. p. 142).

As early possibly as this date (Graha Munjari tables, Puranas, and Bentl.), Devanica reigning in Hindustan.

"90 B. C." (Liv., and Clint.), in Italy, the Marsian or Social war; and by the Romans, the freedom of the city granted to the States remaining in allegiance.

"89 B. C." (. . . Blair), commencement of war in Asia between Mithridates VI. king of Pontus and the Romans. — The war continued twenty-six years.

Scutellaria orientalis of the East Mediterranean countries. The "scordotin" or "scordion" growing according to Mithridates VI. in fertile humid plains in Pontus and bitter to the taste, a cubit high with the stem quadrangular and branchy "quernae similitudine foliis lanuginosis" — (Lenaeus, and Plin. xxv. 27), may be compared: S. orientalis is described by Commelyn rar. pl. 30; is termed "cassida orientalis chamaedryos folio flore luteo" by Tournefort trav. ii. pl. 129; was observed by Sibthorp on the Bithynian Olympus, and is known to grow also in Armenia (Pers.; see S. hirta, and Teucrium scordium).

Agrimonia eupatoria of Europe and Northern Asia. Called in Britain *agrimony* (Prior), in Germany "odermennig" (Grieb), in France "aigremoine" (Nugent), in Italy "agrimonia" or "eupatorio" (Lenz), in Greece "phōnōhōrtōn" or by the Turks "cojun oti," in which we recognize the "eupatoria" known to Mithridates VI. — (Plin. xxv. 29), described by Dioscorides as suffruticosé with a simple stem a cubit or more high, leaves divided into five or more parts and like those of "pĕntaphullŏu" and "kannavĕŏs," seed disposed along the stem hairy and adhering to garments: A. eupatoria was observed by Forskal, Sibthorp, Chaubard, and Fraas, from Constantinople to Smyrna and the Peloponnesus. Farther South, the "gafet" is mentioned by Avicenna, Serapion, Ebn Baitar, and syrup of "ghafe" or "agrimonia" is enumerated by Alpinus, and Forskal mat. med., as employed medicinally in Egypt. Westward, the "ĕupatŏriōn" or "ēpatŏriōn" or "ēpatitis" is identified in the Syn. Diosc. with the "ōuōlōukrōum maiōus" of the Romans: the "agrimonia" is mentioned by Celsus v. 27. 10; the "agrimonium" by Matthæus Sylvaticus pand. f. 9, and "egremoine" by Chaucer (Prior); A. eupatoria is termed "a. officinarum" by Tournefort inst. 301, and is known to grow along roadsides in Italy and throughout middle Europe as far as Sweden (fl. Dan. pl. 588, Pers., and Wats.). Eastward from Greece, is known to grow in Siberia (Wats.); was observed by Thunberg in Japan, and called "daikon so" or "binke so." Possibly by European colonists carried to Northeast America, but was observed by Josselyn prior to 1670 in New England, by myself from Lat. 45° to 39° beyond Philadelphia chiefly in bushy places along roadsides. According to Lindley, "is celebrated as a vermifuge," and is "a common ingredient in 'herb teas.'"

Geum coccineum of the East Mediterranean countries. — The "ĕupatŏriōn" by some called "argĕmŏnēn" from its scarlet flower (Diosc. ii. 207 and iv. 41), may be compared: also the "argemon" or "canaria lappa" discovered by Minerva, according to Pliny xxiv. 116 and xxv. 56, or the kind of "argemonia" whose root has the odour of "thus:" G. coccineum is termed "caryophyllata orientalis flore magno coccineo" by Tournefort cor. 20, and was observed by Sibthorp pl. 485 on the Bithynian Olympus.

Valeriana Dioscoridis of the East Mediterranean countries. The ΦΟΥ of the antidote of Mithridates, — and those of Marcianus, and Servilius Damocrates, mentioned also by Cassius ant., by Andromachus as from Pontus (Scribon. Larg. 170 to 177, and Gal. antid.), by Dioscorides as growing in Pontus and sometimes called "agrian narthōn," a cubit or more high with a hollow stem, leaves like those of "ĕlaphŏvŏskŏ" or "ippōsĕlinŏ," flowers purplish-white, and the root strong-scented (as might be inferred from the name), is referred here by Sibthorp and others: the "phu" is described by Pliny xii. 26 as imported from Crete, a root resembling birds' feet, in other respects his account seems taken from Dioscorides: V. Dioscoridis was observed by Hawkins, and Chaubard, from Lycia to the Greek islands; and is known to grow along the Taurian mountains (Bieb.). The odour of the root according to Lindley is "almost like that of Valeriana officinalis, but less unpleasant."

Boletus laricis of Europe and the adjoining portion of Asia. Called in Italy "agarico" or "agarico officinale" (Lenz), in which we recognize the ΑΓΑΡΙΚΟΝ of the antidote of Mithridates, — and those of Antipater, and Martianus (Scribon. Larg. 167 to 177, and Galen antid. ii.), or the "agarikōn arrĕn" described by Dioscorides as growing in Agaria in Sarmatia, roundish and wholly concrete: the "agaricum" is described by Pliny xvi. 13 and xxv. 57 as a white fragrant "fungus" growing high up on trees and shining at night, the kind from Gaul being weaker than that from the Bosphorus: B. laricis is termed "agaricus sive fungus laricis" by Tournefort inst. 562; is known to grow in Switzerland, France, and throughout middle Europe (Michel. gen. pl. 61, Jacq. austr. i. pl. 20, Bulliard pl. 296, and Lenz); in the absence of the larch, was observed by Sibthorp in Bœotia

in Greece; and according to Sprengel, the best kind continues to be imported from the Ural mountains and Syria.

"The same year" (Porphyr., and Clint. iii. p. 390 to 399), in Egypt, Cleopatra put to death by her son Ptolemy IX. Who was driven into exile by the populace, and his brother Ptolemy VIII. restored as king.

In a *Greek inscription* at Talmis in Nubia, Silco styles himself king of the Ethiopians and "Noubadæ," and boasts of victories over the "Blemyes:" regarded as a branch of the Bischari. — A very late inscription in barbarous Greek also occurs here (Leps. eg. and sin. p. 242).

The Egyptian gods, Osiris, Isis, Nephthys, Atmu, and others on the pyramids at Meroe, not adopted "previous to the First century B. C.; and the same throughout the island of Meroe, Naga, and" other places in Upper Nubia (Leps. eg. and sin. 152).

The *Sinaitic inscriptions* the work of the inhabitants of the country during the first centuries before — and after our Era; some being cut over more ancient Greek names, and not unfrequently Christian crosses are in connexion (Leps. eg. and sin. p. 296 to 311, and 553). Cosmas Indicopleustes is quoted for evidence that at the time of his visit, "about 535 A. D.," the Sinai from which the law was given was believed to be the mountain called at the present day "Serbal." Ruppel mentions *sacrifices* on Mount Serbal by the Arabs, and found the highest point "6342 French feet" above the sea. Lepsius found on the mountain a place overgrown with "habak" (*Mentha?*) and other sweet-smelling herbs, and translates the name, "Serb Bal" palm-grove of Baal.

"88 B. C." (Liv., Blair, and Clint.), commencement of civil war among the Romans, between Marius and Sulla.

"In this year" (Mahanam. mahav., and Max Müll. p. xix.), accession of Vattagamani, now king of Ceylon. — He reigned until "76."

The Nukuhivan or Marquesas Islands colonized from Vavau by Oataia and his wife Ananoona; bringing with them *breadfruit* and *sugar-cane* and a great variety of other plants,* "eighty-eight generations before — their lineal descendant Keatanui; the chief who made this statement to captain D. Porter 49 (Hale ethnogr. Expl. Exp. 129).

About this time (Strab. xvii. 3. 5 to 7), expedition of Bogus king of Mauritania against the "Western Ethiopians," Negro tribes South of the Desert.

The PIZEIC met with, in shape resembling a bull and in size and strength an elephant, accord-

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* *Spondias dulcis* of the Papuan archipelago. The *vi-plum* is a large tree called in Tongan, Samoan, Taheitian, and Nukahivan "vi" (Hale); carried to the Nukahivan Islands perhaps by the first colonists: — observed by Forster prodr. 198 on the Taheitian Islands; by myself, abundantly naturalized on Metia and Taheiti, also abundant and perhaps naturalized on the Samoan Islands, regularly cultivated on Tongatabu, and said to be cultivated in a single locality on the Feejeean Islands, discordant throughout from its deciduous foliage, and evidently exotic. Farther West, is described by Rumphius i. pl. 60, was observed also by Sonnerat ii. pl. 123. By European colonists, was carried to the Hawaiian Islands, stocks "brought from Taheiti" observed by Brackenridge in the garden of a resident White; to the Philippines, where it has become well known and is called in Tagalo "sirihuelas," from the Spanish "ciruelas" (Blanco); to the Mauritius Islands, planted around dwellings (Pers., and Boj.); and by Nimmo by the way of "Bengal" to the environs of Bombay (Graham).

Erythrina seu-pen-lai of the Papuan archipelago. — The only other deciduous tree observed on the islands of the Pacific; an unarmed *coral-tree*, sometimes forty feet high, naturalized near the sea on Taheiti and Aimeo, planted near dwellings on the Samoan and Tongan Islands, planted and also naturalized on the Feejeean Islands, and planted within the limits of the town on Sulu. E. seu-pen-lai is described by Mason v. 409 as "a small tree covered with large scarlet blossoms" and "very ornamental," "often seen in the neighbourhood of Karen villages from Mergui to the Red Karen country."

Ficus prolixa of the Papuan archipelago. A tree called in Taheitian "aoa," in Samoan "'o'a," in Tongan "koka" (Hale): known to the first colonists of the Nukahivan Islands, for they retained its Tongan name "koka" as the word for black or blue, applied to cloth: — F. prolixa was observed by Forster on the Taheitian Islands (Pers.); by myself on the Samoan, Tongan, and Feejeean Islands, in all instances planted, from its bark according to Hale "a brown dye is obtained for staining cloth."

Ficus tinctoria of the Papuan archipelago? A tree called on Taheiti "mati" (Bertero), and probably known to the first colonists of the Nukahivan Islands: — observed by Forster prodr. on the Taheitian Islands (Pers.); by myself, on Taheiti, planted near the dwellings of the natives; and this or the preceding species seen by Rich on the Union and Tarawan clusters of coral-islands.

ing to Iphicrates — (Strab. xvii. 3), may be compared with "ha-risi," from "arōu" and "risi," given by Cosmas Indicopleustes xi. p. 334 as the Abyssinian name for the skin of the "rinōkĕrōs:" the "rinōkĕrōs" was seen in the distance in Abyssinia by Cosmas Indicopleustes, and is further described by him as so-named from the horns on its nose, the hide being thick enough to be employed as a plough; two horns are represented in the accompanying figure, and the species is clearly the *African rhinoceros*, known to inhabit Abyssinia as well as the more Southern and Western portion of the continent.

Asparagus sp. of Equatorial Africa. The "asparagŏn" of great magnitude sent home by Bogus to his wife — (Strab. xvii. 3. 5), may be compared: A. sp. was observed by Grant near the Eastern coast in "7° S., and in every forest," five feet high and very elegant, its roots used to cure sore eyes; "a variety climbs up trees with its opposite branches."

"87 B. C." (Liv., and Clint.); Second grant of the freedom of the city of Rome: now to the Italian States that had taken up arms.

"The same year" (. . . .), after refusing for nearly three years to acknowledge the recalled Ptolemy VIII., Thebes in Egypt captured. On which occasion, the monuments are said to have sustained much injury.

Posidonius on his voyage remained "thirty days" in "Gathĕira" (Cadiz); and from a house "four hundred stadia" distant, saw a star which he identified with Canopus; known to become visible "in the same climate" at Cnidus near Rhodes. He also witnessed mining operations in the South of Spain; the water being removed by means of "aiguptiōis kōhliais," the Archimedes screw — (Strab. ii. 5. 14, and iii. 2. 9).

Dracæna draco of the Canary Islands. At Cadiz, Posidonius saw a tree with the branches deflexed to the ground, and sword-shaped leaves often a cubit long by four fingers broad; the branches when broken giving out a milky, and the roots a red juice — (Strab. iii. 5. 10). D. draco, the *dragon tree*, was observed by Bontier 66 to 69 frequent in the forest on Palma, Gomera, Teneriffe, and Grand Canary, "bearing *dragon's blood*;" a drug according to Lindley at present "scarcely known," the resin of Pterocarpus being substituted.

Posidonius mentions a small island at the mouth of the Lĕigēr (Loire), on which the worship of Bacchus was established (doubtless through Greek or Carthaginian traders). The island was inhabited exclusively by "Samnite" women; who were accustomed to sail with their husbands in ships, and afterwards return to the island — (Strab. iv. 5. 6).

In visiting various parts of Gaul, Posidonius became accustomed to the sight of warriors returning from battle with the heads of their enemies suspended from the horse's neck: heads of illustrious men were further exhibited to strangers, and could not be redeemed for their weight in gold. Smiting with a sword the back of a human victim, they divined by the convulsions; druids or priests being present during all sacred rites. Human sacrifices besides were made at other times: but from all these customs in conflict with "our" ideas, the people were being reclaimed by the Romans — (Strab. iv. 4. 5).

In returning from Spain, Posidonius landed on the Barbary coast; near a wood that proved to be full of *apes*, some in the trees, and others on the ground; and among them he remarked many of the same infirmities that afflict the human family — (Strab. xvii. 3. 4).

"86 B. C. 元光 'chi-youan,' first year of Hiao-tchao-ti, of the Han" or Seventh dynasty (Chinese chron. table).

"The same year" (Plut., and Clint.), in Rome during the last illness of Marius, Posidonius ambassador from the Rhodians; having already visited Spain, Gaul, and other countries.

Lotus edulis of the Mediterranean countries. Called in Greece "grizĕllia" or "kapisōura" or "nĕranizoura" (Sibth.), and the ΛΩΤΟΣ: ΚΕΡΩΕΝΤΙ of Thyillus — (anth. pal. vii. 223) may be compared: L. edulis was observed by Sibthorp, and Chaubard, from the Peloponnesus to Caria and Cyprus. Westward, is termed "l. pentaphyllos siliqua cornuta" by Tournefort inst. 403; and is known to grow in Italy, Sicily, and Spain (Cav. ii. pl. 157, and Pers.).

"March 1st" (Sm. b. d.), the army of Mithridates VI. defeated by Sulla near Athens, that city captured, and its ruler the philosopher Aristion dragged from the altar of Minerva and put to death.

"84 B. C." (Plut., and Clint.), the Library of the deceased Apellicon, containing the writings of Aristotle and Theophrastus, sent by Sulla from Athens to Rome.

"83 B. C." (Justin, and Clint. iii. p. 346), by invitation of the people tired of internal wars, Syria occupied by Tigranes king of Armenia. — Governed by him peacefully "fourteen" years.

"83 to 82 B. C." (Franz. 92), date of a Greek inscription on Aegina, presenting the following form of the letter M.

The Venus de Medici, by the sculptor Cleomenes, is referred by writers to the First century B. C. — (Lubke and Lutrow).

"82 B. C." (Major edit. Bethenc.), Sertorius, fleeing from the ships of Annius, landing near the

mouth of the Quadalquivir on the Atlantic. Meeting some Lusitanian pilots who had returned from the Fortunate Islands (Canaries), he had thoughts of retiring there — (Plut. vit.).

"At the end of the year" (Plut., and Clint.), Sulla dictator at Rome.

"81 B. C." (Porphyr., and Clint. iii. p. 400), in Egypt, Ptolemy VIII. succeeded by his daughter Cleopatra; who at the end of "six months" married her cousin Ptolemy Alexander II., now Ptolemy X. He reigned "nineteen days" only; and his name has not been found on the monuments, nor even on coins.

In a mummy unrolled at Bristol, a solution of silver was found employed in the hieroglyphic writing: and Herapath further ascertained, that the solvent was probably *nitric acid* (Philos. mag. July 1852).

Indigofera tinctoria of Tropical Eastern Asia. The *indigo* plant is called in Yemen "houer" (Forsk.), in Sanscrit "nili" (Roxb.), in Cingalese "nil" (Pidd.), in Bengalee and Hindustanee "neel," in Telinga "neelie," in Tamil "averie" (Drur.), in Burmah "mai-nay" or "shan-mai" (Mason); and bandages dyed with indigo encircling this mummy — were remarked by Herapath (philos. mag. July 1852): the "indicum" dye is mentioned by Vitruvius vii. 14. 68, Dioscorides v. 107, by Pliny xxxv. 27 as imported from India: I. tinctoria was observed by Forskal p. 137 (Steud.) cultivated for its dye in Yemen, and springing up spontaneously. Eastward, "ynde qe il se fait d'erbe" was observed by Marco Polo 180 in Quilon; the manufacture was witnessed also by Nicolo Conti; and indigo was found by Burnes under cultivation in Scinde, and even "exported in considerable quantities" (Graham): I. tinctoria was observed by Rheede i. pl. 54 in Malabar; by Nimmo, "wild in some parts of the Concan" (Graham); by Roxburgh, as far as Bengal, often springing up spontaneously, but not at a distance from places where it has been cultivated. Farther East, was observed by Mason "exotic" in Burmah; by Loureiro, cultivated and springing up spontaneously in Anam and China; by Blanco, cultivated on the Philippines by the natives, and called in Tagalo "tayom," in Pampango "tayung," in Bisaya "tagung." By European colonists, was carried to Africa (A. Dec.); and to our Southern States, where it was once extensively cultivated, and continues in "waste places" (Chapm.) although its cultivation has long ceased. (See I. argentea.)

"80 B. C." (Alex. chron., and Clint. iii. p. 398), accession of an "illegitimate son" of Ptolemy VIII.; a boy under the title Ptolemy XI. Auletes. He does not appear to have been acknowledged by the Egyptians, and his hieroglyphic ovals have not been found (Champoll.-Fig.): but his name occurs on coins, and in Greek inscriptions in red ink at Philæ.

Iambulus in visiting East African islands met with persons who "wrote in vertical columns" — (Diodor. ii. 55), perhaps Chinese; though it is true, vertical writing occurs on the eye-paint bottles "manufactured on the Persian Gulf." The deposition in Egyptian tombs of these eye-paint bottles and of real Chinese manufactures, is evidently more recent.

Flagellaria Indica of Tropical shores from Africa to the Samoan Islands. Called in Malabar "panambuvalli" (Rheede); and the pea-like seeds or grain seen by Iambulus on East African islands — may be compared: F. Indica was observed by myself on Zanzibar; by Grant, at the "Mgæta river 7° 20′ S.;" and according to Persoon, occurs in Guinea. Eastward, was observed by Rheede vii. pl. 53 in Malabar; by Roxburgh, in other parts of Hindustan; by Mason, indigenous in Burmah; is termed "sirioides" by Rumphius v. pl. 29; and was observed by myself as far as the Feejeean and Samoan Islands. By Nimmo, was introduced into the environs of Bombay (Graham).

Cajanus flavus of Equatorial Africa. The *doll* or *pigeon pea* is called in Tamil "thovaray," in Telinga "candaloo," in Hindustanee "toor," in Bengalee "dal urur" (Drur.), in the environs of Bombay "toor" or "dhal" (Graham), in Suahili "baraz" (Grant); and possibly the pea-like grain seen by Iambulus: — C. flavus was observed by myself on Zanzibar, the seeds a principal article of diet with resident Banians, and the plant I further ascertained cultivated as far inland as the Unyamuezi country; by Grant, cultivated everywhere, the "Wahiyow strike a light by using friction with its wood and a reed." Eastward, the "arhaki" enumerated in the Vishnu Purana i. 6 among the seventeen kinds of useful grain, is referred here by H. H. Wilson; and the "ad'haki" or "tubari," yielding oil according to Susrutas sutr. 46 to chikits 33, is referred here by Hessler: "Indian peas" were seen by Nikitin at Calicut: C. flavus was observed by Rheede vi. pl. 13 in Malabar; by Graham, "commonly cultivated" in the environs of Bombay, observed there by myself; by Roxburgh, and Wight, in other parts of Hindustan as far as Bengal and Assam, the seeds according to Drury "much esteemed by the natives," the tender parts of the shrub eaten by cattle, while "the dried stem makes excellent fuel and is well adapted for producing fire by friction." Farther East, is known to occur on Java (Pers.); was observed by Mason "exotic" in Burmah and called "pai-yen khyung;" by Blanco, well known on the Philippines and called in Tagalo "caguios." Westward from Africa, is called in Carib "quingongi" or "bipicaa" or "ouandou" (Desc.), the first of these names resembling the Negro name of an allied plant; continues abundantly cultivated in the West

Indies, and is used for fencing sugar-plantations (Graham), the varieties of "pois-chiches" according to Humboldt iv. 9 known to the Aboriginal Americans from the earliest times, may also be compared: Clearly by European colonists, was carried to the Hawaiian Islands, observed there by myself. "C. pseudo-cajan" of Jacquin or "bicolor" of Decandolle is regarded as not distinct (Drur.).

"79 B. C." (Appian, and Clint.); at Rome, abdication by Sulla of his dictatorship. Besides enacting laws, Sulla wrote commentaries or historical memoirs. — He died in the following year.

As early perhaps as this date, Puchyadharman succeeded by Puchpamitra, now king at Patali-putra on the Ganges. He was persuaded by a Braminical priest in his household to attempt the overthrow of Budhism — (Avadan. asok.). He is called Vrihadratha in the Puranas (Burnouf i. 430 and ii. 778).

A celebrated Sutra against Budhism written as early possibly as this date. It contains legends — referred to by Fa-hian (Burn. i. 162 to 194).

Cinnamomum tamala of Eastern Hindustan. Called in Bengal "tai" or "tadsch" or "tedsch," and its exported dried leaves "folia malabathri, tamalapathri, or Indi" (Nees); in which we recognize the fragrant "tamala" leaves of this Sutra,* — and the Saddharma pundarika (Burn. i. 178 and ii. 145): C. tamala is described by Fr. Nees and Eberm. ii. 426; is known to grow wild in Derwanee and Gongachora, and is cultivated in the gardens of Rungpur, "the taste of the dried leaves warm, aromatic, at first like cinnamon, afterwards like cloves mixed with camphor" (Lindl). The imported drug "tamalabathra" was found by Garcias to consist of dried cassia leaves; by Blume to include various species of Cinnamomum, but in all the samples he examined C. tamala was absent. (See C. iners).

"75 B. C." (Eutrop. and Clint.); from Macedonia, the Roman general Scribonius extending his conquests as far as the Danube.

"The same year" (Cic., and Clint. iii. p. 341), arrival in Rome of Antiochus Asiaticus, son of the deceased Antiochus Eusebes.

"The same year" (Javanese annals, and Elphinstone iii. 10), the Javanese Era. Said to have been established by "a numerous body of Hindus from Clinga," on the occasion of their arrival in Java, where they "civilized the inhabitants." The era continues in use among the Javanese.

Melaleuca cajuputi of the Siamese countries and Malayan archipelago. An elegant little Myrtaceous tree, its birch-like bark yielding *cajuput oil* procured from early times: † — indigenous according to Mason v. 491 "in the Karen forests" as far as 13° North; described also by Roxburgh, and Wight i. 326; and termed "arbor alba javanica" by Rumphius ii. 74. This green aromatic camphorate essential oil according to Lindley is "irritating or stimulating," used "in toothach" and for other medicinal purposes.

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* *Pterospermum acerifolium* of the Siamese countries and Malayan archipelago. A large Sterculioid tree called in Burmah "toung-phet-won" (Mason); and the "karnikara" transplanted from a foreign country according to this Sutra, — mentioned also in the Sagitti sutta, is referred here by Burnouf i. 177 and ii. 826; P. acerifolium was observed in Hindustan by Roxburgh, and Wight; by Graham, in a garden at Colabah near Bombay, also in "Giergaum woods, not common;" by Mason v. 536 wild in Burmah, in company with two other species growing with teak. Transported to Europe, is described by Linnæus, Cavanilles iii. pl. 44, and in Bot. mag. pl. 620.

Erythrina suberosa of Tropical Hindustan. A tree with corky bark called in Telinga "mulu-modagu," in Sanscrit "mundara" (Bedd.): "mandarava" flowers are mentioned in this Sutra, — and the Saddharma pundarika (Burn. i. 178 and ii. 3); the "erythrine" by Valmiki ram. iii. 79 (transl. Gorr.); the "mandara" fillet, and heaps of the flowers waving along the banks of the Ganges, by Kalidasa vikram. to kum. vi. 5: E. suberosa was observed by Gibson, Auld, and Graham, from Guzerat to Kandesh and "the Mahal districts East of the Ghauts;" by Roxburgh, Wight, and Beddome, in other parts of Hindustan.

Erythrina fulgens of . . . . Called in Bengalee "mundaruka" (Pidd.); and possibly the "mandarava" in question: — the "mandari" prescribed by Susrutas, is referred here by Hessler: E. fulgens was seen in Eastern Hindustan by Piddington 175. Is known in the gardens of Europe, as appears from Steudel.

† *Melaleuca leucadendron* of the Malayan archipelago. An allied species, — so far as Roxburgh could discover, never employed in the distillation of cajuput oil, its leaves possessing little or no fragrance (Lindl.): is termed "leptospermum leucadendron" by Forster (Steud.). From transported specimens, is described by Linnæus mant. 105.

Polygala venenosa of Java. A shrub — found by Commerson so much dreaded by the Javanese that they are unwilling to touch it (Lindl.), "systemati nervoso valde infesta" (Pers.). From transported specimens, described by Jussieu enc. v. 493.

Uncaria gambir of the Malayan archipelago. A. Cinchonaceous shrub, from whose leaves the extract called *gambier* prepared from early times by the Malays, — chewed with betel, and considered by Pereira one of the substances called "catechu" in commerce (Lindl.): U. gambir was observed in the Malayan archipelago by Rumphius v. pl. 34, Hunter, and Crawfurd; is described also by Roxburgh.

"74 B. C." (Eutrop., and Clint.), Bithynia bequeathed by king Nicomedes to the Romans.

Cerasus vulgaris of the Armeno-Caucasian countries. The CERASVS in the "480th year of Rome" brought from Pontus by Lucullus — (Plin. xv. 30), seems to be the true *cherry*: "dulces cerasi" are mentioned by Propertius . . .; the "sweet and black-fruited kerasia," by Ebn Baitar; and

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Hopea? sp. of Pulo Condore. A tree — seen only here by Dampier, much larger than any other on the island and yielding *tar*, is regarded by Mason v. 517 to 527 as probably belonging to the Dipterocarpous tribe.

Xylocarpus obovatus of the shores of Java. A Meliaceous tree, known from early times, — the bark of its root extremely bitter: observed by Blume bydr. 179 (Lindl.).

Mangifera foetida of the Equatorial portion of the Malayan archipelago. The *horse mango*, introduced from the Straits of Malacca at an early period, — is called in Burmah "la-mwot;" its large fruit in odour resembling the dorian continuing a favourite with the Burmese, and is cultivated as far as 13° N. at Mergui (Mason v. 448).

Cassia florida of the Malayan Archipelago. A slender graceful Leguminous tree introduced at an early period — and called in Burmah "ma-za-lee," extensively cultivated, its wood said to be not inferior to ebony (Mason v. 404 to 532): is termed "Senna Sumatrana" by Roxburgh ii. 347. Westward, was observed by Wight in peninsular Hindustan; by Gibson, Law, and Graham, "in gardens" in the environs of Bombay, its growth "very rapid." From transported specimens, is described by Vahl symb. iii. 57.

Strychnos tieute of Java. Woody, climbing eighty to a hundred and twenty feet before branching, the bark of its root yielding one of the most dangerous poisons known, — called "tshettik" or "tjettek", or "upas radja," and acting like nux vomica only in a more violent manner: observed by Leschenault ann. mus. xvi. pl. 23, and Blume rum. i. pl. 24 (Lindl.).

Hasseltia arborea of Java. A handsome Apocynous tree, its milky juice from early times used to destroy tape-worm: — observed by Blume in the province of Buitenzorg (Lindl.).

Laurus (Sassafras) parthenoxylon of the forests of Sumatra. A lofty timber-tree called "kayo gadis" virgin tree, and from early times the oil from its fruit and infusion of the root employed medicinally: — observed by Jack, and Blume; described also by Roxburgh hort. (Lindl.).

Laurus (Caryodaphne) densiflora of the mountain-woods of Java. A tree eighty feet high, growing in Western Java at the elevation of from fourteen hundred to two thousand feet, called "kiteja" or "kiedja," and from early times its gratefully aromatic leaves employed in infusion medicinally: — observed by Blume (Nees laur., and Lindl.).

Chloranthus officinalis of the mountain-woods of Java. A smooth shrub, three or four feet high, growing in moist woods at the elevation of from fifteen hundred to two thousand feet; its root from early times used medicinally by the mountaineers: — observed by Blume fl. Jav. pl. (Lindl.).

Chloranthus brachystachys of Java. A smooth upright shrub, three feet high, growing in woods along the coast, and known from early times, — its properties being like those of the last species: observed by Blume fl. Jav. pl. (Lindl.).

Ficus toxicaria of Sumatra. Growing near "pago Pandano" (Pers.), and its juice known from early times as a virulent poison — (Lindl.): F. toxicaria is termed "f. padana" by Burmann (Steud.). From transported specimens, is described by Linnæus mant. 305, and Vahl.

Piper siriboa of the Malayan archipelago. Climbing, and known from early times, — "used in the same way as" P. betle: observed by Rumphius v. pl. 117, and Blume (Lindl.). From transported specimens, described by Linnæus (Steud.).

Curcuma viridiflora of Sumatra. A Scitamineous herb entirely green known there from early times: — termed "tommon giring" by Rumphius v. p. 165. Westward, is described by Roxburgh res. as. xi. 341, and by Nimmo was introduced into the environs of Bombay (Graham).

Hedychium coronarium of the Malayan archipelago. A Scitamineous herb called in the environs of Bombay "sonetukkah" or "doolaba chumpa" (Graham), in Burmah "lan-thæ" (Mason); known to grow on Java, and from early times its large white fragrant flowers worn by Malay maidens in their hair: — observed by Rumphius v. pl. 69 (Pers.); by Mason v. 429 to 804 "exotic" in Burmah, cultivated for its flowers. Westward, was observed by Retz iii. 75 in Hindustan, according to Roxburgh the most charming plant of the order; by Graham, "in gardens" around Bombay, the flowers worn also in the hair by Hindoos.

Pliny states, that the cultivation does not succeed in Egypt; a fact confirmed by Abd-allatif, Clot-Bey, and others, and by experience in the same Latitude in Northeast America. Besides being cultivated, C. cerasus has been observed growing spontaneously in Macedonia and Bithynia (Griseb. spic. i. p. 87), Volhynia, Lithuania, and the Crimea; and apparently indigenous in the forest South of Caucasus (Ledeb. flor. Ross. ii. p. 6), and called there "bali;" corresponding therefore to "aloo-baloo," the name under which the cherry is cultivated in Cashmere (Royle ill. p. 85, and A. Dec.). Farther South in Hindustan, the tree was found by Lush under cultivation at Dapooree (Graham). From Europe, was introduced into the gardens of America, where, in our Northern States, it is now cultivated abundantly, the fruit though of good quality, inferior to some observed by myself at Venice.

Asclepiades of Prusa in Bithynia, founder of the Asclepiadean medical sect, teaching rhetoric at Rome in the time of Pompeius Magnus (Plin. vii. 37 and xxvi. 7), and therefore not earlier than this date.

"73 B. C. = 'pen-chi,' 1st year of Siouan-ti or Hiao-hiouan-ti of the Han" or Seventh dynasty (Chinese chron. table, and Pauth. 249).

72 B. C. (Sm. b. d.), after a successful campaign against the Dardanians and Moesians, the Danube first reached by a Roman army; led from Macedonia by C. Scribonius Curio. — His triumph over the Dardanians celebrated on his return to Rome "B. C. 71."

"69 B. C." (Clint. iii. p. 342), by the Romans under Lucullus, Tigranes defeated and expelled from Syria; and Antiochus Asiaticus established there as king Antiochus VIII.

One hundred and twenty-seventh generation. B. C. 67, May 1st, mostly beyond youth: the Greek philosophers, Cratippus, Antipater of Tyre, Andronicus of Rhodes, and Jason the stoic; the historian Theophanes of Lesbos; the chronologer Castor; the medical writer Dioscorides Phacas; the orator Hybreas; the grammarians, Demetrius of Magnesia, Tyrannion, Demetrius of Erythrae, Asclepiades of Myrlea the younger, and Aristodemus of Nysa; the rhetors, Aeschines of Miletus, and Apollodorus of Pergamus: the Latin writers, the poets Catullus, Varro Atacinus, Calvus Macer, and Bavius; the satirist Furius Bibaculus; the mathematician L. Taruntius Spurina; the historians Sallustius, Lucceius, Aelius Tubero; the orators Hortensius, Q. Cornificius, Furnius, M. Calidius; the grammarians Valerius Cato, Orbilius Pupillus, Curtius Nicia, Ateius; the rhetors Antonius Gnipho; and other Latin writers, Cornelius Nepos, Publius Syrus, Pomponius Atticus, and Laberius Decimus.

Berberis lycium of the Himalayan mountains. The AYKION: INΔIKON of Nicostratus — (Gal. comp. med. ix. 6), Apollonius, Niceratus, Servilius Democrates, Aretaeus, and Paulus Aegineta, known to Dioscorides as the reported product of a thorny shrub called "loghitithōs" having many upright stems three or more cubits high and leaves resembling those of the olive, prepared according to Pliny xii. 15 and xxiv. 77 by cooking the bruised branches and roots in water and exported in bladders of the rhinoceros and camel, and employed medicinally among other purposes against "erosos angulos oculorum," is referred here by Royle (Linn. trans. xvii. p. 83): B. lycium is described by him as observed on the Himalayan mountains, an extract called "rusot" made by digesting in water slices of the root stem and branches of this and other species of barberry employed by the natives against ophthalmia (Lindl.).

"The same year" (Appian, and Clint.), after "two years" war, Crete subdued by the Romans under Q. C. Metellus.

"66 B. C." (Cic., and Clint.), in Asia, Lucullus succeeded by Pompey in conducting the Mithridatic war.

"65 B. C., Caesar being aedile" (Cic. in Rull. i. 1 and ii. 16, see Clint. iii. p. 392), envoys sent to recover money deposited in Tyre; the will of Ptolemy Alexander bequeathing Egypt to the Romans not having been found.

"The same year" (Appian, Blair, and Clint. iii. p. 342), the last of the Seleucidæ Antiochus VIII. dethroned by Pompey, and Syria reduced to a Roman province.

Salvia verbenaca of Europe and the adjoining portion of Asia. Called in Britain *wild clary* (Prior), in Greece "sarkōthrōphi" or "vōuturōhōrtōn" or "agriōs vasilikōs," in which we recognize the "agriōn vasilikōn" identified in Syn. Diosc. with the AKINOC, mentioned as coronary by the physician Andron — (Athen. xv. 26), by Dioscorides as a coronary herb resembling "ŏkimŏ" but fragrant and more hairy, by some persons cultivated: S. verbenaca was observed by Forskal, Sibthorp, and Chaubard, frequent in pastures from Constantinople to the Peloponnesus. Farther South, the "acinon" is enumerated by Pliny xxi. 52 and 101 as cultivated both for food and as coronary by the Egyptians; was known to Athenaeus in Egypt; and S. verbenaca was observed by Delile on the Mediterranean border near Alexandria. Westward, the "akinōs" or "akōnōs" is identified in Syn. Diosc. with the "ŏkimastrōum" of the Romans; the "silvestri ocimo" is mentioned by Pliny xx. 48; S. verbenaca is described by Brunfels ii. p. 26 (Spreng), and Triumfetti pl.

66; is termed "horminum sylvestre lavendulæ flore" by Tournefort inst. 178; and is known to grow in Barbary and throughout middle Europe as far as Britain (Desf. atl., Curt. lond. vi. pl. 1, and Pers.; see Mesembryanthemum Copticum, and Salvia sclarea).

"63 B. C." (Dio, Blair, and Clint.), suicide of Mithridates VI. after defeat by his son, now Pharnaces II.: terminating the Mithridatic war against the Romans. The work of Mithridates on poisons was delivered by Pompey to his own freedman Lenæus, to translate into Latin (Sm. b. d.).

Tamarix Germanica of the plains of Tartary and Eastern Europe. A kind of *tamarisk* called in Italy "tamerigio" or "tamerice" or "mirice" (Lenz), and the ERICEN of Lenaeus, — regarded by some as the "tamaricen" (Plin. xxiv. 41), may be compared: the "tamaris" or "tamarix" is mentioned by Celsus ii. 33, Columella viii. 15. 4, and the "tamarix scopis tantum nascens" by Pliny xvi. 45: T. Germanica is described by Miller pl. 262; and is known to grow in North Italy (Scop., and Lenz) and middle Europe (Lam. fl. fr., Pers., and Moench). Eastward, is termed "t. decandra" by Pallas; is called "balgou" by the Mongols and Bouriates, and is used by them as a substitute for tea (Klapr.).

Cytisus scoparius of middle Europe. Called in Britain *broom*, in the Anglo-Saxon leechbook "brom," in Germany "brame" (Prior), in France "genêt" (Nugent), and possibly the SCOPIS-AMERINIS to which the ERICEN is likened by Lenaeus: — C. scoparius is described by Linnæus, and is known to grow throughout middle Europe as far as Denmark (fl. Dan. pl. 313, Engl. bot. pl. 1339, and Pers.). The young tops in decoction according to Lindley are "diuretic and cathartic, seeds said to be emetic."

"In the summer" (Dio, Jos., Clint., and Kitt. cycl. bibl.), after "three months" siege and on the anniversary day of the first overthrow by Nebuchadnezzar, Jerusalem captured by Pompey, and Jewish independence again overthrown. The Jews now passed to the dominion of Rome.

"October" (Sallust, Blair, and Clint.), at Rome, the conspiracy of Cataline detected by Cicero.

Some of the books in Cicero's library were written on *parchment* — (Pouchet).

Semecarpus anacardium of Tropical Hindustan. ATRAMENTO·SVTORIO is mentioned by Cicero, — and Pliny (Ainsw.); the "halkanthōn" is described by Galen comp. med. viii. 3 as composed in part of "hrusōvalanōu;" the "xanthōvalanōs" is mentioned by Actuarius, and Nicolaus Myrepsus; the indelible ink-markings on mummy-cloth are derived by Mason v. p. 510 from imported nuts of S. anacardium; and the "baladsir" of Ebn Masawia, I. Ben Amran, Rhazes, I. Ben Ali, Avicenna, and Ebn Baitar, is referred to this plant by Sontheimer. Eastward, S. anacardium in Hindustan is sometimes called "belader" (ulfaz udwiyeh, Faulkn., Honigb., and J. F. Wats.); in which we recognize the "balador" identified by Ebn Baitar with the "anakarthiŏn" of the Greeks (Royle antiq. hind., see Cardiospermum); is called in Sanscrit "bhela" or "arushkara," in Bengálee "bhela" or "bela-tuki" or "bhola-tuki," in Telinga "nella-jedee;" was observed in Hindustan by Roxburgh cor. pl. 12, and Wight; by myself, as far as the central portion of the Deccan; by Gibson and Graham, "common throughout the Concans and in Guzerat, whence a considerable quantity of the nuts are exported:" and according to Lindley, the "receptacles eaten like apples when roasted; the pure black acrid juice employed externally by the natives" to "remove rheumatic pains, aches and sprains;" also, "universally used to mark linen:" hence the English name *marking nut*. Farther East, is enumerated by Mason among the plants of Burmah, the nuts at least "constantly for sale in the bazars," and used for making indelible ink.

Rumex bucephalophorus of the Mediterranean countries. Called in Greece "atzĕtōza" (Sibth.) or "agriōlapathō" (Fraas); and the LAPATHI·BREVIS·HERBA of Cicero fin. ii. 8, — and Horace sat. 2, is referred here by Fraas; R. bucephalophorus is described by Columna ecphr. i. pl. 150; is termed "acetosa ocymi folio neapolitana" by Tournefort inst. 503; and is known to grow in Italy (Pers., Pollini, and Lenz). Eastward, was observed by Sibthorp, Chaubard, and Fraas, frequent in grain-fields at the opening of spring from the Peloponnesus throughout the Greek islands to Cyprus.

Aristolochia clematitis of the Caucasian countries. Called in Italy with other species "stallagio" or "stallogio" or "aristolochia" (Lenz), in which we recognize the long-rooted kind called "ĕrva aristōlōhia" by the Romans according to the Syn. Diosc. iii. 5: the ARISTOLOCHIA is mentioned by Cicero; — the "pontica" kind, by Pliny xxv. 54 as the most celebrated; and the "aristolochiae masculae" is described by him as having an oblong root as thick as a staff and four digits in length, supposed to impart the power of generating males: A. clematitis is termed "a. clematitis recta" by Tournefort inst. 162; and is known to grow in vineyards and hedges in Italy and throughout middle Europe as far as Denmark (fl. Dan. pl. 1235, Pers., A. Dec., and Lenz): from its name *Saracen's birthwort*, is conjectured by Bromfield to have been introduced into Britain during the crusades, is mentioned by Gerarde, and Parkinson, as a cultivated plant only, but has since become naturalized (Wats.). Eastward, was observed by Sibthorp on mount Athos and along the

Black Sea near Constantinople; and is known to grow to all appearance indigenous in Southern Russia and around Caucasus. Was formerly in high repute for its medicinal properties (Merat dict. i. p. 411), the roots according to Lindley having "been chiefly employed as aids to difficult parturition." (See A. rotunda).

In or about 62 B. C. (= "20 yrs after the death of Sertorius," Major edit. Bethenc.), Statius Sebosus writing on the Hesperides Islands (Canaries), five of which were known to him.

Laurus Canariensis of the Canary Islands. A *laurel* called in Guanche "carisco" (Webb); and the trees on the Hesperides growing according to Sebosus to the height of "one hundred and fourteen feet" (Plin. vi. 37), may be compared: L. Canariensis was observed by Webb on the Canary Islands. From transported specimens, is described by Willdenow (Steud.).

"61 B. C." (Clint. iv. p. 116), the *First era of Gaza*.

"60 B. C. = L. Afranius and Q. Metellus Celer consuls," the last-named being proconsul of Gaul, "Indos" leaving "India" for trading purposes were driven by a storm to Germany, and were sent to him by the king of the Suevi — (Nepos, and Plin. ii. 67, possibly the earliest historical notice of America).

"In this year" (Liv., Blair, and Clint.), coalition of Pompey, M. L. Crassus, and Caesar, over the Romans; called the "First Triumvirate."

"The same year" = "180th Ol." (Diodor. i. 44 to 47, and Clint.), Thebes in Egypt visited by the historian Diodorus Siculus; the great syenite colossus of Ramessu II., as appears from his description, continuing entire.

The temple mentioned by Diodorus iii. 211 as venerated by all Arabs, is clearly the Caba on the site of Mecca. The Caba is known to have contained a statue of Abraham (Percev. i. 175), doubtless placed there by Ishmaelites, and from this time — has continued in the possession of Ishmaelite tribes.

Tanacetum vulgare of Europe and the adjoining portion of Asia. Called in Britain *tansy*, by Askham "tansye," in France "tanaisie," in old French "athanaisie," in medieval Latin in the time of Lyte "athanasia" (Prior p. 35 and 223): the ΑΘΑΝΑCΙΑ medicine discovered by Isis according to the Egyptians (Diod. i. 30), — mentioned also by Lucian dial. iv, as viper's medicine and high-priced by Galen (Orib. xliv. 4), is referred here by writers; T. vulgare has not been observed in Greece; but is known to occur in the Crimea (Lindl.); and according to Clot-Bey, has been recently introduced into Egypt. Westward, the "tanarita" of the capitularia of Charlemagne is referred here by Antony, and Sprengel: T. vulgare is called in Anglo-Saxon "helde" (leechb. i. 36. 41) or "ænglisc cost" (Lacn. 29, and Cockayne); is described by Tragus f. 61, and Dalechamp pl.; by Lobel, as cultivated in gardens; and at the present day, is known to occur along roadsides throughout middle Europe as far as Denmark (fl. Dan. pl. 881, Pers., and Lindl.). By European colonists, was carried prior to 1670 (Jossel.) to Northeast America, where it has become frequent around dwellings and along roadsides. The plant according to Lindley is esteemed "tonic and cordial," and Withering says "the flesh-fly will not touch" meat rubbed with the leaves.

Galactites tomentosa of the Mediterranean countries. Called in Greece "atrōgira" (Forsk.), and the CΙΛΛΥΒΟΝ described by Diodorus iv. as an edible thistle ΑΚΑΝΘΙΟΝ· ΤΙ· ΑΑΡΟΝ· ΚΑΙ· ΕΔΩΔΙΜΟΝ, — and by Dioscorides as eaten while young cooked with oil and salt, the leaves broad and resembling those of the "hamailĕōnti lĕukŏ," may be compared: G. tomentosa was observed by Forskal in Asia Minor and around the Dardanelles, "flore tomentoso caule alato edulis tenera," a tomentose flower winged stem and eaten while tender; by Sibthorp, and Chaubard, from the Peloponnesus throughout the Greek islands. Westward, the "silybum" is described by Pliny xxii. 42 as growing in Cilicia, Syria, and Phoenicia, the cooking very troublesome. G. tomentosa is termed "carduus galactites" by Tournefort inst. 441, "cnicus galactites" by Deslongchamps; was observed by Forskal on Malta; is known to grow also in Italy, Barbary and Southern France (All., Lam. fl. fr., Cav. iii. pl. 231, and Pers.).

"In this year" (Burm. hist., and Mason 40), Tæpah succeeded by his son Papeyan, now Burmese king: * — during whose reign of "sixty-six" years there were great religious dissensions in India.

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* *Erythrina pen-lay-ka-theet* of Burmah. The *sea coral-tree* perhaps already "famous in Budhist mythology as the tree around which the Devas dance till they are intoxicated in Sudra's heaven" — (Mason 531): E. pen-lay-ka-theet was observed by Mason indigenous and "common" at Toungoo, having "small thorns on the trunk," its flowers "reddish."

Fagræa fragrans of Burmah. A Loganioid tree, called in Burmah "a-nan;" perhaps already regarded by the Burmese "as too good for the laity," but "ought to be confined to sacerdotal purposes," — was observed by Mason 543 "used principally for the posts of Budhist edifices" at Tavoy, its timber "very hard and excellent:" F. fragrans is described also by Falconer, Roxburgh, Wallich, and Griffith, and according to O'Riley its timber is not subject to attacks of the Teredo or ship-worm.

"59 B. C." (Liv., and Clint.), at Rome, an *agrarian law* carried against all opposition by Caesar; one of the consuls for this year. The provinces of Illyricum and Cisalpine and Transalpine Gaul, assigned to Caesar for five years (Sm. b. d.).

About this time, the Danube crossed and the country North of the Adriatic ravaged by the Getae or Dacians; who under their king Boerebistas (compare Ariovistus) had acquired great power. Strabo vii. 3. 5 further states, that Caesar sent an expedition against "Vurĕvistas."

Ornithopus compressus of the Mediterranean countries. The "karōpithla" of the Dacians, — identified in the Syn. Diosc. with the "katanagkē," having according to Dioscorides a slender root, long leaves as in "kōrŏnōpōthōs," six or seven heads of "ōrōvŏ"-like fruit that in drying curve towards the earth like the talons of a dead kite, is referred here by Sprengel: the "katanagkē" is further identified in the Syn. Diosc. with the "arharas" or "arkōpōus" of the prophets; and the "catananćem" of Thessaly employed for amatory purposes and detecting magic, is mentioned by Pliny xxvii. 35: O. compressus was observed by Sibthorp, and Chaubard, from Caria to the Peloponnesus. Westward, the "katanagkē" or "thamnaměnē" or "thiōnusias" or "thursiōn" or "thēmōs" or "krōtiōn" is identified in the Syn. Diosc. with the "ĕrva philikla" or "thatiska" or "iōvis mathiōus" of the Romans; and the "pes milvinus" is mentioned by Columella. . . (Ruel ii. 62): O. compressus is termed "ornithopodium scorpioides siliqua compressa" by Tournefort inst. 400; and is known to grow in Italy, Sicily, Barbary, and Southern France (Bergeret ii. pl. 191, All., and Pers.).

Ornithopus ebracteatus of the Mediterranean countries. — The "katanaghē ĕtĕrōn" employed like the preceding for amatory philtres by the Thessalian women, and further described by Dioscorides as having a small root, leaves in form and colour like those of the olive but soft and divided spreading on the ground, and small fruit pierced into many parts "ĕrĕvinthōn"-like, may be compared: of the added Synonyms, the "kēmōs" seems to belong here, for the "cemos" is distinguished by Pliny xxvii. 35 from the "catananćem," but is employed for the same purposes (compare "kēmōs = lĕōntōpōthiōn" in Diosc. iv. 129): O. ebracteatus was observed by Chaubard in the Subalpine portion of the Peloponnesus. Westward, is described by Dalechamp p. 487; and is known to grow in Spain, Portugal, and Southern France (Brot., Vivian., Dec. fl. fr., and Pers.).

Aster tripolium of the European seashore, along the Atlantic and Mediterranean. Called in Britain *sharewort* (Prior), equivalent to the "iggunalis" of the Romans or "vōuvŏniōn" identified in the Syn. Diosc. with the "rathivitha" of the Dacians: — the account by Dioscorides of the "astēr attikōs" may in part belong here: A. tripolium was observed by Sibthorp sparingly on the seashore of the Greek islands. Westward, the account of the "aster" or "bubonion" by Pliny xxvii. 19 seems chiefly taken from Dioscorides; A. tripolium is termed "a. maritimus palustris cæruleus salicis folio" by Tournefort inst. 481, "a. pannonicus" by Jacquin (Bieb.); and is known to grow on the seashore of France and Britain (Engl. bot. pl. 87, and Pers.).

Erythræa centaurium of Europe and the adjoining portion of Asia. Called in Britain *earth-gall* or *lesser centaury*, in Anglo-Saxon "eorth-gealle," in Germany "tausendgulden" from "centum aureos" or "centaurium" (Prior), in Italy "centaurea minore" (Lenz), in Greece "thĕrmōhōrtōn" (Sibth.) or "phlōuskōuni" (Fraas), in Egypt "kantarian" (Forsk.); in which we recognize the "kĕntauriōn mikrōn" identified in Syn. Diosc. with the "tōulvēla" of the Dacians: — the "kĕntauriōn mikrōn kai lĕptōn" is described by Dioscorides as more than a span high with purplish-red flowers and a diminutive root: E. centaurium was observed by Sibthorp, Chaubard, and Fraas, frequent in open situations from the Peloponnesus throughout Greece; by Forskal p. lxiv, around Cairo in Egypt, and in frequent medicinal use. Westward, the "kĕntauriōn mikrōn" or "limnaiōn" or "aima ēraklĕōus" is further identified in Syn. Diosc. with the "phĕuriphōugiam" or "aura mōulti rathix" of the Romans; the "centaurion lepton" or "fel terrae" or "libadion," by Pliny xxv. 31 with the "exacon" of the Gauls: E. centaurium is described by Io. Iac. Manliis de Bosco f. 72, and Brunfels (Spreng.); is termed "centaurium minus" by Tournefort inst. 122; and is known to grow from Italy throughout middle Europe as far as Denmark (fl. Dan. pl. 617, Rafn, and Pers.). By European colonists, was carried to Northeast America, where it continues at Oswego on Lake Ontario "near the old fort" (A. Gray). The plant according to Lindley continues to be "collected for use in rustic pharmacy," possessing "all the essential properties of the gentian of the shops."

Hyoscyamus niger of Europe and Northern Asia. Called in Anglo-Saxon "henne-belle," converted after the days of Gerarde into *henbane* (Prior); in Germany "bilse" or "bilsenkraut" (Grieb), in France "jusquiame" (Nugent), in Italy "giusquiamo" or "josciamo nero" or "dente cavallino" (Lenz), in Greece "gĕrŏs" (Fraas), in which we recognize the "uōskuamōs" identified in Syn. Diosc. with the "thiĕlĕia" of the Dacians, "vilinōuntia" of the Gauls, and "phavōulŏnia" of the Tuscans; — also the kind of "hyoseyamus" described by Pliny xxv. 17 as "vulgare" and paler, the "jusquianus" of Palladius i. 35 and Vegetius ii. 12, the "hyoscyamon" identified by Beda tabernac. iii. 8 with the plant called "acharo" in Britain, and the "acharonia" or "jusquiamus" of Albertus

Magnus virt. herb.: H. niger is described by Lobel adv. . . ; is termed "h. vulgaris vel niger" by Tournefort inst. 118; was observed by Munby in Algeria, and is known to occur in waste places in Italy and throughout middle Europe as far as Sweden (Fries, and A. Dec.). Eastward, was observed by Sibthorp, and Fraas, in Greece and Bithynia somewhat rare; and is known to occur as far as Casan in Russia and throughout Siberia and Daouria (Wirtz, and Ledeb.). By European colonists, was carried to Northeast America, where it continues in waste places; to Hindustan, where it is sometimes cultivated by residents (Wall., Lush, and Graham). The capsules and seeds (in accordance with the commendation of other species by Scribonius Largus 53, and Dioscorides) "are a rustic remedy for toothach," and further according to Lindley "the leaves produce effects very similar to those of opium," and "the infusion dropped into the eye dilates the pupil like belladonna." (See H. albus and H. aureus.)

Lithospermum officinale of Europe and the adjoining portion of Asia. Called in Britain *grummil* or *gromwell* or *pearl-plant* (Ainsw., and Prior), in Germany "perlkraut" (Grieb), in Italy "miglio al sole" or "litospermo" (Lenz), in which we recognize the "lithōspĕrmōn" identified in the Syn. Diosc. with the "gōnōlēta" of the Dacians, — called by some "ērakliān" from the strength of its seeds: L. officinale was observed by Sibthorp in the environs of Constantinople. Westward, the "lithōspĕrmōn" is further identified in the Syn. Diosc. with the "kōlōunvam" of the Romans; is described by Pliny xxvii. 74 as growing in Italy though he had seen only a gathered specimen, having "margaritis" among leaves and very wonderful, an herb producing stones: L. officinale is called in an English manuscript of the Fifteenth century "lythewale," in the Ortus sanitatis 296 "milium solis," identified with "granum solis" by Treveris grete herb., and hence the combined English name which according to Turner should be written "gray myle" (Prior); is termed "l. majus erectum" by Tournefort inst. 137; was observed by Gussone i. p. 216 in mountain woods in Sicily; and is known to occur along roadsides and in wooded situations in Italy and throughout middle Europe as far as Denmark (fl. Dan. pl. 1084, Pers., and Lenz). By European colonists, was carried to Northeast America, where it continues to occur along roadsides from the St. Lawrence throughout our Northern States. The seeds or nutlets contain lime (A. Dec.).

Lithospermum tenuiflorum of the East Mediterranean countries. — Called in Greece "traheă:" the "lithōspĕrmōn" growing according to Dioscorides in elevated rough situations and having leaves like those of the olive but longer and broader, upright branches with a terminal bifurcation and among leaflets the round white stony seed equalling a small "ōrōvŏ," identified in the added Synonyms with the "aigŏnuhōn" or "thiōspōrōn" or "ĕxŏnuhōn" or "lĕōntiōn" or "lithōs lĕōntikē" or "gōrgŏniōn" or "tantalitis," is referred here by Fraas: the "lithospermo" or "aegonychon" or "dios pyron" or "heracleos" growing on Crete is mentioned by Pliny xxvii. 74: L. tenuiflorum is termed "buglossum chium arvense annuum lithospermi fŏlio flore cæruleo" by Tournefort cor. 6; and was observed by Sibthorp, and Fraas, from Cyprus to Attica. Farther South, by Delile on the Mediterranean border of Egypt near Alexandria.

"58 B. C." (Liv., and Clint.), "L. Piso and A. Gabinius" consuls, Switzerland abandoned by the Helvetii, who having burned all their towns and dwellings proposed acquiring dominion over wider territory in Western Gaul. They were prevented from crossing the Rhone by Caesar i. 2, who built a wall as far as the Jura; he afterwards followed them into Gaul and defeated them, compelling the surviving "one hundred and ten thousand" to return into their own country. They had left their homes "three hundred and sixty-eight thousand" in number, including "ninety-two thousand" fighting men, as appeared from tables written in Greek letters found in the camp.

Of animals and plants whose relics are intermingled and preserved in debris of the lake-villages of Switzerland, the following species (including those already mentioned) have been discovered:

Of water and marsh plants, enumerated (by Heer, in Lee's edit. Keller), *Chara vulgaris* and *C. fœtida; Phragmites communis, Scirpus lacustris, Carices, Scheuchzeria palustris, Iris pseudacorus; Potamogeton perfoliatus, P. compressus, P. natans*, and *P. fluitans; Ceratophyllum demersum, Alisma plantago, Polygonum hydropiper, Galium palustre, Menyanthes trifoliata, Pedicularis palustris, Peucedanum palustre, Nymphæa alba; Nuphar luteum* and *N. pumilum?; Ranunculus aquatilis, R. hederaceus, R. flammula, R. lingua*, and

Hydrocotyle vulgaris of Europe and the adjoining portion of Asia. Called in Britain *white rot* or *sheep's bane* (Prior), in Gothland "spikblad" (Linn.): — termed "cotyledon palustris" by Dodoens pempt. 113, "h. vulgaris" by Tournefort inst. 328, and known to grow from Iceland (Wats.) throughout Europe (Gerarde 528, Curt. lond. vi. 19, fl. dan. pl. 90, and Pers.), also in North Africa and as far as Eastern Asia (Wats.): was observed by Linnæus in Sweden; by Sibthorp, in marshes on Crete and Zacynthus. Possibly by European colonists carried to Jamaica (Pers.), and Australia (Wats.).

Of ferns, *Pteris aquilina:* of mosses, undoubtedly used for stopping holes in the walls of the huts and for bedding, *Antitrichia curtipendula; Neckera complanata* and *N. crispa; Thuidium delicatulum, Anomodon viticulosus, Leucodon sciuroides*, and *Hylocomium brevirostre:*

Of plants for procuring fire, or tinder fungi, *Polyporus igniarius*, *P. fomentarius*; and *Dædalia quercina*:

Of forest trees and shrubs, *Pinus sylvestris*, *P. montana*, *P. abies*, and *P. picea*; *Taxus baccata*, *Juniperus communis*, *Quercus robur*, *Carpinus betulus*, *Betula alba*, *Alnus glutinosa*; *Salix repens* and *S. cinerea*; *Fraxinus excelsior*, *Ilex aquifolium*, *Euonymus Europæus*, *Acer*, *Sorbus aucuparia*, and *Rhamnus frangula*; and at Robenhausen, twigs and remains of leaves of *Viscum album*, the sacred plant of the Gauls:

Rhamnus frangula of Northern Europe and Asia. — Called in Danish "spregner," in Dutch "sporkenhout," in German "sporkenholz" or "spreckenholz" (Cockayne); in which we recognize the "spracen," of the Anglo-Saxon leechbook i. 15. 4 and xxiii: R. frangula is called in Britain *black alder* or *berry-bearing alder* (Prior); is termed "frangula" by Tournefort inst. 612; is known to grow from Lat. 65° 30′ in Lapland throughout Northern and middle Europe (fl. Dan. pl. 278, Læstadius, and A. Dec.); was observed by Sibthorp in the environs of Constantinople; and farther East, is known to grow in the Oural and throughout Siberiā (Gmel., and Ledeb.). According to Lindley, the berries are emetic.

Of berried fruits, *Pyrus malus*, the crab of considerable importance for food, everywhere diffused, and a larger round variety probably cultivated; *P. communis*, only a few specimens; *P. aria*; *Prunus spinosa*, sloes gathered in great abundance; *P. insititia*; *Cerasus padus*, bird cherries gathered in great abundance; *C. mahaleb*, and only at Robenhausen stones of the *sweet cherry*; *Rosa canina*, the seeds in abundance; *Rubus Idæus*, *R. fruticosus*, and *Fragaria vesca*, the rarest of the three; *Sambucus nigra*, and *S. ebulus*, seeds of both in abundance; *Vaccinium myrtillus*, the seeds rare; *V. vitis-idæa*, the leaves only met with; and *Viburnum lantana*, the berries in several lake-dwellings:

Of nuts, *Fagus sylvatica*, beech-nuts abundant and probably used as food; *Corylus avellana*, hazel-nuts including one from Robenhausen bored by the *nut-beetle*; and *Trapa natans*:

Of bast and fibrous plants, *Tilia grandifolia*, and *T. parvifolia*; *Linum angustifolium*, cultivated:

Of plants used for dyeing, *Reseda luteola* may probably have been used for dyeing the linen cloth:

Of aromatic plants, *Carum carui*, caraway seeds found at Robenhausen and probably used as condiments.

Of oil-producing plants, *Cornus sanguinea*; and at Robenhausen, a cake of seeds of *Papaver somniferum* var. antiquum, the seeds probably pressed for oil, or perhaps eaten scattered over bread:

Of culinary vegetables, *Pisum sativum* the only kind that can with certainty be traced as far back as the Stone age; *Faba vulgaris* var. Celtica nana appearing in the Bronze age of a strikingly small size, such as are never found afterwards; *Ervum lens* var. microspermum; *Pastinaca sativa* the parsnep; and *Daucus carota* the carrot:

Of cereals or different kinds of grain, *Hordeum vulgare* var. hexastichum sanctum with *Triticum vulgare* var. antiquorum, both of them small-grained, are the most ancient, most important, and most generally cultivated; next come *Hordeum vulgare* var. hexastichum densum, *Triticum vulgare* var. compactum muticum, *Panicum miliaceum*, and *Setaria Italica*; *two-rowed barley*, with *Trilicum vulgare* var. dicoccum, *T. turgidum*, and *T. monococcum*, probably only cultivated in a few places as experiments; *T. spelta*, with *Avena sativa*, appearing later not till the bronze age:

Of weeds of the grain-fields, *Centaurea cyanus*, at Robenhausen only; *Lolium temulentum*; *Lappa major*, *Agrostemma githago*, *Lychnis vespertina*; *Silene Cretica*, unknown at the present day in Switzerland and Germany; *Spergula pentandra*, *Galium aparine*, *Medicago minima*; *Chenopodium rubrum*, *C.* sp. with striped seeds, and

Arenaria serpyllifolia of Europe and the adjoining portion of Asia. A diminutive annual called in Britain *sand-weed* (Prior), remnants in the debris of the lake-villages of Switzerland: — described by Fuchsius 23; termed "alsine minor multicaulis" by Tournefort inst. 243; and known to occur in fallow ground from Britain throughout middle Europe (Curt. lond. iv. pl. 32, and Pers.); observed by Scopoli in Carniolia (Steud.); by Sibthorp, and Chaubard, frequent on walls and in arid situations from the Peloponnesus throughout the Greek islands; by Bieberstein, along the Taurian mountains. By European colonists was carried to Northeast America, observed by Hooker on Iceland, by myself in fallow ground around Salem and Philadelphia, by A. Gray in "sandy waste places" in Central New York, by Short in Kentucky, and by Chapman in "waste places" as far as "Florida."

Ranunculus repens of Europe and Northern Asia. Remnants of this *butiercup* in debris of the early lake-villages of Switzerland: — R. repens is described by Valerius Cordus 8 (Spreng. præf. h. h.); is termed "r. pratensis repens hirsutus" by Tournefort inst. 289; is known to grow in moist

places and cultivated ground from Denmark to the Mediterranean and Barbary (fl. Dan. pl. 795, and Wats.); was observed by Sibthorp in the Peloponnesus; and is known to grow around Caucasus and throughout Siberia as far as Daouria and Kamtschatka (Ledeb.). By European colonists, was carried to Madeira (A. Dec.); to Iceland (Wats.); to Northeast America, observed by Sheppard around Quebec (Hook.), by myself in moist grass-grown clearings and along river-banks in our Northern and Middle States, completely naturalized, and has been received by Torrey and Gray fl. i. 21 from Georgia and Oregon.

Stellaria media of Europe and Northern Asia. Called in Britain *chickweed*, in Anglo-Saxon "cicena-mete" (Prior emend.), by Hildegarde ii. 174 "hunesdarm" (Spreng.), in Egypt "qezazeh" vitreous (Del.), in Japan "fan ru" or usually "fakôbi" or "fagu iera" (Thunb.); and remnants in debris of the early lake-villages of Switzerland: — S. media is termed "morsus gallinæ" in the Ortus sanitatis 301, "alsine media" by Tournefort inst. 242, and Linnæus, "alsine avicularum" by Lamarck; is described also by Fuchsius; is known to occur in cultivated ground from Lapland to Algeria (Wats., and Munby) and the Canaries (De Buch); was observed by Sibthorp, and Chaubard, from the Peloponnesus to Asia Minor; by Delile, in Lower Egypt; is known to occur from Caucasus throughout Siberia (Ledeb.); and was observed by Kaempfer, and Thunberg, in cultivated ground everywhere in Japan. By European colonists, was carried to Northwest America, observed by Mertens around trading-posts on Norfolk Sound, by Beechey 135 in California, known to occur also between York Factory and Cumberland House (Hook.) and as a common weed throughout the cultivated portions of the United States; was also carried to Greenland (Wats.) and Iceland (Hook.); to the Azores (Wats.); to Southern Brazil (Saint-Hil.); to the Falkland Islands (J. D. Hook.); to Chili (C. Gay); to New Zealand (Raoul); to the Auckland or perhaps Campbell Island (A. Dec. 490); to Austral Africa (Drège, and E. Mey.); and possibly by European colonists to Ceylon, observed by Gardner naturalized in elevated situations, and by Wight on the Neilgherrie mountains farther North.

Chenopodium album of Northern Climates. Esculent, and called in Britain with other species *goose-foot* (Prior), in Egypt "fisah klab" (Del.), in Yemen "rockeb el djammel" (Forsk.), in Japan "rei" or usually "akasa" or "akadsa" (Thunb.); and remnants in the early lake-villages of Switzerland: — C. album is termed "atriplex sylv." by Fuchsius 119 (Spreng.), "ch. folio sinuato candicante" by Tournefort inst. 506; is known to occur in waste and fallow ground from the Feroe Islands and Lapland to the Mediterranean (Martins, Fries, and Pers.); was observed by Forskal, Sibthorp, and Chaubard, from the Peloponnesus to Constantinople; by Hasselquist, in Palestine; by Forskal, and Delile, in Egypt; by Forskal p. 2, frequent in Yemen; by Graham, and Roxburgh, under cultivation as a potherb in Hindustan, but having no Sanscrit name; is known to grow in Siberia (Wats.); and was observed by Kaempfer, and Thunberg, in Japan. Farther East, was observed by Mertens around trading-posts on the American coast at Norton Sound; by myself, around Chinook villages on Puget Sound, also around the European trading-posts, and clearly indigenous throughout the Interior plains, probably indigenous also in the sands along the Atlantic; indigenous according to Lindheimer in Texas (A. Dec. 752); but a frequent weed in the cultivated portions of the United States, as far as Florida (Chapm.), and received by Moquin from Cuba. By European colonists, was carried to Chili (C. Gay); to the Hawaiian Islands (Moq.); and to Austral Africa (Drège).

Chenopodium polyspermum of Europe and the adjoining portion of Asia. Remnants of this allied weed also in the early lake-villages of Switzerland: — the "third blitum" of Tragus is referred here by Sprengel præf. h. h.; C. polyspermum is described also by Gerarde 325; is termed "blitum majus polyspermum a seminis copia" by Morison ii. pl. 30, "ch. betæ folio" by Tournefort inst. 506; is known to occur in cultivated ground from Denmark throughout middle Europe (fl. Dan. pl. 1153, Engl. bot. pl. 1480, and Pers.); and was observed by Sibthorp among rubbish at Constantinople. By European colonists, was carried to Northeast America, found by C. J. Sprague "a scarce garden-weed about Boston," and by Porter in "woods near Mercersburg and Reading, Penn., naturalized" (A. Gray).

Of quadrupeds, enumerated by Rütimeyer, the brown bear *Ursus arctos*, badger *Meles vulgaris*; pine marten *Mustela foina*, at all stations of the Stone age; marten *M. martes*, polecat *M. putorius*, and ermine *M. erminea*; otter *Lutra vulgaris*, fox *Canis vulpes*; wolf *C. lupus*, teeth as trophies of the chase; *C. familiaris*, from the beginning, var. *major* occurring only in the Western lakes; European wildcat *Felis catus*; hedgehog *Erinaceus Europæus*; beaver *Castor fiber*, at all stations of the Stone age; squirrel *Sciurus Europæus*, *Mus sylvaticus*, hare *Lepus timidus*; wild boar *Sus scropha*, and var. palustris, both in the wild state in the Stone age, and subsequently occurring domesticated; *Equus caballus*; *E. asinus*; at Wauwyl; *Cervus alces*, *C. elaphus*, and *C. capreolus*; *Capra ibex*, and *C. hircus*; *Ovis aries*, in the domestic state and from the beginning; *Antilope rupicapra*; *Bos primigenius*, *B. bison*; *B. taurus*, in the domestic state, with the varieties primigenius, brachyceros, trochoceros, and frontosus:

Of birds, *Aquila fulva*, and *A. haliætus*; *Falco milvus*, *F. palumbarius*, *F. buteo*, and *F. nisus*; *Strix aluco*, *Sturnus vulgaris*; *Corvus corax*, and *C. corone*; *Cinclus aquaticus*, *Columba palumbus*, *Tetrao bonasia*, *Ciconia alba*, *Ardea cinerea*, *Grus cinerea*, *Fulica atra*, *Larus* sp., *Cygnus olor*, *Anser segetum*; *Anas boschas*, and *A. querquedula*; *Mergus merganser*, and *Podiceps minor*:

Of reptiles, *Cistudo Europæa*, *Rana esculenta*, *R. temporaria*, and *Bufo vulgaris*:

Of fishes, *Salmo salar*, *Esox lucius*, *Perca fluviatilis*; *Cyprinus carpio*, *C. leuciscus*, and *C. dobula*; *Chondrostoma nasus*, *Lota vulgaris*, and *Scardinius erythrophthalmus*:

But there are no remains of *mice*, *rats*, the domestic *cat*, nor of the *domestic fowl*: and among plants, there are no traces of *rye*, Secale cereale; nor of *hemp*, Cannabis sativa.

"The same year" (Liv., and Clint.), before the close of the first campaign of Caesar in Gaul, extending as far as the Sequana (Seine), the German invaders under Ariovistus defeated and driven back beyond the Rhine.

"The same year" (Porphyr., and Clint. iii. p. 400), arrival in Rome of Ptolemy XI. of Egypt.

"57, Jan. 25th" (Forbiger, and Sm. b. d.), at Rome, P. Clodius, no longer tribune, endeavouring to prevent by armed bands the passage of a decree recalling Cicero from banishment. The ensuing dissensions seem alluded to by Lucretius de rerum natura: a poem dedicated to C. Memmius Gemellus, praetor in the previous year, — and noticed by Cicero in B. C. 55 as recently published.

Santolina chamæcyparissus of the West Mediterranean countries. Called in France "aurone" (Batard fl.); and possibly the ABROTONVM of Lucretius vi. 123: — "abrotonites" wine is mentioned by Columella; the "avrōtōnōn thēlu" is described by Dioscorides as a whitish shrub, with minutely-incised leaves and terminal corymbs of golden flowers, growing on Sicily; and according to Pliny xxi. 34 to 92 the Sicilian kind is the best, and the "abrotonum" with golden flowers is cultivated: S. chamæcyparissus is described by Matthioli comm. 513, and Clusius hist. 341 (Spreng.); was observed by Lenz in the gardens of Italy; and is known to grow wild in France and various parts of Southern Europe (Lam. fl. fr., and Pers.). "S. incana," regarded by Chaubard as not distinct, was observed by him near Mycenæ in the Peloponnesus. (See Artemisia abrotanum).

Cistoseira barbata of the coasts of the Mediterranean and North Atlantic. Probably included in the ALGA-DABAT-TORVM of Lucretius, — and "alga" of Horace iii. 17. 10, Virgil, Pliny, and Servius: C. barbata is mentioned by Bory as one of the most frequent seaweeds in the Mediterranean; was observed by him, and Sibthorp, from the Peloponnesus to the Propontis near Constantinople; and by Delile, near Alexandria in Egypt. Farther North, is known to grow in the Atlantic as far as Britain (Gooden. and Woodw. linn. trans. iii. 128, and Engl. bot. pl. 2170).

"The same year = 1st year of the 'ou-foung' of Siouan-ti" (Chinese chron. table), beginning of the Forty-fourth cycle.

"56 B. C." (Clint.), Caesar in Illyria, acquiring knowledge of the bordering nations, recalled by war breaking out in Gaul.

"The same year" (= 326 B. C. — "140 — 130 yrs." of Masudi, Wilf. as. res. ix. 181, and Colebr. algbr. ind. 43), the *Saca era* of the Hindus; the Saca or Scythians having entered Hindustan repelled by Vikramaditya king of Malwa at Ujayin. The death of Puchpamitra, last king of the Maurya dynasty, possibly coincident, the predicted "five hundred years" of Budhist supremacy (Avadan. asok., Chinese writings, and Burn. i. 432 and ii. 365) having expired. — The era continues in use "through all the countries north of the Nerbadha" (Elph. iv. 1).

As early perhaps as this year, certain trees held sacred to three Budhas supposed to have lived before Gautama. Anterior Budhas — are mentioned in the Avadana asoka, and Saddharma pundarika (Burn. i. 388 to ii. 24).

Acacia (*Albizzia*) *lebbek* of the Siamese countries. An umbrageous tree called by Hindu residents in Yemen "serisch" (Forsk.), in Persian "sirish," in Sanscrit "siris," in Bengalee "sirisha" (J. F. Wats.) or "siris-gachh," in Hindustanee "siris," in Telinga "dirisana," in Tamil "kattuvagai" (Drur.), in Burmah "seet" (Mason); and consecrated to the first Budha — (Burn. i. 388 to 396). The "sirisha" is mentioned by Bhavabhuti mal. 10; its flowers according to Kalidasa kum. v. 4 and ragh. xvi. 48 will sustain the foot of a bee but not of a bird; and is prescribed by Susrutas: A. lebbek was observed by Roxburgh, Wight, Graham, and myself, a common tree of rapid growth from Bombay to Travancore and Coromandel, planted in gardens and along roadsides, but in Northern India "considered unlucky to employ the timber in house-building" (Drur.); is enumerated by Mason v. 529 as indigenous in Burmah, its wood said to be "dark colored and very hard." Westward, was observed by Forskal planted at Beit-el-fakih in Yemen; by Bruce trav. vi. pl. 4, in Abyssinia; by Forskal, Delile, and myself, in the gardens of Egypt. By European colonists, was carried to the Mauritius Islands, where it has become naturalized (Boj.). From transported specimens, is described by Plukenet mant. pl. 331.

"55 B. C." (Cic., Dio, and Clint. iii. p. 395), with the concurrence of Pompey, Ptolemy XI. Auletes restored by a Roman army, entering Egypt under the proconsul A. Gabinius.

"September" (Oros., Blair, and Clint.), Caesar after defeating the Germans across the Rhine and entering Britain, returning to the main land.

The VRVS of Caesar has been already noticed; but the name claims attention from being clearly *French:* — to the present day, notwithstanding the disappearance of the animal, the word "ure" is retained in French dictionaries, a record of the extinction of an idea (see Bos urus).

Lycopus vulgaris of Northern climates. The Gauls are described by Caesar bell. gall. v. 14 as colouring their bodies with VITRVM to strike terror into their enemies — (see also Marcell. Burdigal. ii. 23); and according to Pliny xxii. 2, the British matrons and bride preparing to walk naked in certain religious ceremonies, smear the whole body with "glastum" so as to imitate the colour of Ethiopians: the two names are evidently translations, one from the other; L. vulgaris according to Lyte is called *gipsey-wort*, because those people "colour themselves black with this herbe" (Prior); an account repeated by Withering, and Burnett states that the plant "is known to make a good black dye" (Lindl.). L. vulgaris is described by Matthioli p. 711, and Plukenet alm. pl. 45; is termed "l. palustris glaber" by Tournefort inst. 191; was observed by Forskal near Marseilles, and is known to grow in Barbary and Portugal and throughout middle Europe as far as Sweden (Desf., Brot., and Wats.). Eastward, was observed by Forskal, and Sibthorp, from the Peloponnesus to Smyrna and Constantinople, troublesome in gardens; and is known to grow along the Taurian mountains and throughout Siberia as far as China (Gmel., Bieb., and Lindl.). Farther East, was observed by Scouler at the Straits of De Fuca, and is known to grow from the Saskatchawan and Arkansas throughout Canada and our Atlantic States as far as Florida (Ell., Nutt., Drumm., A. Gray, and Chapm.). According to Lindley, occurs also in the Southern Hemisphere, in Tasmania and Australia.

"54 B. C." (Cic., and Clint.), Second expedition of Caesar into Britain. And "in the winter," his war in Gaul against Ambiorix.

"53 B. C." (Dio, and Clint.), death of M. L. Crassus, defeated beyond the Euphrates by the Parthians. Taking advantage of the situation, Pharnaces II began to extend his authority beyond the limits assigned by the Romans; — and on the breaking out of civil war, defeated the combined forces of the Romans and Galatians, and obtained possession of Colchis, lesser Armenia, and the whole of Pontus (Sm. b. d.).

"52 B. C." (Cic., Dio, and Clint.), after the death of P. Clodius, Pompey created sole consul.

"51, May" (Porphyr., Clint. iii. p. 400 and Sm. b. d.), in Egypt, accession of Cleopatra, in conjunction with her brother Ptolemy XII. Her hieroglyphic ovals occur on various monuments; as on the small temple built by her at Erment or Hermonthis. She also founded the temple at Dendera.

"50 B. C." (Cic, Blair, and Clint.), Caesar ordered by the Senate to disband his army, and refusing unless Pompey should do the same, commencement of civil war.

Hardly later than this date, the medical sect of Methodici founded by Themison, a pupil of Asclepiades of Bithynia. He is regarded as the first physician who employed *leeches* — (C. Aurel. morb. chron. i. 1. p. 286). He died "B. C. 43" (Sm. b. d.).

Plantago lagopus of the Mediterranean countries. The "minor" of two kinds seemingly included in the "vulgarem herbam plantaginem" celebrated by Themison, growing in meads and having narrower and blacker leaves closely resembling a sheep's tongue, its stem angular inclined towards the ground — (Plin. xxv. 39), or the "arnŏglŏssŏn mikrŏn" having according to Dioscorides narrower softer smoother and more delicate leaves, its stem angular inclined towards the ground, flowers pale yellowish and seed at the top of the stem, is referred here by Sibthorp, and Fraas: P. lagopus was observed by them, and Chaubard, abounding in dry sunny situations from the Peloponnesus throughout the Greek islands. Farther South, the "radschil elarnab" is mentioned by Ebn Baitar; and P. lagopus was observed by Rauwolf 6 in Syria, by Delile around Cairo in Egypt. Westward, the "arnŏglŏssŏn" is identified in the Syn. Diosc. with the "plantagŏ minŏr" of the Romans: P. lagopus is described by Morison iii. pl. 16; is termed "p. angustifolia paniculis lagopi" by Tournefort inst. 127, and is known to grow in Spain and Southern France (Pers., and Bory).

Juniperus sabina of Europe and Northern Asia. Called in Britain *savine* from the Sabine district of Italy (Prior), in France "savinier" or "sabine" (Nugent), in Italy "sabina" (Lenz); in which we recognize the "ĕrva savina" of the Romans identified in Syn. Diosc. with the ΒΡΑΘΥΟC of Themison — (Asclepiad., and Gal. comp. med. gen. vii. 12), and of the two kinds described by Dioscorides, the "yrathu ĕtĕrŏn" having tamarisk-like leaves: J. sabina was observed by Sibthorp, and Fraas, on the mountains of Greece, Parnassus, the Bithynian Olympus; is known to grow also throughout Siberia as far as the mountains of Daouria (Gmel., and Pall. pl. 56), or according to A. Decandolle throughout two-thirds of the Subarctic circuit of the Globe. Westward from Greece, the "brathys" is mentioned by Scribonius Largus 154, is identified by Pliny xvii. 21 and xxiv. 61 with the "herba sabina" cultivated in Italy, mentioned also by Propertius iv. 3. 58, and Columella: the "savina" is enumerated among cultivated plants in the Capitularia of Charlemagne, and J. sabina

continues to be cultivated in Britain; is described by Bauhin . . .; and is known to grow wild on the mountains of Italy, and as far as Portugal and middle Europe (Pers., Daub., and Lenz). "Oil of savin" according to Lindley "is a powerful local stimulant, acting when applied to the skin as a rubefacient and vesicant," and though dangerous and uncertain when swallowed, is employed in female complaints. (Compare J. Phœnicia var. Lycia.)

"48 B. C. = 'tsou-youan,' 1st year of Youan-ti or Hiao-youan-ti, of the Han" or Seventh dynasty — (Chinese chron. table).

Sinapis arvensis of Europe and the adjoining portion of Asia. Called in Anglo-Saxon "cerlice," in a manuscript of the Fourteenth century "szerlock," in Scotland "skelloch," in current English *callock* or *carlock* or *charlock* or *wild mustard* (Prior), in Greece "lampsanē" or "lapsana," in which we recognize the "lapsana" on which Caesar's army was obliged to live at Dyrrachium — (Plin.), and the "lampsanē" of Dioscorides, a wild potherb whose stem and leaves are cooked and eaten and are more nutritious than "lapathōu:" S. arvensis was observed by Forskal, and Sibthorp, frequent from Constantinople to the Peloponnesus. Farther South, the "lampsanē" is identified in the Syn. Diosc. with the "ĕuthmōi" of the Egyptians. Westward, with the "napiōum" of the Romans: the "lampsana" or "lapsana" is mentioned by Varro ii. 16, and Columella, by Celsus as esculent, and by Pliny xx. 37 as among "silvestres brassicas," a foot high with hairy leaves closely resembling those of "napi:" S. arvensis is described by Matthioli (Spreng.); is termed "s. arvense præcox semine nigro" by Tournefort inst. 227; was observed by Gussone ii. p. 202 in Sicily, and is known to occur in waste and cultivated ground throughout middle Europe as far as Denmark (fl. Dan. pl. 753, Pers., and A. Dec.). By European colonists, was carried to Northeast America, where it has become a weed in grain-fields; and to the Mauritius Islands, observed by Bojer naturalized.

Sinapis incana of the Mediterranean countries. Called in Greece "vrōuva" or "lahana tōu vōunōu" (Fraas) or "lapsana tōu vōunōu" (Sibth.), and the "lampsanē" in question — is referred here by Fraas: S. incana was observed by him frequent in Greece. Westward, is described by Hermann parad. pl. 115; and is known to grow in Switzerland, France, Spain, and Portugal (Pers.).

"Aug. 9th" (Blair, Clint., and Sm. b. d.), Pompey defeated by Caesar at Pharsalia in Thessaly, and sailing to Egypt, put to death "Sept. 29th" by the guardians of the young Ptolemy XII.; then engaged in war with the expelled Cleopatra at Pelusium.

"In autumn" (Clint. iv. p. 274), the Cilician *era of Ægæ.*

"47, January" (Blair, Clint., and Sm. b. d.), Mithridates of Pergamus with an army from Cilicia and Syria having reached Pelusium, landing of Caesar; who joining forces defeated the Egyptians under Ptolemy XII., and obtained full possession of Alexandria. Caesar next proceeded to Zela in Pontus, where he defeated Pharnaces II.; and returning in "July" to Rome, was made annual dictator.

"December" (Sm. b. d.), at Rome, Q. Fufius Calenus and P. Vatinius appointed consuls for the remainder of the year by the dictator Caesar. The poet Catullus at this time writing (carm. 53 and 113).

Pinus mughus of middle Europe. The *torch-pine* of the French; the TEDA of Catullus,— Virgil geor. ii. 431, Ovid, and Juvenal, described by Pliny xvi. 19 to 30 as growing on the mountains, more abounding in resinous juice than other pines, and used for fire and light in religious ceremonies, may therefore be compared: P. mughus is known to grow on the Alps, from Switzerland to Austria and Silesia (Jacq. rar. i. pl. 193, Pers., A. Dec., and Daub.). "P. pumilio," regarded as not distinct, affords *Hungarian balsam* (Lindl.).

"46 B. C." (Censorin., Blair, and Clint.), the calendar corrected by Caesar through the aid of Sosigenes of Alexandria: and this so-called "Year of confusion" made to consist of "fifteen months and four hundred and forty-five days."

"44 B. C." (Appian, and Clint.), after his victory in Spain, Caesar made "dictator for life and consul for ten years;" an appointment soon followed by his death by the hands of conspirators. In his honour, the month Quintilis received the name of "Julius" through the surviving consul Antony (Cic., and Censorin.).

Departure of Cleopatra from Rome after the death of Caesar (Cic., and Clint. iii. p. 397).

"43 B. C." (Sen. ep. 91, and Clint. iv. p. 41), by Plancus, a Roman colony established at Lugdunum in Gaul (the founding of the city of Lyons).

"April" (Sueton., Tac., and Sm. biogr. dict.), battle at Mutina. The consul C. Vibius Pansa dying of his wounds, his physician Glycon was imprisoned on suspicion.

Aristolochia longa of the Mediterranean countries and middle Asia. Called in Greece "ampĕlōklathōriza," in which we recognize the "aristolochia clematitis" and its "sarmentorum" used by ointment-makers according to Glycon — (Scribon. Larg. 206), and Dioscorides: A. longa was observed by Sibthorp in the Peloponnesus. Westward, a kind of "aristolochia" called "clematitis"

or by others "cretica" is described by Pliny xxv. 54 as having a root "longissimae tenuitatis vitis novellae:" A. longa is termed "a. longa vera" by Tournefort inst. 162, and is known to occur in Carniolia, Italy, and as far as Portugal (Mill. pl. 51, and Pers.). Eastward from Greece, was observed by Thunberg in Japan. The plant according to Lindley continues in medicinal use.

"Nov. 27th" (Blair, and Clint.), the "Second Triumvirate" over the Romans; established by Octavius, Antony, and Lepidus, to continue "five years."

"42 B. C." (Blair, and Clint.), defeat and death of Brutus and Cassius at Philippi in Macedonia.

"41 B. C." (Appian, and Clint. iii. p. 216 and 228), first visit of Antony to Egypt.

The earliest *Latin inscriptions* in Egypt, are perhaps those on coins issued by Antony and Cleopatra.

"38 B. C." (Liv., and Clint.), unsuccessful naval warfare of Antony and Octavius against Sextus Pompeius.

"37 B. C." (Dio, and Clint. iii. p. 220), the Jews having been conquered by Sossius, Herod appointed by Antony king at Jerusalem.

"The same year" (Dio, and Clint. iii. p. 220), return of Antony to Italy; and the renewal of the Triumvirate between him, Octavius, and Lepidus, for "another five years."

"36 B. C." (Liv., and Clint.), renewal of *naval war*, and Sextus Pompeius defeated. The fall also of Lepidus, who had taken part against Octavius. And in the East, the Parthian war and disastrous retreat of Antony from Media.

In this year, Varro "eighty" years old writing on Agriculture "re rustica." — He died "B. C. 28" (Sm. b. d.).

Viburnum opulus of middle and Northern Europe. Called in Britain *water-elder* (Prior), in France in the time of Ruel "opierus" or "obierus," in current French "obier" (Nugent): the OPVLVS of Varro i. 8, — and Columella v. 6, a shrub resembling the cornel, is referred here by Ruel i. 105, and others: V. opulus is described also by Cordus, Tragus, Matthioli, Gesner, Dodoens, Thalius, and Tabernæmontanus; is termed "opulus Ruellii" by Tournefort inst. 606; and is known to grow in the woods of France and middle Europe as far as Denmark (fl. Dan. pl. 661, Lam. fl. fr., Engl. bot. pl. 332, and Pers.). Eastward, was observed by Forskål, and Sibthorp, in the environs of Constantinople. The cultivated variety called *guelder-rose* or *snowball tree* (Prior) from the enlarged and barren flowers, is figured by C. Bauhin; and by European colonists was carried to North-east America, where it continues under cultivation for ornament.

Acer opalus of the West Mediterranean countries. Possibly the "opulus" of Varro, — and Columella: A. opalus is described as an arborescent shrub (Pers.); is termed "acer opalum" by Crescenzio (Spreng.), "a. italum" by Lauth, "a. hispanicum" by Pourret, "a. opulifolium" by Villars, and is known to grow in Italy (Pers., and Steud.).

Triticum monococcum of the Tauro-Caspian countries. Single-seeded wheat is called in Germany "einkorn" (Grieb), in France "locular" (Fée), in Italy "farragine" (Farg.), in which we recognize the FARRAGO of Varro, — Virgil, Columella, and others: the "zëia aplē" single-seeded kind of Dioscorides clearly belongs here: T. monococcum is enumerated by Link as frequent in Greece (Chaub.), but according to Fraas is no longer cultivated there. Westward, occurs in the debris of the ancient lake-villages of Switzerland (Troyon); is described by Morison viii. pl. 6, and Haller helv. 1425 (Pers.), but its cultivation in middle Europe continues unimportant (A. Dec.). In its wild state, is said by Bieberstein to grow from the Crimea to Eastern Caucasus, but this has not been confirmed by other observers (See T. spelta).

Scirpus (*Isolepis*) *setaceus* of Temperate Climates. A diminutive annual kind of *rush;* and the SCIRPICVLVS mentioned by Varro as made into a little wheel — (Ainsw.), may be compared: I. setaceus is termed "s. omnium minimus capitulo breviore" by Tournefort inst. 528, "s. filiformis" by Savi as observed by him in Italy; and is known to grow throughout middle and Northern Europe as far as Denmark and Iceland (Hook., fl. Dan. pl. 311, and Pers.). Eastward, was observed by Sibthorp in marshy ground on the island of Seriphus. In the Southern Hemisphere, is known to grow in Australia (Wats.).

"35 B. C." (Sm. b. d.), the Illyrians defeated by Octavius. According to M. Antonius (Sueton. aug. 63), Octavius had sought in marriage the daughter of the Dacian king Cotiso.

"34 B. C." (Liv., and Clint.), expedition of Antony into Armenia, and king Artavasdes imprisoned.

One hundred and twenty-eighth generation. B. C. 34, Sept. 1st, mostly beyond youth: the historian Ptolemaeus of Mendes; the Greek philosophers, Boethus of Sidon, Athenaeus of Seleucus, Nestor of Tarsus, and Pollio of Tralles; the physicist Athenodorus of Tarsus; the historians, Timagenes, Nicolaus of Damascus, and Dionysius of Halicarnassus; the grammarians Tyrannion the younger, Conon, Demetrius of Adramyttium, and Didymus; the rhetors, Timagenes of Alexandria, Theodorus of Gadara, Caecilius, Hermagoras the younger, and Dionysius of Pergamus; other

Greek writers, Parthenius: the Latin writers, the poets Tibullus, Propertius, Quintilius Cremonensis, Varius Rufus, Aemilius Macer; the historian Livius; the orators Munatius Planeus, Atratinus; the grammarian Caecilius Epirota; the editor Plotius Tucca; the rhetors Porcius Latro, Cestius of Smyrna, Passienus, Albutius Silo, M. Seneca Rhetor; other Latin writers, C. Melissus, Tullius Tiro, C. Asinius Pollio, Messala Corvinus; the Roman actors, Pylades, and Bathyllus; the Roman painter Arellius (Bryan).

"33 B. C." (Dio, and Clint.), Media and Armenia conquered by the Parthians (Persians).

"32 B. C. = 'kien-chi,' 1st year Tching-ti or Hiao-tching-ti, of the Han" or Seventh dynasty (Chinese chron. table, and Pauth. p. 253).

"In this year" (Jap. centen. comm. 95), a ravine dyked in Japan by the emperor Sujin; forming a *reservoir* * from which water was drawn as required to irrigate rice-fields. — Similar constructions, some resembling small lakes, "are now to be met with in many parts of Japan."

"At this time" (Plut., and Clint.), the *Libraries* at Pergamus said to contain "two hundred thousand volumes."

About this time (see Percev. i. 186), Conos son of Maadd, seeking to expel his brother Nizar from the Mecca territory, driven away by the people. Nizar was elected chief, and is reckoned the nineteenth progenitor of Mohammed.

"31, Sept. 2d" (Dio, Blair, and Clint.), at Actium, Antony and Cleopatra defeated in *naval combat* by Octavius.

"30 B. C." (Porphyr., Oros., and Clint.), death of Antony; and on "Sept. 30th," of Cleopatra; the independence of Egypt ceasing, and Octavius becoming the undisputed master of the Roman world. — From this time *gold* disappears from the Egyptian coinage.

The *removal of obelisks* from Egypt, initiated by Octavius. He also continued the temple at Dendera; and his hieroglyphic ovals occur at Talmis, Kalabsheh, Debot, Dendur, Philæ, and on the temple to Isis at Thebes.

Cornelius Gallus, appointed by him prefect over Egypt, is accused of permitting statues of himself to be erected, and of having pillaged the city of Thebes.

"In this year" (Jap. centen. comm. 88, see also Art de verif.), end of the reign of Sujin. He was succeeded by Suinin or Synin, third son of the dairo Siunsin, and now eleventh dairo of Japan.

"B. C. 29, and under Suinin" (Jap. centen. comm. 59), "human figures were formed of clay to be buried together with the deceased members of the imperial family, and in this manner to replace the servants who were otherwise obliged to accompany their masters into the grave."

"In this year" (Dio, and Clint.), Third closing of the temple of Janus, the Romans being at peace among themselves and with all nations.

Reseda luteola of Europe and the adjoining portion of Asia. Called in Britain *weld* or *woold* or *yellow-weed*, in Spain "gualda" (Prior), in Greece "ōhistra," in Egypt "uæhæ" or "blyhah:" the LVTVM of Vitruvius, — Virgil, used for dyeing according to Pliny xxxiii. 26, is referred here by Fée: R. luteola is termed "luteola herba salicis folio" by Tournefort inst. 423, is known to occur along roadsides and in waste ground throughout middle Europe (Engl. bot. pl. 326, and Pers.), and continues to be employed for dyeing yellow. Eastward, was observed by Forskal, Sibthorp, and Chaubard, from the Dardanelles to the Peloponnesus. Farther South, was observed by Forskal, Delile, and Clot-Bey, in gardens and growing spontaneously around Cairo. By European colonists, was carried to Northeast America, where it has been observed "along roadsides in W. New York etc." (A. Gray).

Salix caprea of Europe and Northern Asia: The "erratica" willow distinguished from the cultivated kind by Vitruvius viii. 13, — mentioned also by Pliny xix. 8, is referred here by Billerbeck: S. caprea is termed "s. latifolia rotunda" by Tournefort inst. 591; is known to grow in Italy and throughout Northern and middle Europe as far as Lapland and Iceland (Vaill., Thuill., fl. Lap. pl. 8, Hook., Pers., and Pollini); and according to Lindley, all the *sallows* should probably be comprehended under this species. Eastward, was observed by Sibthorp, and Chaubard, frequent in certain localities in the Peloponnesus; by Pallas, on the Ural mountains; and is known to grow throughout Subaretic Asia (Wats., and A. Dec.). The species is officinal in the Dublin pharmacopœa, and in that of London for 1824 (Lindl.).

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* *Pinus densiflora* of Northern Japan. Called by the Ainos "kui," by the Japanese "aka mats" (Sieb.), and from early times used by them in hydraulic constructions "in very damp ground" — (Jap. centenn. comm. 95): described by Sieb. and Zucc.; known to grow throughout Japan as far as Yeso; and enumerated by Siebold p. 41 and 170 among the kinds especially fit for shipbuilding and supplying masts. The "kouai" of the Chinese and "finoki" or "saki-kousa" of the Japanese, enumerated in the San-kokf transl. Klapr. among the productions of Yeso, may be compared.

Carex acuta of Europe and Northern Asia. Called in Britain with other species *segs* or *sedge*, in Anglo-Saxon "secg" (meaning also a small sword, Prior), and the CARECTVM of Vitruvius,—and Virgil ecl. iii. 20, and "carice pastus acuta" of geor. iii. 231, are referred here by Billerbeck: the "segg" is mentioned in a Wycliffite translation of Ex. iii. 2 (Prior): C. acuta is known to grow from the Mediterranean throughout middle and Northern Europe as far as Lapland and Iceland (Curt. lond. iv. pl. 62, Hook., Pers, and Wats.). Eastward, was observed by Sibthorp, and Chaubard on the mountains of the Peloponnesus; and is known to grow about Caucasus and in Siberia (Bieb, and Wats.).

The NIGRVM · INDICVM of Vitruvius,—and Pliny, is referred by Beckmann to *India ink:* and Pliny xxxv. 25 expressly mentions a kind of ink imported from India The "mĕlan" of Paulus Aegineta is also referred here by F. Adams. "India" ink, notwithstanding the name, is a Chinese manufacture.

"28 B. C." (Hieronym., and Clint.), the Pythagorean and Magian Anaxilaus of Larissa, expelled from Rome and Italy by Octavius.

Valerianella olitoria of Sicily. Called in Britain *corn salad* or *lamb's lettuce*, classed formerly with lettuces and called in medieval Latin "lactuca agnina" (Prior), called in France "doucette" or "mache" (Nugent): the "lactucŭlæ thyrsus" eaten habitually by Augustus to allay thirst—(Sueton. 77), or "teneris frondens lactucula fibris" of Columella, may be compared: V. olitoria is termed "sallade de chanoine" by Lobel hist. 412; is described also by Tabernæmontanus i. 475, and Gerarde em. pl. 348; is known to occur in cultivated ground from Barbary throughout middle Europe as far as Sweden (Linn. fl. suec., and Pers.): and only in Sicily in mountain meads and the open country (Gussone i. 30, and A. Dec.). Eastward, was observed by Bory and Chaubard in cultivated ground in the Peloponnesus. By European colonists, was carried to Northeast America, where it continues in cultivated and fallow ground in our Middle States, and is brought to market in the early spring.

"27, January" (Blair, and Clint.), the *Augustan era*. The title "augustus" conferred by the Roman Senate on Octavius, accompanied with the power of imperator for ten years, the censorship, and absolute exemption from the laws.

Proceeding to Spain, Augustus wrote to Virgil, who in reply states that the Aeneid is not in a fit state to send, hardly begun—(Macrob. sat. i. 24, and Sm. b. d.). The death of Marcellus in "B. C. 23" is alluded to in aen. vi. 883, and the poet died "Sept. 22d, B. C. 19."

Cissus vitiginea of Hindustan. The AMOMVM · ASSYRIVM of Virgil georg. iv. 25,—attributed to Mesopotamia by Strabo xvi p. 290, to Media and Pontus by Dioscorides, to Carduene by Josephus antiq. xx. 2, "indica vite labrusca" according to Pliny xii. 28, is referred here by Plukenet and others: the similar "amŏmithi" with which according to Dioscorides it was adulterated, seems in some respects to correspond: C. vitiginea was received from India by Plukenet mant. pl. 337; was observed by Graham in the environs of Bombay, in "Kennery junglès etc. common in the rains," by Wight in other parts of the peninsula, and by Roxburgh in Bengal, but no known uses are recorded.

Gossypium arboreum of Abyssinia and Yemen. A shrub called in Egypt "cotn el sadjar" tree cotton, in Yemen "otb" or "odjas" (Forsk.), and possibly the cotton-plant attributed by Virgil geor. ii. 120 to Ethiopia:—a shrub "fruticem quem aliqui gossypion vocant plures xylon," small and growing in the higher part of Egypt towards Arabia, is mentioned by Pliny xix. 2. 3, but the fibres of G. arboreum are not known to have been woven into cloth: the shrub was observed by Forskal, and Delile, in the gardens of Egypt; by Forskal, p. 125, under cultivation in Yemen, and var. rubrum wild on the mountains; is known to grow wild also in Abyssinia (A. Rich. p. 64). Eastward, is described by Rumphius iv. pl. 13; was observed by Graham in the environs of Bombay, "generally to be met with about houses and in gardens as an ornamental shrub;" in other parts of Hindustan according to Royle him. 99 only near temples, occurring beyond as far as Celebes (A. Dec.).

Arctium lappa of Europe and Northern Asia. Called in Anglo-Saxon "clate," by Chaucer, and by Galfridus pr. pm. "clote," in current English *clot-bur* or *burdock*, in Germany "klette," in France "bardane" (Prior), in Italy "bardana" (Lenz), in Greece "platĕa" or "platumantulitha;" in which we recognize the LAPPA of Virgil geor. i. 153 to iii. 385,—"tenax lappa" of Ovid, or "personatam" bearing according to Pliny xxv. 58 "grandes lappas" and leaves than which none are "latius:" A. lappa is termed "l. major arctium Dioscoridis" by Tournefort inst. 450; and is known to occur in waste ground in Italy and throughout middle Europe (Curt. lond. iv. pl. 55, and Pers.). Eastward, the "persolata", known to all is identified by Pliny xxv. 66 with the "arcion" of the Greeks; and the "pĕrsŏnakĕam" or "lappan" of the Romans, in Syn. Diosc. with the "prŏsŏpiŏn" or "prŏsŏpitha" or "arkĕiŏn;" described by Dioscorides as having hairy leaves resembling those of "kŏlŏkunthĕs" but larger, a large root, and employed for various medicinal purposes: A. lappa was observed by Sibthorp, and Fraas, in shaded waste ground in Northern Greece, more rare in Attica and on the Greek islands. Farther South, the "arkthion acher" of Ebn Baitar is referred here by

Sontheimer. Farther East, is known to occur in Siberia (Lindl.); was observed by Kaempfer, and Thunberg, everywhere along roadsides in Japan and called "gobo" or "uma bufuki." By European colonists, was carried to Northeast America, where it has become frequent in waste ground. The root according to Sprengel is esculent; and according to Lindley, is employed medicinally, and "reckoned tonic, aperient, sudorific, and diuretic."

Viburnum lantana of Europe and the adjoining portion of Asia. Called in Britain *lithy-tree* (Prior), in France "viorne" (Nugent), in Italy "lentaggine" or "lantana" or "viburno" (Lenz), in Greece "klĕmaxitha" (Sibth.); in which we recognize the VIBVRNA termed LENTA by Virgil ecl. i. 25, — mentioned also by Columella v. 6: the "lythwyrt" is mentioned in the Anglo-Saxon transl. Apul. 29 and 127: V. lantana is described by Dodoens pempt. 769; is termed "wayfaring tree" or "wayfarer" by Gerarde, "viburnum" by Tournefort inst. 607; and is known to grow in Italy and throughout middle Europe, occurring in hedges in Britain (Jacq. austr. pl. 341, Lam. fl. fr., Pers., and Prior). Eastward, was observed by Sibthorp, and Chaubard, in the Peloponnesus.

Valeriana saliunca of Switzerland. Called in Celtic "saliunca" (Val. Cord. p. 2, and Spreng.); in which we recognize the SALIVNCA of Virgil ecl. v. 17, — growing according to Pliny xxi. 20 and 83 in Pannonia and "Norici alpiumque aprica," used medicinally, and placed among clothing on account of its pleasant odour; also the "saliōugka" so-called according to Dioscorides by the natives of the Ligurian Alps where it grows. V. saliunca is described by Dalechamp p. 982, Allioni, Villars, and is known to grow on the Southern prolongation of the Alps, on mount Meri in Savoy, and on mount Ventoux (Reuter, Martins, and A. Dec.). The root, according to Wulffenius, and Sprengel, is exported from Trieste Eastward in large quantities to mix in ointments. (See V. celtica.)

Vaccinium vitis-idaea of Subarctic Climates. A depressed small shrub called in Britain *cowberry* (Prior); in which we recognize the VACCINIA gathered according to Virgil, — mentioned also by Vitruvius vii. 14, and Ovid trist. i. 5, by Pliny xvi. 31 as cultivated by slaves in Italy, but in Gaul used to dye garments purple: "red whortle-berries" were adopted as the badge of the M'Leod clan in Scotland (Vincent's ed. Haydn): V. vitis-idaea is termed "myrtillus exiguus" by Tragus (Spreng.); was observed by Savi on the Appenines; is known to grow in Switzerland, and Northern Europe as far as Lapland and Greenland (fl. Dan. pl. 40, Pers., and Wats.). Eastward, on the higher portion of Caucasus (Bieb.) and throughout Siberia to Kamtschatka (Gmel., and Pall.). Farther East, was observed by Mertens at Norfolk Sound in Alaska; by Drummond, in Lat. 54° on the Saskatchawan; by Richardson, near the Arctic Sea in Lat. 65°; by myself, from the Lower St. Lawrence throughout the neighbouring portion of New England; by Oakes, as far as Lat. 42° 30′ along the Atlantic; and is the *upland cranberry*, whose berries are brought in quantities to the Boston market.

Osyris alba of the Mediterranean countries. Called in Italy "ginestrella" or "osiride" or "casia poetica" (Lenz), in Greece "plĕurōtōxulōn" or "nĕurōtōxulōn;" in which we recognize the CASIA of Virgil ecl. ii. 49 and georg. ii. 213; — also the "osyris" described by Pliny xxvii. 88 as having fruit at first black, changing afterwards to reddish, and used by women for "smegmata" scouring: O. alba is described by Lobel pl. 433, and C. Bauhin pin. p. 212; is termed "casia poetica monspeliensium" by Tournefort inst. 664; and is known to grow in Italy and other parts of Southern Europe (Pers., and Spreng.). Eastward, the "ōsuris" is described by Dioscorides, is written "ōsiris" by Galen fac. simpl. viii. p. 93; and O. alba was observed by Forskal, Sibthorp, Chaubard, and Fraas, frequent from the Dardanelles to the Greek islands and the Peloponnesus.

Rosmarinus officinalis of the West Mediterranean countries. Called in Britain *rosemary* (Prior), in Germany "rosmarin" (Grieb), in France "romarin" (Nugent), in Italy "ramerino" or "rosmarino" (Lenz), in Greece "thĕnthrōlivanōn" or by the Turks "biberic," in Egypt "klil" or "aselban," in which we recognize the MARINVS - ROS commended for bees by Virgil, — and Columella, mentioned also by Horatius od. iii. 23, Ovid, Servius, Apuleius 79, and as cultivated in Italy by Pliny xvii. 21: R. officinalis is termed "r. spontaneus latiore folio" by Tournefort inst. 195; is known to grow in Italy and other parts of Southern Europe (Lindl., and Lenz), and is besides cultivated both here and farther North. Eastward, the "rōsmarinōum" of the Romans is identified in the Syn. Diosc., and by Pliny, and Galen, with the "livanŏtis" used for garlands, having according to Dioscorides slender twigs with crowded narrow leaves, green above and white beneath: the "thĕnthrōlivanōn" is mentioned in the Geoponica xi. 16: R. officinalis was observed by Forskal, Sibthorp, Chaubard, and Fraas, in uncultivated places from the Greek islands to the Peloponnesus, and under cultivation from Constantinople throughout. Farther South, was observed by Forskal, Delile, Clot-Bey, and myself, a favourite in the gardens of Egypt. By European colonists, was carried to Northeast America prior to 1670 (Joss.), and continues under cultivation; to the Philippines, where it is called in Tagalo "romero" (Blanco); and probably also to Hindustan where it was observed "in gardens" by Graham, and to Japan where it was found by Thunberg cultivated

for medicinal use, no native names being given. According to Lindley, "the admired flavour of Narbonne honey is ascribed to the bees feeding on the flowers," but the plant is principally remarkable for its undoubted power of encouraging the growth of hair, causing "the green colour of the best pomatums," is employed besides in manufacturing "Hungary water, the French vinaigre aux quatre voleurs, and eau de Cologne."

Cerinthe major of Siberia. An annual called in Italy "cerinta" or "cerinte" (Targ.), in which we recognize the CERINTHA of Virgil, — white leaved and sought by bees according to Pliny xxi. 41: C. major is termed "c. glauca" by Moench; is known to grow in Siberia, and to occur also in Switzerland (Roth cat. i. 32, and Pers.).

Ligustrum vulgare of Eastern Asia? Called in Britain by Tusser "privy" and in current English *privet* (Prior), in France by Ruel "troena" and in current French "tröene" (Nugent), by the Turks "lilak" (Sibth.), in Italy "ligustro" (Lenz), in which we recognize the ALBA · LIGVSTRA of Virgil ecl. ii. 18, — "nigrum ligustrum" of Columella x. 300, "candidum ligustrum" of Martial i. 117, and the "ligustrum" described by Pliny xvi. 31 and xxiv. 45 as supposed by some to be identical with the "cypros" (henna) of the East, as "tesseris utilissima," the juice used for "nervis articulis algoribus," and the leaves and berries also employed medicinally: L. vulgare is described by Ruel i. 94, Turner, is termed "ligustrum" by Tournefort inst. 596; and is known to grow along hedges throughout middle Europe (Curt. lond. v. pl. 1, and Pers.). Eastward, was observed by Sibthorp, and Chaubard, along hedges and in uncultivated places from Constantinople to Smyrna and the Peloponnesus; is known to grow around Caucasus (A. Dec.); and was observed by Thunberg in mountainous situations everywhere frequent in Japan and called "ibuta" or "ibota." By European colonists was carried to Northeast America, where it has been observed by myself in gardens as far South as Charleston, and through seeds carried by birds (A. Gray) has become naturalized in our Northern States.

Fraxinus rostrata of the Mediterranean countries. The FRAXINVS mentioned by Virgil as IN · SYLVIS · PVLCHERRIMA, very beautiful in the forest, — may be compared with this species of *ash*: Pliny xvi. 30 also speaks of the "fraxinus" as a forest-tree of Italy, growing "aquosis montibus," in wet places on the mountains. F. rostrata is described by Gussone, and is known to grow in Southern France, Sardinia, Algeria, Sicily, and Persia; but has not been found in Roumelia, nor on Caucasus (Griseb., Ledeb., and A. Dec.).

Salix triandra of Europe. The MOLLE · SILER of Virgil georg. ii. 11, — growing according to Pliny xvi. 31 in watery places, is referred here by Fraas: S. triandra is termed "s. folio amygdalino utrinque aurito corticem abjiciens" by Tournefort inst. 591; is described as a tree thirty feet high that sheds its bark like Platanus (Smith, and Pers.); and is known to grow along river-banks in Italy and throughout middle Europe as far as Britain (Curt. lond. vi. pl. 72, and Pollini). Eastward, was observed by Sibthorp, and Chaubard, in the Peloponnesus, and called there "ětia."

Salix murina of Italy. The AMERINA · RETINACVLA of Virgil geor. i. 265, used for tying grape-vines, — mentioned also by Columella iv. 30, and Pliny xxiv. 38, are referred here conjecturally by Sprengel (comm. Diosc. i. 135).

Salix argentea of Western Europe. The GLAVCA willow of Virgil geor. iv. 183 — is referred here by Sprengel: S. argentea was observed by Linnæus it. goth. in Southern Sweden (Steud.); by Lightfoot, and Hudson, in Britain; by Thuillier, near Paris; and is termed "s. lanata" by Roth.

Alnus oblongata of the West Mediterranean countries. The ALNVS · PROCERA of Virgil ecl. vi. 33 to geor. ii. 110 — is referred here by Sprengel: A. oblongata is distinguished by Aiton, and Willdenow, and is known to grow in Southern Europe (Pers.).

Hyacinthus Orientalis of the West Mediterranean countries? Called in Britain *hyacinth* (Prior), in Italy "giacinto" (Lenz), in which we recognize the SVAVE · RVBENS · HYACINTHVS of Virgil, — the "coelestis luminis" and "coeruleus hyacinthus" of Columella ix. 4. 4 and x. 100, and the "hyacinthus" enumerated by Pliny xxi. 38 and 97 as growing wild in Italy, employed by slave merchants to delay puberty in boys, and in Gaul to tinge "hysginum," a purple dye (compare Syn. Diosc., and Vaccinium myrtillus): H. orientalis is described by Gesner, Matthioli, and was first seen by Lobel "in 1562;" is described also by Dodoens, Castor Durantes, and C. Bauhin, is cultivated as an ornamental plant throughout middle Europe; and was observed by Gittard near Nisi in the Peloponnesus (Chaub.). By European colonists, was carried to Northeast America, where it continues a favourite flower in parlours and gardens.

Hyacinthus Romanus of the East Mediterranean countries. — Possibly the "niveus hyacinthus" of Columella x. 100, for Pliny xxi. 38 speaks of "hyacinthis," implying more than one kind growing in Italy: H. Romanus is known to occur there in cultivated ground (Pers., and Gawl. in Curt. mag. pl. 939). Eastward, is termed "muscari byzantinum flore candicante" by Tournefort inst. 347; and was observed by Sibthorp in the Peloponnesus and on Cyprus.

Conferva sp. of fresh water. The VLVA·VIRIDIS of Virgil æn. iii. 135—and Ovid, or "ulva palustris" of Horace sat. ii. 4.-24, is referred by Billerbeck to one or more species of Conferva.

"The same year" (Sm. b. d.), at Rome, building of the Pantheon by M. Vipsanius Agrippa, consul for this year. — The edifice is remarkable for having remained unmutilated, in a perfect state of preservation to the present day.

"26 B. C." (Dio, Hieronym., and Clint.), in Egypt, death of the Roman prefect Cornelius Gallus. And through the influence of Augustus, the "Julian year" adopted there; the moveable calendar stopping with New year's day, 1st of Thoth, fixed to August 29th (Blair). C. Petronius was appointed second prefect over Egypt (Strab., and Sueton.).

Inula helenium of middle Asia? Called in Anglo-Saxon "hors-helene" and in current English *hors-hele* or *elecampane* (Prior), in Germany "alant" (Grieb), in France "aunée" or "enule" (Nugent), in Italy "elenio" or "enula campana" (Lenz); in which we recognize the "inula," the cooking of which was first taught by Horatius, — and the prepared article of diet adopted by Julia Augusta (Cels. iv. 9, and Plin. xix. 29): the "inula" is mentioned also by Columella, Palladius, Vegetius, and Apuleius 95; the "elnan hellenïumque" by Macer Floridus 44, and the "enula campana" by Joannes de Sancto Amando: I. helenium is described by Anguillara p. 89 (Spreng.); is termed "aster omnium maximus helenium dictus" by Tournefort inst. 483; and is known to occur in waste ground in Italy and throughout middle Europe as far as Denmark (fl. Dan. pl. 718, Pers., and Lindl.). Eastward, the "ēnoula kampana" or "tĕrminaliōum" of the Romans is identified in Syn. Diosc. with the "ĕlĕniōn," described by Dioscorides as having a stem two cubits or more high, yellow flowers, and a large odorous subacrid root: the "innoulam" is mentioned by Sotion (Geopon.): a "confiture" of the roots of "inula campagne" was found by Belon eaten at Constantinople; and I. helenium was observed by Sibthorp in Thessaly. Farther South, the "ĕlĕniōn" or "sumphutōn" or "pĕrsikēn" or "mēthikēn" or "ōrĕstĕiōn" or "nĕktariōn" or "klĕōnian" or "vatōn ithaian" or "phlōmōn ithaiōn" is identified in the Syn. Diosc. with the "lenēs" of the Egyptians; "hĕlenium" root is enumerated by Forskal mat. med. as employed medicinally in Egypt; and according to Sprengel comm. i. 15 is mixed with costus by the merchants of Commagenes. Farther East, I. helenium was observed by Thunberg under cultivation and growing spontaneously around Jeddo in Japan, but no native name is given. By European colonists, was carried prior to 1669 (Josselyn) to Northeast America, where it has become frequent along roadsides in our Northern States, perhaps fairly naturalized. The plant according to Smith, and Lindley, "is generally kept in rustic gardens, on account of many traditional virtues."

Rosa eglanteria of Eastern Asia? The QUI·COLOR·PUNICEAE·FLORE·PRIOR·ROSAE of Horatius iv.—is referred by Cornuti p. 12 to the variety of the *yellow rose* having the inner surface of the petals red: "puniceis rosetis" are mentioned by Virgil ecl. v.; "punicas rosas luteolasque" by Columella ix; "rosae lutei floris" by Scribonius Largus 61, and Marcellus 1: the "rosa lutea" with petals altogether yellow, is described by Lobel adv., Dalechamp, Miller, and Linnæus. Eastward, "hrusa kai mōnōphulla" rōtha are mentioned in the addition to Dioscorides i. 130.

"25 B. C." (Dio, and Clint.), Fourth closing of the temple of Janus; the Romans being at peace with all nations.

"24 B. C." (Dio, Blair, and Clint.), expedition of Aelius Gallus down the Red Sea to Lĕukē kōmē (El Haura in Lat. 25°); where he landed his army and proceeded into Arabia. After some days, he reached the territory of Aretas, who received him in a friendly manner: Continuing beyond, using "butter in place of oil" (the temperature rendering butter permanently fluid), he entered the city of Negrana (Nedjran); and "six days" beyond, defeated the Arabs armed with "bows, spears, swords, slings, and pole-axes." He next captured the cities of Asca, Athrōula, and laid siege to Marsiava; belonging to the Rammanites under king Ilasar, and "two days" distant from the Incense country. From the want of water, he was compelled to abandon the siege; and return to the battle-ground in Negrana in "nine days;" thence to the Seven wells (El-Hasba) in "eleven;" and passing Haala (Kholeya?), and Malotha (. . . .), in "sixty days" from Marsiava reached Egra on the sea; in the territory of Obodas, a kinsman of Aretas. He here embarked his army, having lost in battle only "seven" men; and crossing the Red sea to Muŏsōrmōs, returned down the Nile to Alexandria.

Psoralea corylifolia of Arabia? Herbaceous, called in Bengalee "hakooch," in Telinga "bapunga," in Tamil "karpoogum," in Malabar "kaurkoal" (Drur.), in the environs of Bombay "bawurcheen" (Graham), in Yemen "lōbab el abid" (Forsk.); and from early times employed medicinally: — observed by Forskal p. 140 among the mountains of Yemen, near water at Taæs. Eastward, by Graham, "a common weed in the Deccan, also, in Bombay;" by Burmann ind. pl. 49, Ainslie, Roxburgh, and Wight, in other parts of the peninsula and as far as Bengal, its seeds considered by the natives "stomachic and deobstruent," prescribed also in "leprosy and other cutaneous affections" (Drur., and Lindl.); was observed by Mason "exotic" in Burmah.

Acalypha Indica of Equatorial Africa? Herbaceous and annual, called in Telinga "moorkanda,"

in Bengalee "shwet busunta" (Lindl.) or "mukto-juri," in Tamil "cupamani" (Drur.), in Malabar "cupa meni" (Rheede); and from early times employed medicinally: — observed by Grant in Equatorial Africa, "by cult. 5° S. and 2° N." on the Nile; by Forskal p. cxxi and 161, in moist places along the base of the mountains of Yemen. Eastward, by Graham, a "common weed during the rains" in the environs of Bombay, and according to Nimmo, "cats are as much affected by the roots" as "by those of the valerian;" by Rheede x. pl. 81, in Malabar; by Ainslie, Roxburgh, and Wight, in other parts of the peninsula as far as Bengal, employed in decoction as cathartic and for other medicinal purposes (Drur.); was observed by Mason in Burmah, enumerated as indigenous.

"23 B. C." (Tacit., Dio, and Clint.), the tribuneship for life conferred on Augustus; now in his Eleventh consulship.

Perhaps about this time, an ambassador sent to Augustus by the Hindu king Pandion (Strab.). Probably not the first of the name, the kingdom of Pandya including * — the districts of Madura

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* *Helicteres isora* of Tropical Eastern Asia. The *screw tree*, small and hazel-like, called in the environs of Bombay "kawun" or "kewannie" or "dhamnee" (Graham), and from early times used medicinally in diseases of the ears: — observed by Rheede vi. pl. 30 in Malabar; by Gibson, and Graham, "common throughout the hilly jungly parts of the Concan and on the Ghauts" as far as Bombay, "rope may be made from the fibres of the bark;" by Ainslie, and Wight, in other parts of Hindustan. Farther East, its twisted pods in the dried state and called "thu-gnay-khyæ," were seen in Burmah by Mason v. 502 among "drugs in bazar," used medicinally by the natives; observed by Rumphius vii. pl. 17 on the Moluccas (Pers.). Transported to Europe, is described by Plukenet alm. pl. 245

Leea macrophylla of Tropical Hindustan. Herbaceous, four feet high and allied to the grape-vine, called in Bengalee "toolsoo-moodryia" (Drur.), and from early times reputed to be a remedy for the Guinea worm, or according to Roxburgh "ringworm:" — observed by Law, and Nimmo; in the Concans or Low country North and South of Bombay common in jungles towards the Ghauts (Graham); by Roxburgh, and Wight, as far as Bengal, the root astringent and mucilaginous (Drur.). Farther East, by Mason v. 503 "exotic" in Burmah and called "kya-bet-gyee," cultivated for its "astringent" root, used by the natives to stop "effusion of blood in wounds."

Pygeum acuminatum of Tropical Hindustan. A Terebinthoid tree known from early times: — observed by Graham at "Mahableswur and Kandalla, but rare;" by Colebrooke linn. trans. xii. pl. 18, in other parts of Hindustan; by Mason v. 398 to 540, in Tenasserim; and the same or an allied species by McClelland at Toungoo, becoming a tree of "five or six feet girth."

Momordica charantia of Tropical Eastern Asia? A climbing Cucurbitaceous plant called in Tamil "pava-kai," in Malabar "pandipasel," in Bengalee "kurula" (Drur.), in the environs of Bombay "karaila" or "purwud" (Graham), and from early times used medicinally and the fruit eaten: — observed by Rheede viii. pl. 9 and 10 in Malabar; by Gibson, and Graham, "very commonly cultivated about Bombay in the rains," the "fruit twelve or fifteen inches long," notched and ridged like a crocodile's back, and requiring "to be steeped in salt water before being cooked;" is described also by Rumphius v. pl. 151; was observed by Ainslie, Roxburgh, Wight, and Drury, cultivated everywhere in the peninsula; by Mason v. 471, "exotic" in Burmah and called "kyet-hen-kha," used in curries.

Luffa acutangula of Tropical Eastern Asia. The *ridged gourd* is called in Tagalo "patola" (Blanco), in Burmah "tha-bwot-kha-wai" (Mason), in Tamil "peekunkai," in Telinga "beer-kai," in Bengali "jhingo," in Hindustanee "torooi" (Drur.), in the environs of Bombay "toorai" or "gosalee" (Graham); cultivated from early times: — observed by Rheede viii. pl. 7 in Malabar; by Graham, "commonly cultivated" around Bombay; by Roxburgh, Wight, and Drury, in "hedges and waste lands" as far as Bengal, its half-grown fruit one of the best native vegetables, much used in curries, and when boiled and seasoned "little inferior to green peas;" by Mason v. 471, "exotic" in Burmah and esculent; by Blanco, on the Philippines, its fruit cooked and eaten; and is described by Rumphius v. pl. 149. Transported to Europe, is termed "L. foetida" by Cavanilles i. pl. 9 and 10.

Nauclea cordifolia of Tropical Hindustan and Burmah. A Cinchonaceous tree forty to fifty feet high called in Burmah "hteing" (Mason), in Tamil "manja cadamba," in Telinga "daduga," in Bengalee "kelikudum" (Drur.), in the environs of Bombay "edoo" or "eydee" (Graham); its exceedingly beautiful wood, durable if kept dry, used from early times for furniture: — observed by Graham "common throughout the Concans," the wood used at Bombay "for planking etc.;" by Roxburgh cor. i. pl. 53, Wight, and Drury, as far as Travancore, the Coromandel mountains, and Bengal; by Wallich, on the banks of the Irrawaddy in Burmah (Mason v. 534).

Bignonia (*Spathodea*) *Rheedii* of Tropical Hindustan, Burmah, and as far as Java. A small

and Tinivelly, with the capital at Madura in the days of Claudius Ptolemy, and continuing there "till within a century of the present day" (Elph. iv. 2).

"22 B. C." (Strab., Dio, and Clint.), invasion of the Ethiopians under queen Candace, repelled at Elephantine by the Second Roman prefect C. Petronius.

Dalbergia sissoo of Tropical Hindustan. A tree called there "sissoo" or "sheeshum," in which we recognize the "sisam" of the Chaldee-Samaritan translation of Gen. vi. 14, — of the Koran, and various Arab writers (Royle in Kitt. bibl. cycl.), and the "schischam" wood found by Forskal p. xcvi. imported from India into Yemen: "sēsamina xula" is described by Dioscorides as sometimes sold for ebony, but purplish; is mentioned also in the Erythraean periplus, and by Cosmas Indicopleustes xi. D. sissoo was observed in Hindustan by Roxburgh, and Wight; by Graham, in the environs of Bombay, and found by Gibson as far as Goozerat; its timber according to Royle "one of the most valued woods of India," remarkably "strong, of a light greyish hue, with darker coloured veins."

Dalbergia latifolia of Tropical Hindustan. A tree called there "sit-sal" (Royle), or by residents. *blackwood* (Graham): its timber probably imported with the preceding into the Mediterranean countries: — D. latifolia was observed in Hindustan by Roxburgh cor. pl. 113, and Wight; by Graham, in the Southern Concan, and found by Law in the Southern Mahratta country, its wood "used for making furniture;" being according to Royle "heavy, close-grained, of a greenish black colour with lighter veins," and "highly valued." D. yen-daik, "very abundant at Toungoo" in Burmah and used by the Karens "for spear handles," is regarded by Mason v. p. 539 as perhaps identical.

"18 B. C." (Dio, and Clint.), the "empire" or authority of imperator, accepted by Augustus for an additional "five years."

Globularia nudicaulis of the Pyrenees and Switzerland. The CANTABRICA discovered in the reign of Augustus by the Cantabrians of Spain — (Plin.), mentioned by Celsus v. 27, and described by Pliny xxv. 47 and 55 as "caule junceo pedali in quo sunt flosculi oblongi veluti calathi in his semen perquam minutum," stem a foot high and rush-like on which are oblong florets like baskets and in these very minute seed, may be compared: G. nudicaulis is described by Morison vi. pl. 15, and is known to grow on the Pyrenees and mountains of Switzerland as far as Austria (Pers., and A. Dec.). According to Lindley, like other species it possesses purgative properties.

"15 B. C." (Dio, Blair, and Clint.), Augustus in Gaul, and the Rhaeti and Vindelici subdued by Tiberius and Drusus.

Marrubium Creticum of Crete. The MARRVBII · TENVIS of the antidote of Antipater against the bite of the asp — (Scribon. Larg. 167), may be compared: M. Creticum was observed in Crete by Sibthorp. From transported specimens, is described by Dalechamp pl. 962; is termed "m. album angustifolium peregrinum" by Tournefort inst. 192; and was observed by Roth ii. 35 growing spontaneously in Germany.

Verbascum blattaria of Europe and the adjoining portion of Asia. Called in Greece "spuri:" the VERBASCI of the antidote of Antipater — (Scribon. Larg. 167) seemingly corresponds; for the "phlomis" with golden flowers is described by Dioscorides as useful against scorpion-sting, employed also for dyeing the hair, and wherever placed attracting "silphas" (the small cockroach, Blatta Germanica): V. blattaria was observed by Forskal, Sibthorp, and Chaubard, around Constantinople and in the Peloponnesus. Westward, the "blattaria" herb is described by Pliny xxv. 60 as resembling and often mistaken for "verbasco," with more stalks and the leaves not so white; V. blattaria is described by Lobel obs. pl. 304; is termed "blattaria lutea folio longo laciniato" by Tournefort inst.

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and elegant tree called in Burmah "tha-khwot" (Mason), in Telinga "woody" (Drur.), in Malabar "nir pongelion" (Rheede), in the environs of Bombay "mersingee" (Graham); and from early times, nets made of its fibres, and its strong timber used for agricultural and building purposes: — observed by Rheede vi. pl. 29 in Malabar; by Law, and Graham, in "the vale of the Nagotnah river," the Southern Mahratta country, and "in gardens Bombay;" by Roxburgh cor. ii. pl. 144, Wight, and Beddome, in other parts of Hindustan; and is known to grow on Ceylon. Farther East, was observed by Mason v. 543 indigenous in Burmah, its wood according to Berdmore of "excellent quality for building purposes;" is known to grow also on Java, and is described by Rumphius iii. pl. 46 (Pers.).

Artocarpus hirsutus of Tropical Hindustan and Burmah. A large tree called in Tamil "anjelie," in Malabar "ansjeli" or "ayenee" (Drur.), and from early times its fruit eaten, yielding also *birdlime*, and its trunk hollowed out into fishing-canoes: — observed by Rheede iii. pl. 32 in the forests of Malabar; by Drury, as far as Travancore, its fruit of "the size of a large orange," and its timber under the name of *anjely wood* "well known on the western coast for house-building, ships, frame-works etc.;" was observed by Roxburgh, and Wight, in other parts of Hindustan; by Mason v. 462, "indigenous" in Burmah. By Nimmo, was introduced into the environs of Bombay (Graham).

147; and is known to grow in Southern Europe and in Britain (Pers., and Engl. bot. pl. 393). By European colonists, was carried prior to 1670 (Jossel.) to Northeast America, where I have met with it along roadsides; was also carried to Southern Brazil, where it was observed by Aug. Saint-Hilaire (A. Dec.), and myself, in the environs of Rio Janeiro.

"13 B. C." (Sm. b. d.), Herod accompanied by his friend Nicolaus of Damascus visiting Rome and Augustus. *Dates* of superior quality presented by them were termed by Augustus "nicolai,"—a name that continued in use in the middle ages.

Euphorbia simplex of Tropical Arabia. The "barba jovis" consisting according to Nicolaus of Damascus plant. ii. 9 of a stem without leaves or fruit,—may be compared: E. simplex was observed by Forskal among the mountains of Yemen, and called "dahan;" by myself, on the Desert hills at Aden and Muscat, a green cylindrical sprout, like a terminal twig of E. tirucalli, but upright, a foot or more high, and sometimes with a few branches.

Sodada decidua of Tropical Arabia. The fruit of the "myrobalanorum arboris" described by Nicolaus of Damascus plant. ii. 17 as at first "dulces, consequenter pontici, et in completione amari,"—may be compared: S. decidua was observed by Forskal p. 81 everywhere in Yemen, a thorny shrub called "sodad," its fruit "ruber nuce coryli major," and before ripening cooked and eaten by the Banyans.

Leptadenia reticulata of Tropical Hindustan. A large twining Asclepiaceous plant with corky much-cracked bark (Graham); and the "mediannus" described by Nicolaus of Damascus i. 13 as a plant all bark,—may be compared: L. reticulata was observed by Law, and Graham, "common in hedges about Surat and in the Southern Mahratta country;" by Retz obs. ii. 15, Roxburgh, and Wight, in other parts of Hindustan; is termed by Roxburgh "asclepias suberosa."

"12 B. C." (Dio, and Clint.), Lepidus succeeded as "pontifex maximus" by Augustus; and the pontifical books numbering about "two thousand" burned, with the sole exception of the "Sybilline Oracles."

C. Julius Hyginus of Spain, a pupil of Alexander Polyhistor, and freedman of Augustus, having charge of the Palatine library (Sueton., and Sm. b. d.).

Daphne cneorum of the West Mediterranean countries. Called in Italy "neoro" (Lenz), and possibly the "cneoron" identified by Pliny xxi. 29 with the CASIAM of Hyginus,—and further enumerated as coronary: the "casiae daphnitidis" is mentioned by Marcellus 25: D. cneorum, is described by Linnæus; and is known to grow on the mountains of Austria, Italy, and Southern France (Poll., Jacq. austr. pl. 426, Lam. fl. fr., and Pers.; see D. Gnidium).

"In or about B. C. 10" (Sueton., and C. O. Muell. edit. Fest.), the grammarian Verrius Flaccus appointed tutor over the two grandchildren of Augustus.—Verrius died in the reign of Tiberius (Sm. b. d.). A portion of his lexicon has been preserved through abridgments by Pompeius Festus, and Paulus Diaconus.

"9 B. C." (Abyss. chron., and C. Mull. geogr. min. p. xcvii), accession of Za-Bazen as king of Abyssinia.—He reigned "sixteen" years.

"8 B. C." (Dio, and Clint.), the empire for another "ten years" accepted by Augustus; and the name of the month Sextilis changed by the Senate to "augustus." The Calendar also corrected by Augustus (Blair), "by ordering the twelve ensuing years to pass without intercalation."

"6 B. C. = 'kian-ping,' 1st year of Gai-ti or Hiao-ngaï-ti, of the Han" or Seventh dynasty (Chinese chron. table).

"The same year" (Dio, and Clint.), the tribunician power for "five years" conferred on Tiberius; and his retirement to Rhodes,—where he remained "seven years."

Apollonius before the time of Archigenes lived long at Alexandria, perhaps Apollonius Mus a cotemporary of Strabo. Apollonius Herophileus,—is quoted by Andromachus (see Sm. b. d.).

Pluchea Dioscoridis of the Upper Nile. Called in Egypt "barnuf" (Forsk.); and the KONYZHC: EYWAOYC prescribed by Apollonius for pain in the head—(Galen comp. med. ii. 1), may be compared: the "barnuf" is mentioned by Eltamini, and Ebn Baitar: P. Dioscoridis was observed by Forskal p. 148, and Delile, cultivated for its fragrance in Lower Egypt, and escaping from gardens naturalized along the Nile; by Rauwolf pl. 54, at Tripoli in Syria.

"5 B. C." (according to Clinton iv. p. 14, see also Matth. ii. 16 to 22, Luke i. 5 to ii. 39, and Sulpic. sacr. hist. ii. 39), "the most probable" date of the Nativity.

To Strabo xvii. 1. 34 visiting the Pyramids, the *nummulites* abounding in the subjacent rock were pointed out as the "food of the workmen."—The same legend that is repeated by the Arabs to travellers to the present day.

Ascending the Nile in company with Aelius Gallus now third Roman prefect, Strabo heard the sound uttered by the broken colossus on the plain of Thebes. This statue of Amenophis III.—some seventy years later, became an object of pilgrimage; as recorded in history, and shown by Greek and Roman inscriptions covering the base; certificates of visitors who had "heard *Memnon*."

In the reign of Septimius Severus, the colossus was repaired with separate blocks of stone, and has since remained silent. (see Champ.-Fig. p. 76).

Continuing on to Syene and the Red Sea, Strabo ii. 5. 12 found in the harbour of Myoshormos "one hundred and twenty ships" engaged in voyages to India.

The ΓΑΛΑC: ΑΓΡΙΑC described by Strabo iii. 2. 6 as imported from Lybia into Spain, and sent with the mouth tied into rabbit-burrows to expel the inmates, — were of course the *ferret*, Mustela.

Oenanthe crocata of Western Europe. The Spanish are described by Strabo iii. 4. 18 as having in readiness a poison producing death without trouble, prepared from a plant resembling smallage CЄΛΙΝΩ: ΠΡΟCΟΜΟΙΑC — (a substitute for the "kŏnĕiōn" of the Greeks): O. crocata is described by Matthioli 628 (Spreng.); is known to grow in "wet places common in the west of Europe" as far as France, and Britain, where it is called *dead-tongue* or *hemlock-dropwort* (Pers., Engl. bot. pl. 2313, and Lindl.). Further according to Lindley, "a dangerously poisonous plant, the cause of many fatal accidents."

Quercus humilis of the West Mediterranean countries. One to two feet high; and the small oak growing according to Strabo iii. 2. p. 388 within the Pillars of Hercules, its fruit eaten by tunny-fish, — is referred here conjecturally by Sprengel: Q. humilis is described by Lobel ic. ii. p. 157, and is known to grow in sandy situations in Portugal and France (Pers.).

Stipa tenacissima of the Mediterranean countries. The CXOINOΠΛOKΙΚΗΝ: ΣΠΑΡΤΟΝ described by Strabo iii. 4. 9 as abounding near Saguntum in Spain and exported to Italy, — is referred here by Sprengel: Pliny xix. 9 and xxiv. 40 speaks of the "africanum vel hispanum spartum" as unknown in the time of Homer, and of the "spartum" having come into use since the days of Theophrastus: S. tenacissima is termed "spartum" by Clusius hist. ii. 220, "gramen spicatum quod spartum Plinii" by Tournefort inst. 518; and is known to grow in Barbary and Spain (Desf. pl. 30, and Pers.). Eastward, was observed by Sibthorp on the hills of Attica in Greece.

Papyrus Pangorei of Tropical Hindustan. A species of *paper-rush* called in Bengalee "madoorkati" (Drur.); and the BYBΛOC is attributed by Strabo xvii. 2. 4 to both Egypt and India: — P. Pangorei was observed by Graham in the environs of Bombay; is termed "cyperus tegetum" by Roxburgh, and was observed by him, Wight, and Drury, "common in ditches and borders of tanks" in the peninsula and Bengal: the floor-mats so common at Calcutta are made of the split stems, and according to Mason v. 520 are imported into Burmah.

Rumex Abyssinicus of Eastern Equatorial Africa. A species of *dock*, perhaps included in the ΠΟΛ eaten according to Strabo xvii. 2. 2 by the Ethiopians: — R. Abyssinicus was received by Jacquin hort. iii. pl. 98 from Abyssinia; was observed by Grant from "2° N." on the Nile to "1° 42′ S.," the "people of Fipa at 8° S. are said to eat its leaves."

Aerua lanata of Tropical Africa and Arabia. Called in Yemen "schadjaret el athleb" (Forsk.); and possibly included in the "pōa" of Strabo, eaten by the Ethiopians: — A. lanata was observed by Grant from "7° 30′ S. to 2° N." on the Nile, a "potherb, grows prettily over huts like an ivy;" by Forskal p. 48. along the base of the mountains of Yemen. Farther East, by Rheede x. pl. 29 in Malabar, and called "scherubula;" by Graham, "a common weed" around Bombay, where also it appeared to me only naturalized; by Retz, and Roxburgh, in other parts of Hindustan, and by Burmann pl. 60 on Ceylon; by Mason, "exotic" in Burmah; by Blanco, little known to the natives on the Philippines, but called in Tagalo "bonga bonga." Through European colonists, was carried to Brazil, observed by myself frequent in the outskirts of Rio Janeiro.

Corchorus . . . sp. of Eastern Equatorial Africa. Included perhaps in the "poa" of Strabo, eaten by the Ethiopians: — observed by Grant common from "1° to 2° N." on the Nile, a foot high, its leaves used for making a stringy spinage.

Crotalaria glauca of Equatorial Africa. Called there "m'cæwæ" (Grant); and perhaps included in the "pōa" of Strabo, eaten by the Ethiopians: — observed by Grant in "plantain-groves Unyoro," near the Equator, three feet high and its flowers pods and leaves eaten as spinage by "the people of Madi." From transported specimens, described by Willdenow (Steud.).

Celosia trigyna of Tropical Africa. Included perhaps in the "pōa" of Strabo, eaten by the Ethiopians: — received by Linnæus from Senegal (Pers.); and observed by Grant from 2° to 3° N. on the Nile, "by huts Nov. 1862," eaten as a potherb.

Narcissus? sp. of Eastern Equatorial Africa. Included perhaps in the "pōa" of Strabo, eaten by the Ethiopians: — observed by Grant in "sandy moist places about 6° S.," eight inches high, its leaves tasting of onions and made into spinage.

Veltheimia sp. of Eastern Equatorial Africa. Included perhaps in the "pōa" eaten by the Ethiopians: — observed by Grant in swamps from "6° S. to 1° N." on the Nile, its flowers collected for spinage.

Urginea? sp. of Eastern Equatorial Africa. Included perhaps in the "pōa" eaten by the Ethi-

opians: — observed by Grant in "rocky ground 3° 15′ N." on the Nile, three feet high, its leaves and stems cooked as spinage by the Wanyamuezi.

Commelyna sp. of Eastern Equatorial Africa. Included perhaps in the "pōa" eaten by the Ethiopians: — observed by Grant on Zanzibar, spinage made of its leaves.

Commelyna latifolia of Eastern Equatorial Africa. Probably included in the "pōa" eaten by the Ethiopians: — received and described by Hochst.; observed by Grant "every where on rich soil near huts," and used as a potherb.

Dombeya multiflora of Eastern Equatorial Africa. A tree called "keenga" (Grant); probably in some instances furnishing the wooden bows four cubits long used according to Strabo xvii. 2. 3 by the Ethiopians: — D. multiflora was received from Africa by Endlicher; was observed by Grant frequent in "3° N." on the Nile, its wood tough and used for bows.

Grewia sp. of Eastern Equatorial Africa. A large tree called "mkomo" (Grant); and probably furnishing some of the bows in question: — observed by Grant diffused generally from "Unyanyembe 5° S." to Madi on the Upper Nile, its wood used for building, for bows and arrows, and its bark for ropes, "no insect is said to touch it."

Sterculia sp. of Eastern Equatorial Africa. Probably furnishing some of the bows in question: — observed by Grant in "3° 58′ S.," a "shrubby tree," bows made of its wood, and the sultan of Ukuni (in the Unyamuezi country) "has his hut-lashings made from its bark."

Kigelia pinnata of Tropical Africa. Called in the Kinyoro language "m'sankwa," in Suahili "malegæa" (Grant); and possibly furnishing some of the bows in question: — received from Africa by Decandolle; and observed by Grant "everywhere," its wood used by the Wanyamuezi for bows, its leaves with sand for polishing spear-handles, and its roasted seeds eaten in famines.

"4, March 13th" (Jos., and Clint.), at Jerusalem, *eclipse of the moon*, and death of Herod before the passover. He was succeeded by his son Archelaus; another son, Herod Antipas, being appointed tetrarch of Galilee. The accession of Herod Antipas is fixed to this year by coins, Jos., and Clint. iv. p. 22.

The apocryphal book of Enoch written after the death of Herod; whose reign is included in the condemnation lxxxix. 25. The book is quoted by Jude, Justin Martyr, Clemens Alexandrinus, and other Christian writers down to the time of Syncellus and the patriarch. Nicephorus; and has been preserved in an Abyssinian version, manuscripts of which have at different times been brought to Europe (Stuart in bibl. repos. for 1840, and S. Davidson in Kitt. cycl. bibl.).

"2 B. C. = 1st year of the 'youan-cheou' of Gai-ti" — (Chinese chron. table).

Bubon Macedonicum of Northern Greece. The PETROSELINVM of the antidote composed for Augustus by Marcianus, — of Celsus v. 23, Cassius the physician, Scribonius Largus 120, Pliny xx. 47, or the "pĕtrōsĕlinōn" of Andromachus, growing according to Dioscorides on crags in Macedonia, according to Galen antid. i. p. 76 also in Epirus and sold by the Macedonians to all nations, mentioned too by Paulus Aegineta, and termed "the chief condiment" in Geopon. xii. 1; is referred here by writers: the "makĕthŏnisiŏn spĕrma" is enumerated by Nicolaus Myrepsicus i. 1; B. Macedonicum was observed by Belon in market at Constantinople; and by Forskal, under cultivation there in gardens. Westward, is described by Blackwell pl. 382; and is known to occur in Mauritania (Pers.), probably cultivated, as in various parts of Europe where the seeds are sold in the shops (F. Adams). Eastward from Greece, is known to occur in Cochinchina (Pers.), probably cultivated.

Lavandula stoechas of the Mediterranean countries. Called in English gardens *cassidony* from "stoechas sidonia," or *French lavender* (Prior), in Germany "stöchas" (Grieb), in Greece "hamŏlivanō" or "levantha" (Fraas) or "maurŏkĕphali," or by the Turks "cara bach" (Sibth.); in which we recognize the STOECHADOS of the antidote of Marcianus, — Celsus viii. 9, Andromachus, Pliny xxvii. 107, Galen, Paulus Aegineta, named according to Dioscorides after the Stoechades isles near Marseilles, and in the added Synonyms identified with the "skiŏlĕvina" of the Romans, "ŏphthalmōs puthŏnōs," of the prophets, and Egyptian "sōuphlŏ:" the "isthuchudus" of Mesue simpl., and Ebn Baitar, is clearly the "estachudes" imported according to Forskal mat. med. from Barbary and Syria into Egypt, and referred by him with a mark of doubt to this species of Lavandula: L. stoechas is enumerated by Alpinus among the ingredients of the Egyptian theriac; has long been employed by the Arabs as "expectorant and antispasmodic" (Lindl.); but the living plant according to Clot-Bey has only recently been introduced into Egypt. Farther North, L. stoechas is described by Fuchsius 778 (Spreng.); is termed "stoechas purpurea" by Tournefort inst. 201; was observed by Sibthorp, Chaubard, and Fraas, frequent from the Peloponnesus and Greek islands to Northern Greece; is known to grow also in Italy, Southern France, Barbary, and Spain (Pers., and Lenz).

"1 B. C." (Dion. ind., Ephiphan., Cassiodor., and Clint.), at Rome, "Cn. Cornelius Lentulus Cossus and L. Calpurnius Piso" consuls for this year.

"In this year" (Sm. b. d.), Caius Caesar on his way to the East: to whom Juba II. dedicated his history of Arabia. — A coin dated in the "48th year" of his own reign (= A. D. 1) is extant, and the revolted Gaetulians were subdued with the assistance of Cossus Cornelius Lentulus in "A. D. 6."

Ficus vasta of Yemen. Called there "talak," or in Arab botanical books "delb" (Forsk.), and fruit of Arbutus unedo being called by the Arabs "altin aldeb" wolf figs (Spreng.), the "arbutus" trees fifty cubits high in Arabia enumerated by Juba II. — (Plin. xv. 28) may be compared: F. vasta was observed by Forskal p. 179 everywhere among the mountains of Yemen, an immense tree "vastissima arbor" with a composite trunk and spreading rafter-like branches. Eastward, may have been carried by Arabs, or by Banyans, to Hindustan; for "F. Bengalensis" of Rheede i. pl. 28, and Linnæus, is regarded by Dryander as identical (Pers., and Steud.).

Euphorbia regis Jubae of Morocco and the Canaries. A cactiform *spurge* called in Morocco "dergmuse" (Jacks.), and the ΕΥΦΟΡΒΙΟΝ discovered by Juba II. on Atlas and named after his physician Euphorbus, — "specie thyrsi foliis acanthinis" according to Pliny xxv. 38, is referred here by Webb: the drug "ĕuphōrviōn" is mentioned by Niger (Diosc. praef.), Rufus Ephesius, Aetius, and Paulus Aegineta; as the product of a plant growing in Mauritania, by Dioscorides iii. 86, and Galen comp. med. loc. ix. 271; forms an article of commerce along the Tropical margin of the Sahara, according to the Arab account of Ghanat (Jaubert rec. soc. geogr. ii); and in Egypt, "ferfiun" or "gum euphorbiæ" was found by Forskal mat. med. imported from Barbary. The plant producing it is described by Leo Africanus ix. 300; by Jackson, as "with its branches" having the general form "of a goblet," the stem "at first soft and succulent, but after some years becomes hard, the branches are scalloped and have on their sides small knots from which grow five extremely sharp-pointed thorns," and each branchlet bears "on its top a vivid crimson flower" (med. gaz. xx. 745). E. regis Jubae is distinguished by Webb; was observed by him, and Lowe, "common" on the Canary Islands (Major edit. Bethenc. p. 138); but according to Pereira, the *euphorbium* of commerce all comes from Mogador (Lindl.).

An expedition sent by Juba II. to explore the "Fortunatae insulae" (Canaries) found there stone buildings and a little temple; one of the islands being called "Nivaria" from the perpetual snow (Teneriffe), and another "Canaria" — (as to the present day: Latin names recorded by Pliny vi. 37, indicating intercourse with the Northern side of the entrance to the Mediterranean).

Rocella purpura-antiquorum of the Canary Islands and Madeira. One of the lichens yielding the *archal* or *orchil* of commerce; and the dyeing of "Gaetulicam purpuram" established by Juba II. on islands in this vicinity — (Plin. vi. 36), may be compared: R. purpura-antiquorum is distinguished by Bory.

Echium giganteum of the Canary Islands. Woody-stemmed and called "taginaste" (Webb); possibly affording the "Gaetulicam purpuram" of Juba II; — the "ligna rubra tingentia," distinct from "verzino" (Caesalpinia sappan) but dyeing almost as well, is referred here by Webb: E. giganteum was observed by him on the Canary Islands; was received by the younger Linnæus from Teneriffe, growing on rocks (Pers.).

Euphorbia balsamifera of the Canary Islands. A woody-stemmed *spurge*, but its milky juice sweet and innoxious: the "arbores similes ferulae, ex quibus aqua exprimatur, ex nigris amara, ex candidioribus potui jucunda" — (Plin. vi. 37), may be compared: E. balsamifera is known to grow on the Canary Islands (Aiton ii. 137, and Pers.), its juice is thickened to a jelly and eaten by the natives (lond. soc. tract geogr. plant.).

Laurus till of the Canary Islands. A large tree called "til" (Major); and possibly the "arbores" in question yielding water to drink: — certain til trees in elevated situations on Ferro, exposed to fogs, are continually dripping "clear delicious water" that forms a pool near the trunk (Bont. 65); especially one gigantic tree called the "Garoe" or "Arbre Santo," of unknown antiquity, overthrown by a hurricane before "June 12th, 1612," but which is mentioned by Galindo, Nieremberg, Garcia del Castillo, and Von Buch (Major edit. Bont. p. 125): L. till is distinguished by Poiret (Steud.).

"The same year = 2d year of the 'youan-cheou' of Gai-ti" — (Chinese chron. table).

One hundred and twenty-ninth generation. A. D. 1, Jan. 1st, mostly beyond youth: the Greek philosophers, Sextius, and Sotion the younger; the medical writer Niceratus; other Greek writers, Philistion, Thrasyllus, and Apollonides of Nicaea: the Latin writers, the poets Pedo Albinovanus, Cotta; the satirist Cassius Severus; the historian Fenestella; the orator Asinius Gallus; the rhetors Votienus Montanus, Haterius, Junius Gallio; other Latin writers, Macer the younger, and Tuticanus; the Roman painter Ludius (Bryan).

"In this year, Caius Caesar and L. Aemilius Paulus" consuls (Clint.), Caius Caesar being absent in the East. A letter to him is extant (Gell. xv. 7), in which Augustus names "ix. kalend. octobr." as his own "sixty-fourth" birth-day.

Micropus erectus of the Mediterranean countries. The CENTVNCVLVM called by the Greeks "gnaphalitha," prescribed by Julius Bassus, — Scribonius Largus 121, and the "herbam incoctam" by Marcellus 29, described by Pliny xxiv. 88 as lying in cultivated ground, its leaves like "capitis penularum" woolen caps, may be compared: M. erectus was observed by Lœfling pl. 1 f. 5 in Spain; and is known to occur in cultivated ground in France (Lam. fl. fr., and Pers.). Eastward, the "kĕntougklōum" of the Romans is mentioned in Syn. Diosc. iii. 120; and M. erectus was observed by Sibthorp frequent on Cyprus and other Greek islands.

Santolina maritima of the seashore along the Mediterranean and Atlantic as far as Britain. Called in Greece "vamvatzitha;" and the "gnaphalitha" in question — according to Syn. Diosc. should be the "gnaphaliōn" of Dioscorides having soft white leaves substituted for down, and infused in wine against dysentery: S. maritima was observed by Sibthorp, Chaubard, and Fraas, frequent on the seashore of the Greek islands. Farther South, the "gnaphaliōn" or "irĕs" or "ampĕtōkōs" or "anaxētōn" or "anaphalis" is identified in Syn. Diosc. with the "sĕmĕōn" of the Egyptians; and S. maritima was observed by Delile on the Mediterranean shore of Egypt. Westward, with the "gĕlasōnĕn" of the Gauls, and "tōukōularis" or "alvinōus" of the Romans; and the account by Pliny xxvii. 61 of the "gnaphaliōn" or "chamaezelon" seems in part taken from Dioscorides: S. maritima is described by Matthioli p. 625, Lobel, Dodoens, and Clusius; is termed "gnaphalium maritimum" by Tournefort inst. 461; was observed by Desfontaines ii. p. 161 in Barbary, and is known to grow on the Atlantic shore of France and as far as Suffolk in England (Engl. bot. pl. 141, Pers., and Spreng.).

"The same year = 'youan-chi,' 1st year of Hiao-ping-ti," one hundred and seventh Chinese emperor (Chin. chron. table, and Pauth.); "nine" years old, and under the regency of Wang-mang.

"2 A. D." (Vell. ii. 101, and Clint.), on an island in the Euphrates, interview of Caius Caesar with the Parthian king Phraates; witnessed by the historian Velleius Paterculus.

"3 A. D." (Clint.), the empire for "ten years," for the fourth time accepted by Augustus.

The author of the poem interpolated as the "Third book of Tibullus" is styled Lygdamus, and by his own account should be in this year 45 years old (Sm. b. d.).

Amaranthus caudatus of Subtropical Eastern Asia? Called in Britain *love-lies-bleeding:* the AMARANTHVS of Lygdamus 4, — and Ovid . . . , a purple spike according to Pliny xxi. 23 rather than a flower, coming in August and continuing into autumn, plucked and kept in "alexandrino palma" and when moistened reviving for winter garlands, may be compared: A. caudatus is described by Miller (Steud.), is well known in the gardens of Europe, and escaping occurs in some localities growing spontaneously (A. Dec.). Eastward and Southward, is known to occur in Russia and Persia (Pers.); in waste ground in Abyssinia (A. Dec.); in the gardens of Hindustan, but devoid of a Sanscrit name (Roxb., Pidd., and Graham), in Ceylon, and in Nepaul (Pers., and A. Dec.). Probably by European colonists carried to Peru (Pers.), but no American specimens seen by Moquin, nor by A. Decandolle. (See Sedum eriocarpum.)

"4 A. D. = 4th year of the 'youan-chi' of Hiao-ping-ti" (Chinese chron. table), beginning of the Forty-fifth cycle.

"The same year" (Vell., and Clint.), death of Caius Caesar in Lycia, and Tiberius adopted by Augustus. Tiberius now in command of the Roman armies was sent into Germany, accompanied by the historian Velleius-Paterculus as praefectus equitum (Sm. biogr. dict.).*

"6 A. D. = 1st year of the interregnum of Jou-tseu-ying," under the protectorship of Wang-mang — (Chinese chron. table, and Pauth.).

"The same year" (Jos., Dio, and Clint. iii. p. 256), Archelaus successor of Herod, banished from Jerusalem.

About this time (Percev. i. 77 to 292), Yacer-Younim, a descendant of Himyar, ruling Yemen. — He undertook an expedition into the West, and advancing as far as the Wâdi-rraml, Valley of sands, set up a statue inscribed with mousnad or *Himyarite characters.* These characters — continued in use until the time of Mohammed, when they were supplanted by the modern Arabic.

Hypericum (*Androsæmum*) *officinale* of Europe and the adjoining portion of Asia. Called at Padua "ciciliana" (Anguillara), in other parts of Italy "androsemo" (Lenz), in which we recognize the ANΔROÇAIMON of Niger, — identified by Dioscorides i. præf. and iii. 163 with the "thiōnu-

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* *Asparagus tenuifolius* of middle and Western Europe. The HERBAM·SIMILLIMAM·ASPARAGO observed by Tiberius Caesar in the plains of upper Germany, — or the "incultius asparago" growing on mountains and milder than the "corruda" according to Pliny xix. 42, or the "ĕlĕiōs asparagōs" of Galen . . . , may be compared: A. tenuifolius is described by C. Bauhin pin. 594; and is known to grow on mountains and in marshy situations in Hungary and Southern France (Waldst. and Kit., Lam. encl., and Pers.).

siatha," a shrub with red branches, leaves thrice as large as those of "pēganōu," terminal yellow flowers, fruit marked with lines, the bruised inflorescence exhaling a resinous odour, and the plant applied to restrain the flow of blood: A. officinale was observed by Sibthorp in the Peloponnesus. Westward, the "androsaemon" is described by Pliny xxvii. 10 as growing in vineyards, and applied to wounds: the "cecilianae" is mentioned by Belon obs. i. 17 (ed. Clus.); A. officinale is described by Anguillara p. 92 (Spreng.), and Dodoens p. 78; is termed "a. maximum frutescens" by Tournefort inst. 251, and is known to grow in woods in Italy, Southern France, and even in Britain (All. ped. 1440, Curt. lond. iii. pl. 48, and Pers.). The dried plant is called "androsämum" in the drug-shops of Italy (Lenz); and according to Lindley, "the leaves once much esteemed as vulnerary, and still employed with great confidence in cases of recent wounds by rustic nurses."

Hypericum perfoliatum of the East Mediterranean countries. The "anthrōsaimōn" — is however described by Dioscorides as having "anthēlia mikra" small flowers, and is referred here by Sibthorp, Sprengel, and Fraas: H. perfoliatum is termed "h. creticum amplissimo folio nitido" by Tournefort cor. 18; was observed by Sibthorp, and Fraas, on Zacynthus and throughout Greece to the vicinity of Constantinople, in shaded situations and called at present "lēihēnōhōrtōn" or "murŏthia." Farther West, was observed by Columna ecphr. i. p. 78 in Apulia in Southern Italy, and is termed "androsemum sambac perfoliato folio" by Boccone mus. pl. 127.

Aloe vulgaris of Abyssinia. Yellow-flowered and called in Egypt "sabbarah," on Cyprus "alŏē," and seemingly connected with the mistake of Niger in supposing the drug "alōē" dug out of the ground in Judea; — clearly the "alōē" of Dioscorides praef. and iii. 22 growing in Asia and by the seaside on Andros and other islands, its thick leaves spinulose and spreading backwards: A. vulgaris was observed by Sibthorp on Cyprus. Farther West, the "alŏē" or "amphiviōn" or "ĕruggiōn" or "ĕrminōn" or "tragōkĕrŏs" is identified in the Syn. Diosc. with the "alŏam" of the Romans; the "aloe" is described by Pliny xxvii. 5 as somewhat resembling "scillae" but larger with the leaves more fleshy, the stem not unlike "antherico;" A. vulgaris is described by C. Bauhin pin. 286, and Tournefort inst. 366, and is known to continue under cultivation in Italy, Malta, Sicily, and Barbary (Lindl.). Southward and Eastward, was observed by Forskal, and Delile, in the gardens of Egypt; by Forskal p. 73, at the port of Lohaja in Tropical Arabia; by Rheede xi. pl. 3, and Roxburgh, in Hindustan, by Graham "common in gardens" at Bombay and called "kuar pur," and by myself, growing spontaneously on the Deccan. By European colonists, was carried to the West Indies, where it continues under cultivation, and its product is exported under the name of "Barbadoes aloes" (Pers., and Lindl.).

"7 A. D." (Burm. hist., and Mason 40), Papeyan succeeded by his son Ronmokkha, now Burmese king; "a good man skilled in the Vedas," — and who reigned "fifteen" years.

"Probably about A. D. 7" (Sm. b. d.), P. Quintilius Varus, having returned from Syria, sent into Germany as governor, the first one having civil as well as military power. — In attempting to introduce Roman institutions, he was opposed by the people, who found a leader in Arminius chief of the Cherusci.

Armeniaca vulgaris of the Tauro-Caspian countries. Called in Britain *apricot* or by old writers *abrecocke*, in Spain "albaricoque" (Prior), in Germany "aprikose" (Grieb), in France "abricot" (Nugent), in Italy "albicocco" or "arbricocco" or "armeniaco" (Lenz), in Greece "prikōkkia" or "vĕrikōkkia" (Fraas), by the Arabs of Spain and Barbary in the time of Ebn Baitar "barkouk" but by Eastern Arabs "mishmish" (as to the present day in Egypt and Yemen), but at Mocha as heard by myself sometimes "bertoud," in which we recognize the "vĕrikōkkia" of Varro and Quintilii (Geopon. iii. 1), or the "praecocia" ripening in summer and known to the Romans for "thirty" years — according to Pliny xv. 11.: the "praecoccia" or "praecoqua" or "armeniaca" is mentioned also by Columella v. 10, Palladius xii. 7. 6, and Rutilius; the "arměniaka" or "praikōkia" by Dioscorides, and the "prĕkōkkia" by Galen fac. alim. ii. 20: A. vulgaris was observed by Chaubard, and Fraas, under cultivation in Greece, and is known to be cultivated throughout middle and Western Europe. Farther South, was observed by Forskal, and Delile, in Egypt; and by Forskal, under cultivation on the mountains of Yemen. Eastward, is known to occur in Persia (Roxb. ii. p. 501); is cultivated in the valley of Cashmere, besides springing up spontaneously on the site of abandoned villages (Royle him. p. 205), has been observed under cultivation within the Tropics as far as the environs of Bombay (Graham), is called in Hindustanee "khubani," in Bengalee "phal bishesh" (D'roz.), but has no Sanscrit name (Pidd., and A. Dec.). By European colonists, was carried to Northeast America, where the product continues uncertain on account of spring frosts; to Oregon, prior to the visit of our Expedition; and to the Mauritius Islands, where according to Bojer it is cultivated but never flowers.

"8 A. D. = 1st year of the 'tsou-chi' of Jou-tseu-yng" (Chinese chron. table).

"In this year" (Abyss. chron., and C. Mull. geogr. min. p. xcvii), Za-Bazen succeeded by Za-Senatu, now king of Abyssinia. — He reigned "twenty-six" years.

"9 A. D. = 1st year of the open usurpation of Sin-mang" or Wang-mang — (Chinese chron. table).

"The same year" (Vell., Dio, and Clint.), the Romans under Quintilius Varus defeated in Germany.

"The same year" (Clint.), the poet Ovid, at the age of "fifty," banished to Pontus on the Euxine.

Artemisia procera of the Uralian plains. The country North and East of the Black Sea TRISTIA·PER·VACVOS·HORRENT·ABSINTHIA·CAMPOS according to Ovid epist. i. 3; — and Benedict of Poland with Plan Carpin found "plurimum absincium" in the country North of the Caspian: A. procera is described by Lobel ic. 768; and is known to grow from France and Italy to Siberia (Pers.). Is besides enumerated by Lindley among the species which have been used medicinally.

Saturgia hortensis of the West Mediterranean countries. Called in Britain *savoury*, in France "savorée," in Italy "savorregia" (Prior) or "santoreggia domestica" (Lenz), on Malta "sarriette" (Forsk.), in which we recognize the SATVREIA of Ovid, — mentioned by Celsus ii. 21 as esculent; by Pliny xix. 50 as a cultivated condiment, also mentioned by Columella xi. 3. 57, and Martial: S. hortensis was observed by Forskal on Malta, is known to grow wild in Italy and France (Pers., and Lenz), is besides cultivated throughout Western Europe. By European colonists, was carried prior to 1670 (Josselyn) to Northeast America, where it continues under cultivation, and has escaped therefrom to the prairies of Illinois and the rocky islets of the Falls of the Ohio (Short, and A. Gray).

Narcissus biflorus of the West Mediterranean countries. The NARCISSVS of Ovid, CROCEVM·PRO·CORPORE·FLOREM...FOLIIS·MEDIVM·CINGENTIBVS·ALBIS, — may be compared: N. biflorus is described by Marcellus Virgilius, and is known to grow wild on the Appenines (Spreng.) and in Spain (Pers.). As a garden flower farther North is described by Dodoens pl. 223, is termed "n. poeticus" by Hudson (Pers.), but has become naturalized in various parts of Europe, and from at least the time of Gerarde 110 to 112 in Britain (Park. th. pl. 75, Ray, Wats., and A. Dec.).

A. D. 10, beyond the Lower Rhine, Germanicus found in a maritime district a solitary spring of fresh water; the use of which for drinking caused the teeth to fall out within two years, and the knee-joints to be loosened; a malady called by the physicians "stomacacen" and "sceletyrben" *scurvy* (Plin. xxv. 6).

Cochlearia officinalis of extreme Northern Climates. Called in Germany "löffel-kraut," in Britain *spoonwort* or *scurvy grass* or more properly *scurvy cress* (Prior); and the "britannica" herb pointed out by resident Frisians as a remedy, its juice expressed even from the root, and its flower called "vibones," — may be compared: the "oscedinem herba britannica viridis sumpta in cibo lactucae modo," according to Marcellus 11, heals the mouth, is also dried: C. officinalis is known to grow on the seashore from Spitzbergen and Lapland to Ireland and Denmark, and in mountainous wet situations inland as far as Switzerland (fl. Dan. pl. 135, Wats., and Lindl.); also in Siberia, as far as 67° on the Oby (Pall.). Westward, was observed by Hooker on Iceland; is known to grow in Greenland (Wats.), Labrador (Colmaster), and along the Arctic Sea to Mackenzie river and beyond (Hook.); was observed by Chamisso on Unalascha. Recently, according to Clot-Bey and Figari, has been introduced from the gardens of France into Egypt.

Rumex aquaticus of Europe and the adjoining portion of Asia. Called in Britain *water dock* (Prior), in Italian drug-shops "erba britannica" (Lenz), in Greece "nĕrōlapathō" (Fraas) or "agriō lapathŏn" (Sibth.); and possibly the "britannica" in question: — the "ippōlapathōn" of Dioscorides, large, growing in marshes, and agreeing with the four other kinds in medicinal properties, is referred here by writers; together with the "hydrolapathum" of Pliny xx. 85 said to grow in water: R. aquaticus is described by Lobel pl. 285, and Camerarius 232; is termed "lapathum aquaticum folio cubitali" by Tournefort inst. 504; is known to grow in the marshes of the district visited by Germanicus (Lips., and Spreng.); also throughout middle Europe as far as Italy (Huds., Pers., and Pollini); and was observed by Sibthorp, and Fraas, not rare in marshes from the Peloponnesus to Cyprus.

Betonica alopecurus of the mountains of Southern Europe. Called in Greece "vĕtōnikē" (Sibth.); and the ΒΡΕΤΑΝΝΙΚΗ mentioned about this time by Niceratus — is perhaps the "vrĕtannikē ē vĕttonikē" of Dioscorides, having a short and slender root, a stem not large, leaves like "lapathō agriō" but more hairy and larger, their inspissated juice astringent and used for ulcers in the mouth: the "vrĕtannikē" is mentioned also by Damocrates, and Galen antid. ii. 2. p. 453; and the "vĕttōnikē," by Paulus Aegineta: B. alopecurus was observed by Sibthorp frequent on Parnassus. Westward, is described by Dalechamp 1358 (Spreng.); is termed "b. alpina latifolia major villosa flore luteo" by Tournefort inst. 203; and is known to grow on the mountains of

Carniolia, Austria, Italy, and Southern France as far as the Pyrenees (Scop. carn. pl. 28, Pers., A. Dec., and Lenz).

"13 A. D." (Dio, and Clint.), the empire for "ten years" accepted for the fifth time by Augustus.

As early probably as this date, an instrument for crushing the stone within the bladder invented by Ammonius; — together with the mode of using it, described by Celsus vii. 26. 3. The art was revived in 1813 by Gruithuisen of Bavaria, who having introduced a *straight catheter* into the bladder, proposed by means of a looped wire to draw up and destroy stony concretions (Salzburgh medicosurg. gaz. for March, and Mc.Euen in litt.); but not until 1824 was *lithotrity* successfully accomplished, Civiale at Paris employing a rotating or watchmaker's drill (Cuv. rapp. Inst.). Improved instruments for crushing were afterwards invented by Huerteloup, and Jacobson, and have led to the general adoption of the art.

"14 A. D. = 1st year of the 'thiang-foung' of the usurping Sin-mang" or Wang-mang — (Chinese chron. table).

"The same year," and "before the death of Augustus" (Clint. iv. p. 45), a *comet*. Observed by L. Seneca nat. qu. i. 1.

"August" (Sueton., and Clint.), Augustus succeeded by Tiberius, second Roman emperor. The hieroglyphic ovals of Tiberius occur at Dendera, Karnak, Esneh, Philæ, and on the temple continued by him at Debot in Nubia.

Rosa pumila of Eastern Europe. The NARDI·GALLICI·FOLIORVM·ROSAE·ARIDORVM mentioned by Celsus v. 23, — were probably of this species, whose petals according to Lindley "are astringent and tonic, and are dried for various officinal preparations:" R. pumila is known to grow wild in Italy (Lenz); is further described by Lindley as a "dwarfish stiff short-branched bush" growing in Austria and the Crimea; and was observed by Chaubard, and Fraas, frequent in Greece. Farther East, "R. Gallica" was observed by Thunberg at Dezima and elsewhere in Japan.

Athamantha Cretensis of the Mediterranean countries. Its imported fruits are called in drug-shops "semina dauci cretici" (Lindl.); in which we recognize the DAVCI·CRETICI·SEMINIS prescribed by Celsus v. 23, — clearly among the four kinds of Petronius Diodotus, "probatissimi in Creta, mox in Achaia, et in siccis ubicunque nati," the stem upright a foot high, and root "suavissimi gustus et odoris" (Plin. xxv. 64): the "thaukōs krētikōs" is described by Dioscorides as growing in dry stony places, its root thick as the finger and a span long, flowers white, fruits hairy white pungent to the taste and odorous: "daucum" seeds from Crete were found by Alpinus iv. 7 employed medicinally in Egypt: and A. Cretensis in its annual state is described by Fuchsius pl. 231, is termed "myrrhis annua semine striato villoso incana" by Tournefort inst. 315, and was observed by Sibthorp along the margin of fields on the island of Melo. Westward, A. Cretensis is described by Matthioli, and Lobel (Spreng.); is known to grow from Carniolia to the Pyrenees (Jacq. austr. pl. 62, Pers., and A. Dec.); was observed by Lenz in North Italy, and by Lecoq in limestone districts as far as central France. Its fruits according to Lindley are "aromatic with a warm agreeable flavour," and "were used in the preparation of diaphoenix Venice treacle, and compound syrup of wormwood."

Euphorbia lathyris of Eastern Asia. Called in Italy "cacapuzza" or "catapuzia" (Lenz), in which we recognize the CATAPOTIVM pill of Celsus: — seven or eight seeds of "lathuris" taken in "katapōtiŏ," are prescribed by Dioscorides iv. 164; for a more violent purgative (according to Pliny xxvii. 71) the seeds of "lathyris" are taken in their follicles, and as they hurt the stomach are eaten with fish or chicken-pottage; the "lathyr." is mentioned by Serenus (Ainsw.); "lacteridae" by Charlemagne capit. for cultivation in every garden; E. lathyris is called "cataputia minor" in the old pharmacopœias (Lindl.); is termed "t. latifolius cataputia dictus" by Tournefort inst. 86; and besides growing spontaneously in waste ground, continues to be cultivated in Italy and throughout middle Europe as far as Holland (Pers., A. Dec., and Lenz); in Britain is called *caper-plant*, the "seed vessels being used in sauce for the buds of the real caper" (Prior). Eastward, the "lathuris" classed by some among "tithumalōis" is further described by Dioscorides as a cubit high, leaves resembling those of the almond, and three-seeded fruit rounded like capers "kapparin;" is mentioned also by Galen antid. ii. 17; E. lathyris was observed by Sibthorp, and Chaubard, in the Peloponnesus, but seems rare and has not been found by others: is enumerated by Clot-Bey and Figari as recently introduced into Egypt. Farther East, was observed by Thunberg in Japan, growing here and there and called "soku suisi." By European colonists, was carried to Northeast America, where it continues under cultivation and is sometimes found growing spontaneously (A. Gray). According to Lindley, the seeds are "drastic," and are said "to procure abortion."

Daucus gummifer of Sicily. The MARINA·PASTINACA prescribed by Celsus v. 27, — may be compared; and the liquid storax supposed by Matthaeus Platearius f. 248 to be produced in Calabria, is referred here by Sprengel: D. gummifer is termed "pastinaca tenuifolia gummi manans" by Boccone pl. 20; and is known to grow on "dry stony hills" along the seashore of Sicily (Gussone

fl. sic. pl. 117, and Lindl.). Boccone further states, that the roots yield the "bdellium siculum" of the old pharmacopoeias; a substance according to Lindley having "a bitter balsamic taste and a weak but unpleasant odour."

Cyperus pertenuis of Hindustan. Called in Bengalee "naga," in the Taleef Shereef 981 "nagarmotha" (J. F. Wats.); and the aromatic IVNCI·QVADRATI identified by Celsus iii. 21 with the ΚΥΠΕΙΡΟΝ of the Greeks, — may be compared. Eastward, the "naga" is prescribed by Susrutas chik. 37: C. pertenuis was observed in Hindustan by Roxburgh, Piddington 180, Balfour 94, and Drury, its roots used medicinally, and besides "for perfuming the hair." (Compare C. juncifolius.)

"16 A. D." (Tacit. and Clint.), decree of Tiberius, expelling the "mathematicians and magians" from Italy.

Foritis anthriscus of the Mediterranean countries. An Umbelliferous weed called in Egypt "chellē" or "gazar Sjæitani" (Forsk.); in which we recognize the "crowfoot" or "Satan's carrot" of Egypt identified by Ebn Baitar with the "daucus" of the Greeks: the "daucus" of Petronius Diodotus having seeds like "milio" — (Plin. xxv. 64) may be compared: T. anthriscus was observed by Forskal, and Delile, from Damietta to Cairo; by Forskal, and Sibthorp, along hedges from the Peloponnesus to Constantinople. Westward, "Satan's carrot" is further identified by Ebn Baitar with the "aatharilal" of Elzaharawi (Abulcasis), and Edrisi, the name being Berber: T. anthriscus is termed "daucus annuus minor floribus rubentibus" by Tournefort inst. 308, "tordylium anthriscus" by Linnæus, "caucalis anthriscus" by Smith fl. br. 298; was observed by Scopoli in Carniolia; and is known to occur in waste places throughout middle Europe as far as Denmark (fl. Dan., Jacq. austr. pl. 261, and Pers.).

Seseli ammoides of the Mediterranean countries. Of the four kinds of "dauci" distinguished by Petronius Diodotus, the "tertium" — (Plin.) or "thaukōn tritōn" of Dioscorides, having coriander-like leaves, white flowers, an "anēthŏ"-like summit and fruit, the umbel carrot-like and full of oblong acrid seeds, is referred here by Sprengel: S. ammoides was observed by Sibthorp in the cultivated fields of Greece. Westward, is termed "fœniculum lusitanicum minimum acre" by Tournefort inst. 312, "sison ammi" by herbalists (Steud.); and is known to occur in Italy and Portugal (Jacq. hort. pl. 52, and Pers.).

"17 A. D." (Tacit., Blair, and Clint.), twelve cities in Asia thrown down by an *earthquake;* regarded by Pliny ii. 84 as the severest one on record.

At this time in or near Rome, Antonius Castor cultivating a *botanic garden* of his own — (Plin. xxv. 5). Probably the earliest one on record.

Lepidium cornutum of the East Mediterranean countries. A species of *pepper-wort,* and the PIPERITIS or SILIQVASTRVM having according to Castor white seeds tasting like pepper — (Plin. xx. 66), may be compared: L. cornutum is termed "bursa pastoris orientalis cardamines folio siliqua longissima quadrangula" by Tournefort cor. 15; and was observed by Sibthorp on Cyprus.

Potamogeton pectinatus of Northern climates, in water more or less brackish. A species is called in Italy "potamogeto" (Lenz), and the POTAMOGETON growing according to Castor in watery places, its leaves slender like horse-hair, a long smooth thyrsus, and the root healing "strumas" and "durities" — (Plin. xxvi. 33), may be compared: P. pectinatus is described by Vaillant pl. 32, was observed by Forskal near Marseilles, and is known to grow along the European coast as far as Sweden and Iceland (fl. Dan. pl. 186, Hook., and Wats.). Eastward, was observed by Sibthorp, Chaubard, and Fraas, in the Peloponnesus; by Delile, along the Mediterranean border of Egypt; and is known to grow in Siberia as far as the salt lakes of the Irtiseh (Pall.). Westward from Europe, is known to grow along our Atlantic coast, and inland throughout the chain of the Great Lakes (A. Gray) to Lat. 54° at Cumberland House (Drumm.; see P. crispus).

"18 A. D." (Clint.), the historian Valerius Maximus visiting Asia in company with Sextus Pompeius, a friend of Ovid.

Glaucium rubrum of the East Mediterranean countries. Called on Tenedos "lōllĕ" or by the Turks "hawa at" (Forsk): the GLAVCEA·SVCCO·SALVBRI of Columella x. 103, — and Scribonius Largus 22, or "glaukiōn" described by Dioscorides as the juice of an herb, growing at Hierapolis in Syria and having leaves like "kĕratitithōs mĕkŏnŏs," expressed by the inhabitants and employed against maladies of the eyes, according to Pliny xxvii. 59 growing in Syria and Parthia and having further medicinal uses, may be compared: also the herb "bomnih" mentioned by Avicenna as yielding the "mamitsa" juice (Spreng.): G. rubrum is termed "g. orientale flore magno rubro" by Tournefort cor. 18, and was observed by Forskal, and Sibthorp, at Smyrna and on the nearer Greek islands.

Helleborus foetidus of Western Europe. Called in Britain *bear's foot* or *oxheel* or *setterwort* or *fetid hellebore* (Prior); in which we recognize the CONSILIGO of shepherds, good according to Columella vi. 5 in all diseases of cattle; a discovery of "nostra aetas" in the Marsian mountains —

according to Pliny xxv. 48 to xxvi. 21: H. foetidus is described by Cordus, Ruel, Tragus i. pl. 83, Gesner, and Matthioli (Dierb.); is known to grow from "Lat. 51°" near Iena to Styria, the Tyrol, France, and Italy (Poll., Ten., and A. Dec.). Is probably exotic in Britain, though found seemingly wild by Gerarde 286, and Ray 272 (Hook., Bab., and Wats.): its root according to Prior inserted as a seton in the dewlap of cattle, and hence the name. Its medicinal properties according to Lindley are similar to those of H. niger and its "leaves are emetic and purgative."

Lepidium latifolium of the East Mediterranean countries. Called in Britain *pepperwort* (Prior), in Germany "pfefferkraut," in Portugal "herva pimentiera maior," in Italy "piperella" (Spreng.), in Greece "agria lahana" (Fraas) or "lĕpithi" (Sibth.), in which we recognize the LEPIDIVM of Columella — (Ruel ii. 105), applied externally as ulcerating in the antidote of Apuleius Celsus (Scribon. Larg. 174), and according to Pliny xix. 51 and xx. 70 a foreign plant cultivated in Italy, lasting two years, a cubit high with laurel-like but soft leaves: L. latifolium is described by Dodoens hist. p. 716, and Tournefort inst. 216; was in Britain before the days of Gerarde p. 187 (A. Dec.); and is at least naturalized in Italy and throughout middle Europe as far as Denmark (fl. Dan. pl. 557, Pers., and Lenz). Eastward, the "lĕpithiōn" by some called "giggithiōn" is described by Dioscorides as a well-known herb whose acrid ulcerating leaves are applied externally in cutaneous and other diseases, and the root tied to the neck as a remedy against toothache; is mentioned also by Galen, and Paulus Aegineta; L. latifolium was observed by Sibthorp, and Fraas, frequent in Greece. Farther South, the "shitharaj" mentioned by Dioscorides according to Ebn Baitar, or "sheiteraj" of Serapion, is referred here by Sprengel, and Sontheimer; L. latifolium is enumerated by Clot-Bey and Figari as long known in Egypt, and was observed by Delile around Cairo.

Raphanus sativus of Eastern Asia. Called in Britain *radish*, in France "rave" (Nugent), in Germany "radieschen" (Grieb), in Italy "radicine" (Lenz), in Greece "rapania" (Fraas), in Egypt "fidjel," in Yemen "fidyl" or "bŏkel" (Forsk.); in which we recognize the ASSYRIA·RADIX or SYRIACAE·RADICIS of Columella xi. 3, — brought from Syria according to Pliny xix. 26 quite recently: the "radix" is mentioned by Palladius, Vegetius, and in the Capitularia of Charlemagne: the "fujl" by Eldshuz, Ebn Masawia, Costus, Elthabari, Rhazes, and Ebn Baitar: R. sativus is described by Platearius, and in Ortus Sanitatis 383; is known to be cultivated from Italy throughout middle Europe, in some instances springing up spontaneously (A. Dec.); was observed by Fraas under cultivation in Greece; by Forskal, Delile, and myself, under cultivation in Egypt, where according to Clot-Bey the leafstalks are eaten as well as the root; by Forskal, in Yemen; by myself, a favourite object of cultivation at Mocha, Zanzibar, and Muscat. Eastward from Arabia, is called in Sanscrit "mooluka" (Roxb.), in Bengalee "mula," in Hindustanee "muli" or "murai" or "turb" (D'roz.), in the environs of Bombay "mohlee" (Graham); was observed by myself abundantly cultivated on the Deccan; by Mason, "exotic" in Burmah and called "mung-la"; ? by Loureiro, under cultivation in Anam; by Kaempfer, and Thunberg, along roadsides and everywhere cultivated in Japan. By European colonists, was carried to Northeast America, where it continues abundantly cultivated and "inclines sometimes to be spontaneous" (A. Gray); to the island of Tristan d'Acunha (Petit-Thouars, and Carmich.); and to the Mauritius Islands (Boj.). Var. *oleifer* long cultivated in China for the oil from its seeds (A. Dec.) seems to have accompanied the fleshy-rooted form into Egypt: for "ĕlaiōn raphanīnōn" is mentioned by Dioscorides i. 45, and Pliny, as used among the Egyptians; "fadjl oil" is mentioned by Elminhaj, Ebn Baitar, by Abd-allatif as manufactured in Egypt; and the plant producing it was observed under cultivation there and in Nubia by Lippi, and Granger (Del.: see Raphanistrum maritimum).

Crambe maritima of Western Europe. Called in Britain *sea-kale* (Prior): the BATIS of Columella xii. 7. 13, — or "batin marinam" and "batin hortensiam" by some called "asparagum gallicum" enumerated by Pliny xx. 50 and xxvi. 50 among the indigenous esculent plants of Italy, is referred here conjecturally by Fraas: C. maritima is known to grow along the Atlantic shore of Europe as far as Denmark (fl. Dan. pl. 316, Pers., and Prior).

Trifolium pratense of Europe and the adjoining portion of Asia. Called in Britain *clover* or *meadow clover* or *honeysuckle*, in Anglo-Saxon "hunig-sucle" (Prior), in Germany "wiesenklee" (Grieb), in France "trèfle" (A. Dec.), in Greece "triphulli," and the TRIFOLIVM sown for geese or TRIFOLIVM·PRATENSE of Columella vi. 17. 2 and viii. 14. 2, — and Scribonius Largus 163, is referred here by writers: "read clæfre" is mentioned in the Anglo-Saxon Leech book iii. 8, and glossary Laud. (Cockayne): T. pratense is described by Lobel hist. p. 493, Culpepper, and Parkinson; is termed "t. pratense flore monopetalo" by Tournefort inst. 404; and is known to grow in North Africa, Corsica, and throughout middle and Northern Europe as far as Lapland (Wats., Dec., and A. Dec.). Eastward, was observed by Forskal, and Sibthorp, in grassy situations everywhere from Constantinople to the Greek islands; is known to grow also from Armenia and Caucasus throughout the neighbouring portion of Siberia and as far as Cashmere (Ledeb., and Royle). Its cultivation in middle Europe according to Link, and A. Decandolle, having commenced in the Six-

teenth century, T. pratense may have been carried by European colonists to Iceland, where it was observed by Hooker: clearly by European colonists was carried to Northeast America, where it continues to be abundantly cultivated, has become naturalized, and is distinguished as *red clover*.

Medicago falcata of Europe and the adjoining portion of Asia. Called in Britain *yellow medic* or *horned medic*, in Germany "sichelklee" (Grieb) or "schwedischen luzern" (Lenz); and the wild medica alluded to by Columella ii. 11 — is referred here conjecturally by Fraas: M. falcata is termed "falcata" by Rivinus pl. 84, "m. sylvestris" by Tournefort inst. 410; was observed by Forskal near Marseilles; is known to occur cultivated and naturalized throughout middle Europe as far as Denmark (fl. Dan. pl. 233, Pers., Dureau de la Malle, and A. Dec.); and at least in Britain is regarded by Watson as exotic. Eastward, was observed by Forskal, Sibthorp, Chaubard, and Fraas, from the Peloponnesus to Constantinople.

Bryonia alba of the West Mediterranean countries. Called in Italy "zucca selvatica" or "vite bianca" (Lenz), in which we recognize the VITIS · ALBA of Columella vi. 4. 3 and xii. 7. 1, — Palladius i. 35, and Apuleius 66, identified with the "bryoniae" by Scribonius Largus. 79: B. alba is described by Blackwell pl. 533, and is known to be frequent throughout Italy, growing as far even as middle Europe (Pers., Lindl., and Lenz). Eastward, was observed by Fraas in Greece, rare and called "agrioklēma." According to Lindley, the "properties like those of" B. dioica.

Ligusticum (*Trochiscanthes*) *nodiflorum* of the extreme Southern Alps. The LIGVSTICVM of Columella xii. 59, — and Apicius, described by Pliny xix. 50 and xx. 73 as wild on the mountains of Liguria, a condiment when cultivated sweeter but without strength, by Dioscorides as named from Liguria where it is chiefly produced, growing in shady places on the highest rough Appenines close to the Alps, the stem slender like that of "anēthŏ" and geniculate, leaves "mĕlilŏtŏu"-like the uppermost ones much divided, seeds "marathrŏu"-like acrid and aromatic, used for pepper by the natives who call the plant "panakĕs," is referred here by Dierbach, and others: L. nodiflorum is described by Villars; and is known to grow on the Southern prolongation of the Alps separating France from Italy (Allion., and Pers. See L. levisticum).

Pastinaca sativa of Western Europe. Called in Britain *parsnep*, or in old herbals *pasnep* (Prior), in France "panais," in Italy "pastinaca" or "pastinaca domestica" (Lenz), in which we recognize the PASTINACA of Columella, — and Macer Floridus, and "pastinacae maiori" of Pliny xix. 28: P. sativa is described by Fuchsius pl. 751, Anguillara, and Columna (Spreng.); is termed "p. sylvestris latifolia" by Tournefort inst. 319; and besides being cultivated, is known to grow wild throughout middle Europe as far as Denmark (fl. Dan. pl. 1206, and Pers.). Eastward, was observed by Sibthorp, and Chaubard, along the margin of fields in the Peloponnesus and on the Greek islands. By European colonists, was carried prior to 1670 (Josselyn) to Northeast America, where it continues to be cultivated and has become naturalized: perhaps also by European colonists carried to Hindustan, where it was observed by Law "in gardens" in the environs of Bombay (Graham); and to Burmah, where it was observed by Mason, but no native name is given.

Carum carui of Europe and the adjoining portion of Asia. Called in Britain *carraway* (Prior), in Welsh "carwass" or "carddwy" (Davies p. 20), in Germany "kummel," in Finland "kumina," in Polish and Bohemian "kmjn," in French Switzerland "cumin" (A. Dec.), in France "carvi" (Nugent), in Italy "comino tedesco" or "carvi" or "caro" (Lenz), in Egypt "karaouih," in which we recognize the CAREVM of Columella xii. 51, — and Apicius vii. 2, according to Pliny xix. 49 exotic in Italy and cultivated in the same manner as "olusatrum," the best produced in Caria whence the name, and the next best in Phrygia: seeds of C. carui have been found in debris of the ancient lake-villages of Switzerland (at Robenh., Heer); the term "carui semina" occurs in medieval Latin, and the herb "carui" is mentioned by Galfridus pr. pm. as growing abundantly in Britain (Prior); C. carui continues frequent there, has been long known on the neighbouring continent between "Lat. 50° and 60°," and is regarded by A. Decandolle as indigenous from Lapland to Siberia and Caucasus. Farther South, the "karŏn" is described by Dioscorides as a well known little seed, warm, grateful to the taste and stomach and the root edible, is mentioned also by Galen, Oribasius, and Aetius; C. carui has not been found by modern travellers in Greece nor in Asia Minor, but was observed by Forskal, and Clot-Bey, in the gardens of Egypt, the seeds besides imported from "Barbary and Andalusia" (Forsk. mat. med., and Del.). Eastward, is called in Hindustanee "karwiya" or "ajmod" (D'roz.); and is enumerated by Mason as "exotic" in Burmah and called "sa-mwot." By European colonists, was carried to Northeast America, where it continues under cultivation for its seeds; and to the Mauritius Islands, where it rarely flowers (Boj.). The more tender roots according to Sprengel are eaten in Germany.

Carduus personata of the mountains of middle Europe. The PERSONATA of Columella vi. 17. 1 — is referred here by Sprengel and others: C. personata is described by C. Bauhin prodr. 155; is termed "arctium personata" by Linnæus; and is known to grow on the Alps from Geneva and Taurero to Austria (Jacq. austr. pl. 348, and Pers.).

Xeranthemum annuum of the Mediterranean countries and middle Asia. The IMMORTALIS AMARANTVS of Columella x. 175,—is referred here by Sprengel: X. annuum was observed by Sibthorp in Greece, in dry stony mountainous situations frequent; by Gmelin, in Siberia. Westward, is described by Morison vi. pl. 21; is termed "x. flore simplici purpureo majore" by Tournefort inst. 499; and is known to grow in Italy and as far as France (Jacq. austr. pl. 388, Lam. fl. fr., and Pers.). According to Sprengel, the flowers have no pungent odour.

Artemisia palmata of Western Europe. The SANTONICVM of Columella vi. 25,—and Pliny xxvii. 28, "sandonica herba" of Scribonius Largus 141, or "tritōn apsinthiōu" growing according to Dioscorides mostly in Gaul beyond the Alps, and called after the district producing it "santōniōn," mentioned also by Galen fac. simpl. vi. p. 804, is referred here by Lobel obs. p. 436, and Sprengel: A. palmata is known to grow in Southern France and Spain, its seeds being the officinal "seminis santonici" (W., and Pers.).

Mentha gentilis of Europe and the adjoining portion of Asia. A species of *mint* called in Greece "agriōēthuōsmōs" (Sibth.): the NEPETA SYLVESTRIS of Columella vii. 5. 18—may be compared with the "nĕpĕtan" of the Romans identified by Dioscorides with the "ĕtĕra kalaminthē" called "agrian glēhŏna" from resembling the "glēhŏni" even in odour, and referred here by Fraas: M. gentilis is distinctly described by Linnæus 805; is known to grow in wet places and among rubbish throughout middle Europe as far as Britain (Sm. brit. ii. p. 621, Sole pl. 18, and Pers.); was observed by Sibthorp, and Fraas, not rare in Greece, among stubble late in the autumn.

Salix praecox of middle Europe. The GALLICA SALIX of Columella iv. 30. 4—is referred here by Sprengel: S. praecox is described by Hoppe, Hoffmann, Villars, and Host (Steud.); is known to grow on river-banks in middle Europe as far as Britain (J. E. Smith), a tree with branches "fragilissimis" (Pers.).

Sorghum vulgare of Tropical Eastern Asia. Called in Greece "kĕghri" or "kalampōki," in Italy "sorgo" or "saggina," or "melica" (Targ., and Lenz), in which we recognize the MELICAE GALLINAE, a term applied by Columella to the MELEAGRIS *Guineā fowl*, about this time first served upon the tables of the Romans: a kind of "milium" brought within ten years from India to Italy—is further mentioned by Pliny x. 38 and xviii. 10 as having a very large reedy stem seven feet high and called "lobas," cultivated in moist places and the most productive of all grains, a single seed yielding "terni sextarii:" the "melica" is also mentioned by Palladius (Fraas p. 312); specimens of a kind of grain called "meliga" were brought from Natolia to Incisa in Piedmont in "August 1204," the price of "meliga" or "melya" is mentioned by Uberto de Lucerna "in 1298," the mode of cultivating "milica" is described by Crescenzio, the "milica" is identified with the "sorghum" by Cardanus, with the "saggina" by C. Bauhin, and the "sorgo" is also mentioned by Matthioli (A. Dec. p. 943). Eastward and Southward, S. vulgare was observed by Fraas under cultivation in Greece; stems intermingled with those of Papyrus were observed by myself in a bundle exhumed at Sakara, the "dhorra" continued in the days of Abd-allatif almost unknown in Egypt, but is at present one of the principal objects of cultivation (Alpin., Forsk., Del., and Clot-Bey); is called in Nubia "mareh" (Del.), in Southern Arabia "taam" or "habb" (Forsk.), in Hindustan "jondla" or "jowaree" (Graham); in which we recognize the "jawars" of Ebn Masah, Abu Hanifa, Rhazes, and Ebn Baitar; was observed by myself both in Arabia and in Equatorial Africa at Zanzibar, and through the Interior had reached Senegal on the Atlantic prior to the visit of Cadamosto; was observed in Hindustan by Apollonius of Tyana (according to Philostratus, and Beckmann), and continues to be extensively cultivated there, as witnessed by Rumphius v. pl. 75, Roxburgh, Graham, and myself. Farther East, was observed by Mason "exotic" in Burmah and called "pyoung;" and by Kaempfer, and Thunberg, under cultivation in Japan, and called "sioku" or usually "kibi." By European colonists, a slender-stemmed variety has been recently brought "from China" to Northeast America, and continues to be cultivated along the Ohio and Mississippi for the sugar procured from the stems.

Morchella esculenta of Europe. An edible mushroom called in Britain "morel," in France "morille" (Prior), in Italy "spugnolo" or "spongiole" (Lenz), in which we recognize the SPONGIOLI of Columella,—Pliny, and Apicius, described as a spongy ball on trees: M. esculenta is known to grow also in middle Europe.

Mucor mucedo of all climates? The MVCOR of Columella xii. 4 and 17,—and Pliny xiv. 26, is referred by writers to this minute fungus, called in English *mould*.

"19 A. D." (Tacit., and Clint.), visit to Egypt of Germanicus; and his death on his way thence in Syria. At this time, a *comet* observed by L. Seneca nat. qu. i. 1 (Clint. iv. p. 45).

"The same year" (Tacit., and Clint.), at Rome, the religious rites of the Egyptians and Jews prohibited; and all persons following them banished from Italy.

"20 A. D. = 1st year of the 'ti-hoang' of the usurping Sin-mang" or Wang-mang—(Chinese chron. table).

"22 A. D." (Mason iii. 40), in Burmah, king Ronmokkha succeeded by his son Ranthinkha;—who "discouraged Budhism," and reigned three years only.

Polygonum barbatum of the Eastern Himalayas. Three to four feet high with several stems, and called in Telinga "kunda-mallier," in Tamil "aat-alarie," in Malabar "velutta-modela-mucu" (Drur.); from early times furnishing feed for cattle, its leaves besides used by the natives in colic, and its seeds as carminative: *—observed by Rheede xii. pl. 77 in Malabar; by Ainslie, Roxburgh, and Wight, as far as Bengal; by Mason, in Burmah, enumerated as indigenous; and is known to grow in China (Pers., and Lindl.). Westward, was observed by Grant on the "coast range" of Equatorial Africa. Observed by Thunberg fl. 385 in Austral Africa; but clearly by European colonists, carried to the West Indies (Sloane i. pl. 3).

"23 A. D. = 'keng-chi,' 1st year of Ti-youan, of the Han" or Seventh dynasty—(Chinese chron. table).

"25 A. D. = 'kian-wou,' 1st year of Kouang-wou-hoang-ti" or Kouang-wou ti, of the Han or Seventh dynasty (Chinese chron. table, and Pauth.). He removed the seat of government from Singan-fou in Chen-si to Ho-nan-fou in Honan: and hence the name "Eastern Han" for the remainder of the dynasty.

"The same year" (Tacit., and Clint.), death of Cremutius Cordus. His annals "praising M. Brutus and calling C. Cassius the last Roman," were ordered by the Senate to be burned; but copies being concealed, the work continued extant.

"In this year" (Burm. hist., and Mason 41), in Burmah, Ranthinka succeeded by his son Ramunsalingda, an excellent and religious king—who reigned "fifteen" years.

"27 A. D." (Sueton., Tacit., Alst., and Clint.), fall of the amphitheatre at Fidenæ; in which "more than twenty thousand persons" perished.

Ficaria ranunculoides of Europe and the adjoining portion of Asia. Called in Greece "sphōurthakula" or "zōhathōhōrtōn" (Sibth.,) and one of the plants called in Britain *swallow-wort* (Prior), in which we recognize the CHELIDONIVM applied as ulcerating of the antidote of Apuleius Celsus—(Scribon. Larg. 174); F. ranunculoides is termed "r. vernus rotundifolius" by Tournefort inst. 286; is known to grow throughout middle Europe as far as Denmark (fl. Dan. pl. 499, and Pers.); and according to Sprengel, the roots so resemble grains of wheat as to have been cooked by mistake in times of scarcity, and from being left exposed in quantities after inundations have occasioned superstitious fear. Eastward, the "hĕlithŏniōn tō mikrōn" by some called "purōn agriōn" is described by Dioscorides as ulcerating the skin, growing near water, stemless, the leaves ivy-like, and roots like a cluster of grains of wheat; F. ranunculoides was observed by Sibthorp, Chaubard, and Fraas, frequent in moist shady places throughout Greece.

28 A. D. = "15th year of the reign of Tiberius" (Luke iii. 1, and Epiphan. haeres. p. 446), the Baptism. In the Jordan, by "John the son of Zacharias."

"29 A. D.," in the consulship of "Rubellius Geminus and Rufius Geminus" (Clem. Alex., Tertull. adv. Jud. 8, Augustin., and Clint.), the Crucifixion. After "forty days," the number of disciples being "about an hundred and twenty," Matthias elected apostle in place of the deceased Judas: and on "the day of Pentecost," the gift of tongues, and "about three thousand" disciples added (Acts i. 3 to ii. 41).

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* *Ulmus alternifolia* of the mountains of Burmah. One of the two *elms* called "tha-lai" (Mason) known in Prome from early times:—observed by McClelland, "the largest trees" of the district (Mason v. 540. See U. integrifolia).

Juglans arguta of the Eastern Himalayas. Called in Burmah "theet-kya" (Mason), and known from early times:—observed by Wallich. *Walnuts* according to Mason v. 460 "are occasionally brought from above Ava, but it is not certain that they are the produce of the indigenous" tree.

Quercus sp. of the Eastern Himalayas and the mountains of Burmah. Seven different species of *oak*—observed by Wallich in Burmah: "three or four" according to Mason "are natives of" Tenasserim "and all afford useful timber."

Pardanthus Chinensis of the Eastern Himalayas. The *leopard flower*, Moræa-like, and called in Burmah "theet-sa" (Mason), in Malabar "canda-shular mini" (Rheede), cultivated from early times:—observed by Rheede xi. 37 in Malabar; by Graham, "common in gardens" around Bombay; by Roxburgh, in other parts of Hindustan; by Royle, "wild in the Doons of the Himalayas" (Graham); by Mason v. 431 to 807, "exotic" in Burmah, cultivated for ornament. Transported to Europe, is termed "ixia chinensis" by Linnæus.

Asparagus acerosus of Burmah. Called there "sheet-ma-tet" (Mason), and from early times:—found by Mason v. 468 "a passable substitute for" our *garden asparagus*, "to which however it is much inferior."

In or about 30 A. D. (Acts viii. 1, and ix. 19), martyrdom of Stephen; and the disciples, "except the apostles," scattered abroad "as far as Phenice, and Cyprus, and Antioch."

"31 A. D." (Sueton., Dio, and Clint.), disgrace and death of Sejanus, prefect of the praetorian guard and consul for this year. A *comet* visible at the time, witnessed by L. Seneca nat. qu. i. 1 (Clint. iv. p. 45).

In or about 32 A. D. (see Acts viii. 5 to 25), the gospel extended to Samaria by Philip the evangelist; Simon Magus being among those baptised. — Simon afterwards ("35 to 65" Clint. iv. p. 123) founded the Sect of Simonians; and is regarded by Tertullian haer. 46, as the first heretical Christian.

By Philip also (Acts viii. 27 to 39), conversion and baptism of "a man of Ethiopia, an eunuch of great authority under Candace queen of the Ethiopians, who had the charge of all her treasures:" and who was at least inclining to the Jewish faith, having "come to Jerusalem for to worship, was returning, and sitting in his chariot read Esaias the prophet." — Reasons have been found for suspecting, that the Nubian or Ethiopian kings "adopted both Christ and Jupiter among the gods" (Leps. eg. and sin. p. 210).

A *Roman inscription* at Naga in Upper Nubia: and at or near Meroe, a "temple of superior workmanship" perhaps built by Roman artisans, but is devoid of inscriptions (Leps. eg. and sin. p. 155 and 210).

33 A. D. (= 36 — "3 years" of Galat. i. 18), conversion of Saul or Paul, on his way to Damascus.

Vinca minor of Europe and the adjoining portion of Asia. Called in Britain *periwinkle*, in medieval Latin "pervincula" (Prior), in Italy "pervinca" (Lenz), in Greece "agriōliza:" the ΚΑΗΜΑΤΙC mentioned confusedly by Pamphilus — (according to Galen simpl. vii. 31), identified by Dioscorides with the "philĕtairiōn" or "thaphnōĕithĕs" or "mursinŏĕithĕs" or "pōlugōnŏĕithĕs," having shoots as large as "shōinōu" and laurel-like leaves but much smaller, is referred here by writers: V. minor was observed by Sibthorp, Chaubard, and Fraas, in the Peloponnesus. Westward, seems at least included in the "vincapervinca" of Pliny xxi. 39, and Apuleius 58: is called in Slavonic and Saxon by names turning on the syllable "yink," but totally different Welsh names are given by Davies (A. Dec.); is described by Brunfels (Spreng.), and Wigand; is termed "pervinca vulgaris angustifolia flore cæruleo" by Tournefort inst. 120; is known to grow wild in Italy and throughout middle Europe, but is regarded by Watson as exotic in Britain and only naturalized (Pers., A. Dec., and Lenz). By European colonists, was carried to Northeast America, where it continues under cultivation for ornament. (See V. major.)

One hundred and thirtieth generation. A. D. 34, May 1st, mostly beyond youth: the Greek philosopher Demetrius the cynic; the historian Pamphila; the grammarians, Pamphilus, Heracleides of Pontus the younger: the Latin writers, the poets Lucanus, and Persius; the orator Domitius Afer; the grammarians Palaemon Vicentinus, Probus of Berytus; the rhetors Clodius Quirinalis, Statius Ursulus; the commentator Asconius Pedianus; the Roman painters, Amulius, Turpilius, and Antisteus Labeo (Bryan).

"In this year" (Abyss. chron., and C. Mull. p. xcvii), Za-Senatu succeeded by Za-Les, now king of Abyssinia. — He reigned "ten" years.

"35 A. D." (Sm. b. d.), C. Cestius Gallus Camerinus, and the historian and orator M. Servilius Nonianus, consuls for this year. Considia, daughter of the consul M. Servilius, was healed by the physician Damocrates — (Plin. xxiv. 28).

Lepidium iberis of Western Europe. The ΚΑΡΔΑΜΑΝΤΙΚΗ growing according to Servilius Damocrates in waste places, a cubit high with root and leaves like ΚΑΡΔΑΜΟΥ and white flowers, discovered and named by him ΙΒΗΡΙC — (Pliny xxv. 49), is referred here by writers: L. iberis is described by Lobel pl. 223; was observed by Forskal near Marseilles, and is known to grow along roadsides in other parts of France and in Germany (Roth, Lam. fl. fr., and Pers.).

Lepidium graminifolium of the Mediterranean countries. Possibly included in the "ivēris" by Damocrates, — being apparently the "ivēris" known to the Greeks, and mentioned in the addition to Dioscorides: L. graminifolium is described by Bauhin hist. ii. pl. 918 (Pers.); is termed "thlaspi lusitanicum umbellatum gramineo folio flore albo" by Tournefort inst. 213; was observed by Forskal, Sibthorp, and Chaubard, in waste ground throughout Greece from the Peloponnesus to Constantinople; and is known to occur throughout Southern Europe (Pollich, and Pers.).

Teucrium marum of the West Mediterranean countries. Called in Germany "katzenkraut," in Italy "maro" (Lenz); and the ΜΑΡΟΝ of Damocrates — may be compared: "maron" inferior in quality to the Lydian was produced in Egypt in the days of Pliny xii. 53: "maru species sclareæ" was found by Alpinus employed there medicinally; and "marum" seeds, by Forskal; but according to Clot-Bey, the living T. marum has only recently been introduced. Farther North, was observed by Gittard in mountainous situations on Amorgos (Chaub.), but in Greece and Italy according to Lenz

occurs under cultivation only: is known to grow wild in Spain (Matthiol. comm. 537, Ludwig ect. pl. 14, Pers., and Spreng.). According to Lindley, the plant "seems to be a genuine feline aphrodisiac." (See Origanum Sipyleum).

"36, before the passover" (J. R. B. in Kitt. cycl. bibl.), Pontius Pilate, "sixth Roman procurator of Judæa," removed from office by the Roman general Vitellius.

The same year, (see Acts ix. 24, 2 Cor. xi. 32, Galat. i. 18, Alst., and Neand. in Kitt. cycl. bibl.), Damascus held by the Arabian king Aretas III. of Petra, and the return of "Saul" or Paul to Jerusalem; where he abode with Peter "fifteen days," but of the other apostles saw "none, save James the Lord's brother." Thence, "Saul" proceeded "into the regions of Syria and Cilicia" (compare Acts ix. 30).

"37, March 16th" (Tacit., and Clint.), Tiberius succeeded by Caius Caligula, third Roman emperor. From Egypt, Caligula removed an obelisk to Rome (Plin. xvi. 76. 2). His hieroglyphic ovals occur on temples at Dendera, Philæ, and Talmis in Nubia.

His prefect over Egypt, Publius Avilius Flaccus, is named in a Greek inscription at Dendera.

Lemna polyrhiza of Northern climates. Called in Egypt "ads-el-ma," and possibly known there as early as this year: — the "adschma" is mentioned by Gafeki, and Ebn Baitar; and L. polyrhiza was observed by Forskal, and Delile, at Rosetta. Westward, is described by Vaillant pl. 20, and Micheli xvi. pl. 11; and is known to grow floating on still or stagnant water from Switzerland to Sweden and Russia (Pers., and Wats.). Farther West, is known to occur in our Atlantic States from Lat. 43 to Florida, and inland as far as Arkansas (Ell., Chapm., Nutt., and myself), but according to A. Gray has not in America been found flowering. Probably by European colonists and through the cultivation of semi-aquatic plants introduced into Madeira (Lemann, and A. Dec.).

Lemna gibba of Northern climates. Its frond plano-convex, more resembling a lentil, and possibly the original "ads-el-ma," — becoming in English *water-lentil* (Prior), in Germany "wasserlinse" (Grieb), in France "lentille sauvage" (Nugent): L. gibba was observed by Delile around Rosetta in Egypt; known to grow also in Northern Asia. Westward, is described by Micheli xvi. pl. 11, and Wolf p. 26; and is known to grow in Switzerland and throughout middle Europe as far as Ireland and Sweden (Pers., and Wats.). Farther West, was observed by Webb phyt. iii. p. 297 on the Canary Islands; and is known to grow in North America from Western New York to Cumberland House in Lat. 54° (Pursh, and A. Gray), but according to A. Gray has not been found flowering. (See L. minor).

In or about this year (Acts x. 1 to 45, and xv. 7), at Cæsarea, in the presence of Peter, the Roman centurion Cornelius, and others, the gift of tongues and the gospel extended to the Gentiles.

38 A. D. (= 39 — "a whole year" of Acts xi. 26), the disciples first "scattered abroad" preached the word to "the Jews only;" but some "of Cyprus and Cyrene" coming to Antioch, conversions took place among the Greeks; and Barnabas sent from Jerusalem, brought "Saul" or Paul from Tarsus to Antioch.

"39 A. D." (Jos., and Clint.), Herod Antipas tetrarch of Galilee, deposed and banished by the emperor Caligula; who appointed Herod Agrippa ruler over Galilee.

"The same year" (Jos., and Clint.), arrival in Rome of "five ambassadors" from Alexandria; Apion the grammarian and Philon Judaeus being among the number.

Linaria vulgaris of Europe and the adjoining portion of Asia. Called in Britain *toad-flax* (Prior), in France "linaire" (Nugent), in Germany "lynkraut" or "flachskraut" or "harnkraut" (Trag.), in Egypt "æisj el mælik" (Forsk.); and the "cynocephaliam herbam" of Apion the grammarian, used in Egypt against all poisoning and called "osirites" — (Plin. xxx. 6), is referred here by Tragus: the "cynocephalium" is identified by Apuleius Barbarus 86 with the "antirrhinon" or "ametiston" or "pithecion" or "canis cerebrum" or "osireos taphen": L. vulgaris is figured in the Ortus Sanitatis 23 and 261, and is described by Braunsweig, Tragus i. pl. 117, Fuchsius 585, and Dodoens; is termed "linaria vulgaris lutea flore majore" by Tournefort inst. 170; and is known to occur in waste ground from Denmark throughout middle Europe (fl. Dan. pl. 982, and Pers.); was observed by Sibthorp in the Peloponnesus; by Forskal p. liii, in a single garden in Egypt. By European colonists, was carried before 1670 (Jossel.) to Northeast America; where it has become frequent in waste and cultivated ground, and in Pennsylvania is called *Ransted weed* (Shecutt, and A. Dec.). In London according to Burnett occasionally boiled in milk to destroy flies (Lindl.).

"The same year" (Alst., prior at least to the reign of Claudius, Acts xi. 26 to 28), the disciples first called "Christians" at Antioch. Eusebius places the founding "by Peter" of the Church of Antioch, in the "third" year of Caius, and the "two hundred and fourth" Olympiad.

"40 A. D." (Sueton., Dio, and Clint.), the emperor Caligula at Lugdunum (Lyons in France) on his expedition to the ocean. After his return to Rome, interview with Herod Agrippa interceding in behalf of the Jews.

"In this year" (Burm. hist., and Mason 41), Ramunsalingda succeeded by his younger brother

Bæringda as Burmese king. — Who went to Tekkatho (Taxila on the Upper Indus), where he became skilled in the knowledge of the Vedas. He reigned "twelve" years.

"41, Jan. 24th" (Sueton., Clem. Alex., and Clint.), Caius Caligula succeeded by Claudius, fourth Roman emperor. The hieroglyphic ovals of Claudius occur on temples at Dendera, Esneh, Edfu, and Philæ.

The celebrated *Series of Egyptian coins*, of so much service to history and chronology, begins with the reign of Claudius. — Nearly every year of the next two hundred and fifty-eight is accounted for; on coins inscribed with the year of the reigning emperor, often too in a variety of patterns issued.

"Before the close of the year" (Jos., and Clint.), Samaria and Judæa added to the district governed by Herod Agrippa.

42 A. D. ("in the first year of Claudius, two thousand and fifty seventh ann. Abr., and two hundred and fifth Olymp." of Euseb.), Christianity introduced into Alexandria and Egypt by the evangelist Mark, "Peter's interpreter."

"In the second year of Claudius" (according to Hieronymus sc. ecc.), Peter proceeded to Rome. As Rome and "Babylon" are considered identical by some writers, it may here be remarked: that the "Babylon" of 1 Peter v. 13 is clearly the military station — bearing the name to the present day, and situated not far from Cairo. While in Egypt, I heard of "remarkable Christian relics" discovered in the vicinity, but did not see them.

"43 A. D." (Sueton., Dio, and Clint.), expedition of Claudius into Britain, and conquest of "Vectem" (Isle of Wight); Vespasian being one of the Roman commanders. Claudius was accompanied by his physician, Scribonius Largus (Sm. b. d.).

Cerastium vulgatum of Europe and Northern Asia. Called in Britain *mouse-ear chickweed* (Prior), and the AVRICVLAE·MVRINAE prescribed against calculus by Scribonius Largus 153, — and identified in Syn. Diosc. ii. 214 with the "lavōthōlavath" of the Numidians, may be compared: the "myosoton" is described by Pliny xxvii. 8 as beginning to grow in midwinter and drying up in midsummer: C. vulgare is termed "auricula muris" by Dodoens (C. Bauhin, and Willd.), "myosotis arvensis hirsuta parvo flore" by Tournefort inst. 245; and is known to grow in North Africa and throughout middle and Northern Europe as far as Sweden and Iceland (Vaill. par. pl. 30 f. 3, Curt. lond. ii. pl. 35, Hook., and Wats.). Eastward, the "muŏs ŏta" is so named according to Dioscorides from its leaves resembling a mouse's ear, is besides called "alsinē" from flourishing in groves and shaded situations; and in the added Synonyms is further identified with the "muŏtōn" or "muŏrtōlōn" or "murtōsplēnōn" or "anthulliōn:" C. vulgatum was observed by Sibthorp, and Chaubard, in the Peloponnesus and on mount Parnassus; is known to grow also throughout Siberia (Ledeb., and A. Dec.); and was observed by Kaempfer, and Thunberg, in Japan, frequent and called "fan ru" or "fagu iera" or "fakobi." By European colonists, was carried to Northeast America, where it continues a weed in waste and cultivated ground and has become naturalized; also to South America (Wats.).

Cerastium viscosum, regarded as distinct, — is termed "alsine glutinosa" by Gesner (C. Bauhin, and Willd.), "myosotis hirsuta altera viscosa" by Tournefort inst. 245; is described also by Dodoens; and is known to grow in North Africa and throughout middle and Northern Europe as far as Lapland and Iceland (Vaill. par. pl. 30 f. 1, Curt. lond. ii. pl. 34, Hook., and Wats.). Eastward, was observed by Sibthorp from Constantinople to the Peloponnesus and Cyprus; is known to occur in Abyssinia (A. Rich., and A. Dec.); and was observed by Thunberg along roadsides in Japan, frequent and also called "fakobi." By European colonists, was carried to Northeast America, where it is known to occur in Greenland and Iceland (Wats.), around trading posts in the Interior (Hook.), and according to A. Gray in "grassy fields and copses" in our middle States "naturalized;" to Austral Africa (Drège and E. Mey.); and to Southwest Australia (Bartl.).

Trifolium squarrosum of the West Mediterranean countries. A species of *clover:* the TRI FOLIVM·ACVTVM or OXYTRIPHYLLON growing mostly on Sicily and seen in Italy by Scribonius Largus only at Luna harbour when on his way to Britain,* two feet high, bearing a general resemblance to "prātense trifolium" but emitting "odorem gravem," — may be compared: T. squarrosum is described by Morison ii. 2; is termed "t. dipsaceum" by Thuillier 302; and is known to grow in France and Spain, the lowest calyx-tooth very long and reflexed (Pers.).

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* *Impatiens noli-tangere* of Northern Europe. Called in Britain *touch-me-not* or *balsam* (Prior): the NASTVRTII·ANIMATI·SEMINIS of Scribonius Largus 95 — may be compared; also the "melago" identified by Galfridus pr. pm. with the "balsamus" or "bawme:" the "persicariæ siliquosæ" whose fruit on the slightest contact leaps apart, is mentioned in 1635 by Cornuti p. 5: I. noli-tangere is described by Linnæus; is termed "i. palustris" by Persoon; and is known to grow in woods and wet places in France and as far as Denmark (fl. Dan. pl. 588, and Lam. fl. fr.).

Prunus (*Armeniaca*) *Sibirica* of the mountains of Siberia. The SARKOKOLLAE of Scribonius Largus 22, — resembling according to Dioscorides thin frankincense, somewhat fulvous, bitterish, agglutinating wounds and the exudation of a tree growing in Persia, according to Pliny xiii. 20 and xxiv. 78 the product of a tree said by some to be spiny, mentioned also by Galen, and Paulus Aegineta, is admitted to be *sarcocol*; a drug found by Sprengel to agree in all respects with the description by Dioscorides. Among the Arabs, sarcocol or "anzarut" is mentioned by Rhazes, by Mesue f. 79 as the product of a spiny shrub with knotty branches, and was observed by Forskal mat. med. employed medicinally in Egypt. A figure of the tree sent by a Persian merchant to Andr. Marini has the leaves ovate-oblong serrate or dentate (Spreng.); and A. Sibirica observed by Ammann pl. 20, and Pallas i. pl. 8, on the mountains of Siberia, may be compared. According however to E. A. Sophocles lex., sarcocol is the gum of the peach tree.

Lophotaenia aurea of the East Mediterranean countries. Called in Greece "maithanōn tōu vounou" (Fraas): the SPONDYLION prescribed by Scribonius Largus ii. 5, — known to Pliny xii. 58 and xxiv. 16 chiefly as a drug, but according to Syn. Diosc. called "ĕrva rōutinalis." (rotularis Spreng.) by the Romans, may be compared. Eastward, the "sphōnthuliōn" is described by Dioscorides as growing in wet ground, having a "raphanŏ"-like root, stems a cubit or more high, leaves between those of "platanŏ" and "panąkōs," seed in the umbels "sĕsĕlĕi"-like but broader and strong-scented, "ŏhra ē lĕuka" milky or yellowish flowers yielding a juice which is collected and preserved; is mentioned also by Asclepiades, and Galen; and is identified in Syn. Diosc. with the "sphŏnthulis" or "araggēn" or "phalaggiōn" or "astĕriōn" or "nisuris" or "hōrōthanōn" or "ōinanthē" of the Greeks, "ōsiris" of the prophets, and "apsapher" of the Egyptians: L. aurea is described by Hoffmann (Steud., and Chaubard); by Sibthorp pl. 282 as having the radical leaves "rotundātis;" and was observed by him, and Fraas, on Parnassus and the mountains of Attica and the Peloponnesus; is known to grow also along the Taurian mountains (Bieb.).

Hyoscyamus aureus of the East Mediterranean countries. Called in Greece "mĕlōhōrtarō" (Forsk.): the ALTERCVM identified with the YOCKYAMON of the Greeks and its seeds and root prescribed by Scribonius Largus 52 to 181, — "altercum" of the Arabs according to Pliny xxv. 17, including among medicinal kinds one with reddish seeds like "irionis," may be compared: H. aureus is known to grow in Italy (Lenz), and was observed by Forskal on Malta. Farther East, the kind of "uōskuamōs" having according to Dioscorides its flowers "mĕlinōĕithē" yellow, and seeds "upōxanthōn" tawny like those of "ĕrusimōn," is referred here by writers: H. aureus is termed "h. creticus luteus major et minor" by Tournefort inst. 118; and was observed by Forskal, and Sibthorp, frequent in Greece along walls and among rubbish as far as Tenedos.

Plantago lanceolata of Europe and Northern Asia. Called in Britain *ribwort* or *ribgrass* (Prior), in Italy "agnoglosso" or "lanciola" or "piantaccine longa" (Lenz), in Greece "pĕntanĕurōn" (Sibth.), in which we recognize the "ribbe" of the Anglo-Saxon transl. Apul. 98, and the NERVALEM identified with the ΠΟΛΥΝΕΥΡΟΝ by Scribonius Largus 12: — P. lanceolata is termed "plantago minor" in Ortus sanitatis pl. 333, "p. angustifolia major" by Tournefort inst. 127; is described also by Brunfels (Spreng. præf.); and is known to grow in Italy and throughout middle and Northern Europe as far as Sweden and Iceland (Pers., Hook., and Wats.). Eastward, the "pōlunĕurōn" is mentioned in Syn. Diosc. ii. 152, also by Oribasius 11: P. lanceolata was observed by Forskal, Sibthorp, and Chaubard, abounding throughout Greece and the Greek islands as far as Smyrna and Constantinople; is known to grow also along the Taurian mountains and in the neighbouring portion of Siberia and as far as Nepaul (Bieb., and Wats.). Farther South, was observed by Forskal around Cairo and among the mountains of Yemen; is known to occur also in Abyssinia (A. Rich., and A. Dec.). By European colonists, was carried to Northeast America, where it continues a weed in waste ground throughout our Atlantic States (A. Gray, Chapm., and myself), and has become naturalized. The plant according to Lindley "has rather bitter astringent leaves and roots, and has been used with some other species as an expectorant and vulnerary."

Aspidium aculeatum of Northern climates. The FILICIS-MACEDONICAE prescribed as vermifuge by Scribonius Largus 140, — and distinguished by Pliny xxvii. 55 as "optimum" best in quality, may be compared: A. aculeatum is termed "lonchitis aculeata latioribus pinnulis" by Tournefort inst. 538; and is known to grow throughout middle and Northern Europe (Engl. bot. pl. 1562). Eastward, was observed by Sibthorp around Constantinople and on Athos and other mountains of Greece. Westward from Europe, is known to grow in North America, in "deep woods" in Northern New England and New York (A. Gray).

About this time (= 29 + "nearly 15 years," Burton in Kitt. cycl. bibl.), leaving Antioch on his First missionary tour, Paul sailed from Seleucia to Cyprus in company with Barnabas; and thence to Pamphylia on the Southern coast of Asia Minor. After visiting the neighbouring countries of Pisidia and Lycaonia, they returned by sea to Antioch; where they "abode long time" (Acts xiv. 11 to 28).

"44 A. D." (Sueton., Dio, and Clint.), return of the emperor Claudius from Britain to Rome.

"In this year" (Abyss. chron., and C. Mull. geogr. min. p. xcvii), Za-Les succeeded by Za-Maseuh, now king of Abyssinia. — He reigned "six" years.

"47 A. D." (Tacit., Dio, and Clint.), the Roman general Vespasian in Britain; Corbulo having charge in Gaul and Germany.

"The same year" (= 33 + "14 years" of Galat. ii. 1 to 14, compare Acts xv. 4 and xii. 25), Third visit of Paul to Jerusalem; where "James, Cephas, and John" gave to him "and Barnabas the right hands of fellowship;" to go unto the uncircumcised. After returning to Antioch, and openly rebuking Peter for concealing the fact that "he did eat with the Gentiles," Paul set out on his Second missionary tour; and proceeded with Silas through Cilicia and Asia Minor to Macedonia, Athens, and Corinth; where "he continued a year and six months" (Acts xv. 41 to xviii. 11).

48, in "the days of unleavened bread." (Acts xii. 3), "James the brother of John" put to death, and Peter imprisoned, by Herod Agrippa. Who, before the close of "this year" (Jos., and Clint., compare Acts xii. 23), was succeeded by his nephew Agrippa the younger as governor of Judæa.

49 A. D. = "9th year of Claudius," in a Greek inscription at the Great Oasis — discovered by Hoskins.

This or another Greek inscription of the same date (see Franz) presenting the following form of the letter Λ.

"The same year" (= 52 — "3 years" of Acts xx. 31), arrival of Paul in Ephesus, on his Third missionary tour.

Under Claudius, a freedman of Annius Plocamus sailing along the Arabian coast driven by a storm to the island of Taprobane; where the sun rose on the left, and the soil was carefully cultivated — (Plin. vi. 24).

Jambosa Malaccensis of the Moluccas. The *Malay apple* is called in Tamil "jambu-malacca," in Malayan "jambu-kling" or "jambu-merah" (J. F. Wats.), in Burmah "tha-byu-tha-byæ" (Mason), in Tagalo "copcop" (Blanco); and the "pomis" found by the freedman abundant on Taprobane — (Plin.) may be compared: "red jambu flowers" and "jambu fruit" are mentioned in Karen dirges (Mason p. 83): J. Malaccensis has been long known in Hindustan; was observed by Rheede i. pl. 18 in Malabar; by Graham, "common in gardens" around Bombay; by W. Jones, Roxburgh, and Wight, under cultivation in other parts of Hindustan; by Mason v. 450, "exotic" in Burmah, thriving "luxuriantly at Mergui." Farther East, the "jambos with dark red fruit" is mentioned by Nieuhoff; J. Malaccensis was not seen wild on Java by Blume; was observed on Sumatra by Marsden; by myself, under cultivation only throughout the Malayan archipelago; by Blanco, on the Philippines, and termed by him "eugenia montana;" by Rumphius i. 195, spontaneously growing on the Moluccas (A. Dec.); by myself, a large tree cultivated and naturalized on the Feejeean, Samoan, Taheitian, and Hawaiian islands; by Foster, on the Hawaiian, and Marquesas islands. By Arab colonists, was carried to Zanzibar, observed by myself on the Imaum's plantation: by European colonists, was carried to the Mauritius Islands (Boj.). From transported specimens, is described in 1640 by Parkinson. (See Hawaiian Islands.).

"The same year = beginning of the Twelfth manwantara" among the Hindus — (Graha Munjari tables, and Bentl.).

"Not earlier than the 1st century A. D." (Dallet p. xii.), commencement of Corean history. Corea at this time divided into three States or kingdoms, Kao-li in the North and Northeast, Pet-si in the West, and Sin-la in the Southeast, civil wars and contests between Kao-li and China on the one hand, and between Sin-la and Japan on the other, — continuing more than ten centuries. Sin-la in general maintaining predominance, so that the period in question is sometimes termed the "Dynasty of Sin-la."

"50 A. D. (= 9th year of the war in Britain," Tacit., and Clint.), after the defeat of the "Iceni" (Exeter?), Caractacus leader of the "Silures" (Salisbury?) defeated and taken prisoner by the Roman general Osorius.

Reseda phyteuma of the Mediterranean countries. Called in Greece "ōhēstra" or "ōhrēstra" (Fraas): the "phutĕuma" with a long slender superficial root suitable according to some writers for love-charms, — further described by Dioscorides as having leaves like "strōuthiŏ" but smaller, and numerous perforated fruit, is referred here by Lobel adv. p. 320, and others: R. phyteuma was observed by Sibthorp, and Fraas, in mountain-ravines from the Peloponnesus to mount Athos, its leaves cooked and eaten. Westward, the "phyteuma" used for love-charms only, is mentioned by Pliny xxvii. 99; R. phyteuma is described by Columna ecphr. i. p. 276; is termed "r. minor vulgaris" by Tournefort inst. 423; and is known to grow in Austria and Southern France (Jacq. austr. pl. 132, Pers., and Spreng.).

"In this year" (Abyss. chron., and C. Mull. geogr. min. p. xcvii), Za-Maseuh succeeded by Za-Sutuwa, now king of Abyssinia. — He reigned "nine" years.

"In or about this year" (peripl. Eryth., and Major voy. ind.), Hippalus, commander of a vessel

in the Indian trade, proceeding from the Red Sea boldly out into the ocean discovered the regular course of the prevailing winds, and first made known the *monsoons* to the Greeks.

"In or about this year" (Samuel Aniens.), the apostle Bartholomew put to death at Arebonum in Armenia.

"In or about this year" (Meylan, and Jap. mann. 351), a "Braminical sect" "introduced into Japan, the doctrines of which were, the redemption of the world by the son of a virgin, who died to expiate the sins of men, thus insuring to them a joyful resurrection; and a trinity of immaterial persons, constituting one eternal, omnipresent, omnipotent God, the Creator of all."

"51 A. D." (Sueton. Tacit. xii. 43, and Clint., see also Acts xi. 28), severe and wide-spread famine.

"In the eleventh year of Claudius" (Euseb., appointed "before the twelfth," Jos. a. J. xx. 7. 1, J. R. Beard in Kitt. cycl. bibl.), Felix entering upon his duties as procurator of Judea.

"52 A. D." (Acts xxiv. 10, Sueton., Tacit. xii. 53, and Clint.), Paul pleading before Felix, and from this time held prisoner.

"53 A. D." (Sm. b. d.), marriage of Octavia daughter of Claudius, with Nero son of Claudius' fourth wife Agrippina.

Amanita muscaria of Europe. The "beletus medicatus" with which Claudius was poisoned by Agrippina — (Plin. xxii. 46, Mart. i. 21, Juv. v. 147, and Sueton. xliv. 33), is referred here by Fraas, and others: A. muscaria is described by Linnæus; and is known to grow in Italy, where it is called "tignoso" or "uovolaccio" or "uovolo rosso" or "uovolo malefico" (Lenz).

"54, Oct. 12th" (Tacit., and Clint.), Claudius succeeded by Nero, fifth Roman emperor. The hieroglyphic ovals of Nero, occur on the temple at Dendera.

Andromachus, physician to Nero and author of a theriac or compound medicine long in repute, the first person on whom the title "archiater" is known to have been conferred (Sm. b. d.).

Galium verum of Europe and the adjoining portion of Asia. Called in Anglo-Saxon "cysgerūn," in current English *cheese-rennet* (Prior), in French "caille-lait," in Danish "melklobe" (Spreng.), in Germany "labkraut" (Grieb), in Italy "gallio giallo" or "gallio vero" (Lenz); in which we recognize the ΓΑΛΛΟΥ of an antidote of Andromachus — (Gal. antid. ii. 1), or "galiōn" or "gallĕriōn" or "galatiōn" named according to Dioscorides from coagulating milk, closely resembling "aparinē" in branch and leaves but erect with numerous slender sweet-scented yellow flowers on its summit: G. verum was observed by Sibthorp, Chaubard, and Fraas, from Samos and Aetolia to the Peloponnesus; is known to grow also along the Taurian mountains and in Siberia (Bieb., and Wats.). Westward, is described by Lobel pl. 804; is termed "g. luteum" by Tournefort inst. 115; and is known to grow in Italy and throughout middle and Northern Europe as far as Iceland and nearly to Lapland (Hook., Wahl., and Wats.). By European colonists, was carried to Northeast America, where it has become naturalized in a few localities around Boston.

"The same year" (= 52 + "2 years" of Acts xxiv. 27, see also Jos. a. J. xx. 8. 9), by Nero, Felix removed and Porcius Festus appointed procurator of Judæa. On the arrival of Festus, Paul brought before him and Agrippa the younger; and appealing "unto Caesar," sent to Rome.

55 A. D. (Acts xxvii. and xxviii.), arrival of Paul in Rome, after shipwreck and wintering on the island of Melita.

"56 A. D. = 1st year of the 'kian-wou-tchoung-youan' of Kouang-wou-ti" — (Chinese chron. table).

"In the reign of Kouang-wou-ti" (Topog. cant., and Pauth. 472), the barbarians brought *horses*: *walls* of stone built by Ma-yuan, to prevent the irruption of foreigners from the South and West: the Western nations about this time changed their name: and henceforward, the people of Tien-tchou or India, Thsin or Roman Empire, and other nations, came by sea and held much intercourse with Canton.

57 A. D. (= 55 + "2 whole years." of Paul's residence "in his own hired house" in Rome), end of Luke's record, called the "Acts of the apostles."

An inscription relating to Balbillus, prefect of Egypt under Nero, has been found near the Great Sphinx at Gizeh.

A. *demotic papyrus* dated as late as the reign of Nero — is mentioned by De Rougé (monit. univers. Mars 1851).

"58 A. D. = 'young-ping,' 1st year of Hiao-ming-ti" or Ming-ti, of the Han or Seventh dynasty — (Chinese chron. table, and Pauth.).

"The same year" (Sen. ep. 91, and Clint.), conflagration at "Lugdunensis colonia" (Lyons), in the "one hundredth year" after its foundation. L. Seneca speaks of the rhetor Liberalis as saddened by the news.

The BLATTARIA BALNEA mentioned by Seneca, — are clearly baths infested with the small cockroach, *Blatta Germanica*. By European colonists, the insect was unintentionally carried to Northeast America, where it has become frequent in damp places in dwellings.

"59, April 30th," in the consulship of "Vipsanius and Fonteius" (Plin. ii. 70, and Clint.), *eclipse of the sun*. Observed also in Armenia by the Roman general Corbulo. Before the close of the year, Agrippina, mother of Nero, put to death.

"In this year" (Abyss. chron., and C. Mull. geogr. min. p. xcvii), Za-Sutuwa succeeded by Za-Adgaba, now king of Abyssinia. — He reigned "ten y. six months."

As early probably as this year, Apollonius of Tyana, after "twenty months" in Persia, entering Hindustan. He remained "four months" beyond the Indus, and returning by water — up the Persian Gulf and the river Euphrates as far as Babylon, reached Athens in the "following year" (Philostr., and Clint.). He afterwards visited Rome, Spain, and the cataracts of the Nile; everywhere accompanied by Damis, an Assyrian whose narrative is followed by Philostratus.

The ΤΑΝΤΑΛΙΟΝ: ΥΔΩΡ in which Apollonius was initiated by Brahmans, — and the water in a cave containing the statue of a human being male on one side and female on the other (described to Bardesanes by Indian envoys on their way to Antoninus) are identified by Porphyrius de styx. I remarked such a statue on the sculptured walls of the *Elephanta cave-temple*, which contains a shallow artificial basin of water, and was informed, that Guzerati bramins continue to make pilgrimages, arriving in "April and May."

Garcinia purpurea of Western Hindustan. A very elegant Calophylloid tree called in the environs of Bombay "kokum" (Graham); and from early times, its fruit eaten and oil obtained from the seeds: the tree seen by Apollonius in India bearing fruit like a large pomegranate, the apple within the husk of the colour of a fine hyacinth and the very best flavoured fruit they ever ate — (Priaulx in roy. asiat. soc. xvii), may be compared: G. purpurea is described by Rumphius iii. pl. 32; was observed by Graham in "ravines at Kandalla" and "pretty common in some parts of the Concan," also "in gardens Bombay," the acid juice of the fruit used by workers in iron as a mordant; was observed by Roxburgh, and Wight, in other parts of Hindustan, and is called "brindao" by the Portuguese at Goa, where *kokum oil* is used for adulterating ghee or butter (Graham, and Drur.).

"60 A. D." (L. Sen. nat. qu. vii. 21, Tacit., and Clint. iv. p. 45) a *comet*. Continuing in sight "six months," and differing according to L. Seneca from any seen by him during forty-six years, and from the one recorded to have made its appearance after the death of Caesar.

"61 A. D." (Sm. b. d.), at Rome, C. Petronius Turpilianus and C. Caesonius Paetus consuls. "T. Petronius consularis" — who in "A. D. 66" anticipating sentence of death broke a costly *murrhine vase* in order to disappoint Nero (Plin. xxxvii. 7) is termed "C. Petronius" by Tacitus xvi. 18; and the *satirical poem* attributed to him — is mentioned as the work of "Petronius" or "Arbiter" by Terentianus Maurus, and Sidonius Apollinaris xxiii. 155.

Tulipa Clusiana of the East Mediterranean countries. The SATYRION of Petronius, furnishing a potion, — and according to Dioscorides termed "triphullon" from usually having three leaves upon the ground, its stem "psilon" slender, a cubit high, flower "krinoeidēs" lily-like and white, root bulbous as a "mēlon," agreeable to the taste, and infused in wine, is referred here conjecturally by Sprengel: the account of the "graeci satyrion" by Pliny xxvi. 63 seems in part taken from Dioscorides: T. Clusiana is termed "t. persica praecox" by Clusius posth. 18, "t. praecox angustifolia" by Tournefort inst. 375; was observed by Sibthorp in Italy, near Florence, flowering in March; but has not been found in Greece.

Satyrium hircinum of Western Europe. Called in Italy "satirio" or "satirione" (Targ.), and probably the "satyrion" of Petronius: — S. hircinum is known to grow in calcareous soil in France and Austria (Jacq. austr. pl. 337, and Pers.); was observed by Haller pl. 25 in Switzerland; by Scopoli, in Carniolia.

"The same year" (Tacit., Blair, and Clint.), the Romans defeated in Britain by queen Boudicea. Shortly afterwards, her army defeated in turn by the Romans under Suetonius Paulinus.

"62 A. D." (W. W. in Kitt. cycl. bibl.), "James the Lord's brother," after holding for "thirty years" (Hieronym.) the chief direction among the apostles, and therefore called "first bishop of Jerusalem," put to death by the Jews (Jos. a. J. xx. 9. 1).

"In this year" (Burm. hist., and Mason 41), Thaka succeeded by his son Thathee, now Burmese king. He had no regard for Budhism.

"62 to 63 A. D. = 8th year of Nero" (Euseb. h. e. ii. 24, Hieronym., and Clint.), Annianus or Annaniah left by Mark to watch over the Christians in Egypt: in other words, ordained first bishop of Alexandria. — His successors in the office are enumerated in an uninterrupted series by Eusebius.

Clematis flammula of the Mediterranean countries. A vine called in Greece "alōgaki glukugē" or "hēlithrōnia" (Sibth.), in Egyptian "phulakōuōn" (Syn. Diosc.); and the ΕΤΕΡΑ: ΚΛΗΜΑΤΙΣ of Dioscorides iv. 7 (the description as repeated in iv. 179 — belonging to a different plant, according to Galen simpl. fac. vii. p. 31), may be compared: C. flammula was observed by Sibthorp, and Chaubard, in the Peloponnesus. Westward, the "ětěra klēmatis" or "ĕpigētis" is identified in Syn. Diosc. with the "amvōuxōu" of the Romans: C. flammula is described by Matthaeus Plātearius f.

236, Crescenzio, Matthioli 680 (Spreng.), and Dodoens pempt. pl. 404; is termed "c. sive flammula repens" by Tournefort inst. 293; was observed by Tenore pl. 48 near Naples, by Forskal near Marseilles; and is known to grow in hedges and thickets in Barbary and as far as Switzerland (Scop., All., Pers., Steud., and Lindl.). Is enumerated among medicinal plants by Lindley, the "leaves used as vesicatories." (See C. vitalba.)

Ranunculus parviflorus of the Mediterranean countries? The ΒΑΤΡΑΧΙΟΝ: ΤΡΙΤΟΝ of Dioscorides, diminutive and strong-scented with golden flowers, — may be compared: R. parviflorus was observed by Sibthorp, and Chaubard, in the cultivated ground of the Peloponnesus. Westward, the account of the "ranunculum tertium" by Pliny xxv. 109 seems taken from Dioscorides: but R. parviflorus is termed "r. arvensis annuus hirsutus flore omnium minimo luteo" by Tournefort inst. 290, is known to occur in various parts of Southern Europe, and as far even as Britain (Pers., Engl. bot. pl. 120, and Dec.). By European colonists, was carried to Northeast America, where it continues in "waste places" from Norfolk in Virginia to Georgia (Ell., Hook., A. Gray, and Chapm.).

Ranunculus lanuginosus of Europe and the adjoining portion of Asia. Called in Greece "spōurthōkūla" (Sibth.) or "spōurthakula" or "sphōurthakla" (Fraas): and the ΒΑΤΡΑΧΙΟΝ: ΕΤΕΡΟΝ also called ΣΕΛΙΝΟΝ: ΑΓΡΙΟΝ described by Dioscorides as taller and more woolly, with leaves more divided, and growing mostly on Sardinia — may be compared: R. lanuginosus was observed by Sibthorp, Chaubard, and Fraas, in wet springy soil from the Peloponnesus to Northern Greece. Westward, is termed "r. montanus lanuginosus foliis ranunculi pratensis repentis" by Tournefort inst. 291; was observed by Moris i. p. 3 abounding on Sardinia (Spreng.), by Tenore neap. pl. 147 in Italy; and is known to grow throughout middle Europe as far as Denmark (fl. Dan. pl. 397, Thuill., and Pers.).

Aconitum lycoctonum of middle and Northern Europe. Called in Britain *wolfsbane* (Prior), in which we recognize the ΛΥΚΟΚΤΟΝΟΝ identified by Dioscorides with the ΚΥΝΟΚΤΟΝΟΝ or ΑΚΟΝΙΤΟΝ: ΕΤΕΡΟΝ a cubit high, with platanus-like leaves but more divided and much smaller, growing mostly on the mountains of Italy, and the root placed in meat to destroy wolves: — in the added Synonyms, one of three kinds of "akōnitōn" is mentioned as employed in hunting, and the "akōnitōn čtĕrōn" or "kuamōn lĕukōn" is identified with the "kōlōmĕstrōum" of the Romans: A. lycoctonum is described by Gerarde p. 822, and Clusius hist. ii. pl. 94; and is known to grow in mountainous situations in Italy, Hungary, and throughout middle Europe as far as Sweden and Lapland (Jacq. austr. pl. 380, Pers., Lindl.). The roots according to Lindley "have been used to destroy wild beasts; this is, however, reputed less venomous than many other species."

Thalictrum flavum of Europe and the adjoining portion of Asia. Called in Britain *meadow-rue* or *fen-rue*, or by old writers "pigamon" or "peganon" (Prior), in Greece "mōulpia" (Fraas), in Italy "talittro" (Targ.); and the ΘΑΛΙΚΤΡΟΝ growing according to Dioscorides chiefly in the open country, its stem as stout as that of ΠΗΓΑΝΟΥ, and on it coriander-like leaves, — is referred here by Fraas: the "thaliēktrōn" is mentioned by Galen, and the "thaliētrōn" by Paulus Aegineta (Spreng.): T. flavum was observed by Sibthorp, and Fraas, from the Peloponnesus to Constantinople. Westward, the "thalitruum" is described by Pliny xxvii. 113 as growing everywhere and having the stem "papaveris," but the remainder of his account seems chiefly taken from Dioscorides; T. flavum is termed "th. majus siliqua angulosa aut striata" by Tournefort inst. 270; and is known to grow in Italy and throughout middle and Northern Europe as far as Lapland (Linn. fl. lap., fl. Dan. pl. 939, Pers., and Lenz).

Thalictrum minus of Europe and Northern Asia. Possibly included in the account of Dioscorides, — observed by Sibthorp in the Peloponnesus, but according to Fraas is confined in Greece to subalpine summits. Westward, is described by Tournefort inst. 271; is known to grow in Italy and throughout middle Europe as far as Denmark (fl. Dan. pl. 732, Spreng., A. Dec., and Lenz).

Delphinium tenuissimum of the East Mediterranean countries. The ΔΕΛΦΙΝΙΟΝ: ΕΤΕΡΟΝ of Dioscorides, resembling the first kind but with much more slender leaves and branches, and less potent medicinal effects, — is referred here by Sprengel, and Fraas: D. tenuissimum is described by Sibthorp pl. 505; and was observed by him, and Fraas, on the mountains of Attica and Southern Greece.

Leontice chrysogonum of the East Mediterranean countries. The ΧΡΥΣΟΓΟΝΟΝ having according to Dioscorides oak-like leaves, its flower like coronary ΦΛΟΜΟΣ, and its black ΓΟΓΓΥΛΗ-like root red within and employed against bites of ΜΥΓΑΛΗ the shrew-mouse, — is referred here by writers: L. chrysogonum is termed "leontopetalon foliis costæ simplici innascentibus" by Tournefort cor. 49; was observed by Sibthorp near Abydos on the Hellespont; and by Rauwolf 119, in Syria. Westward, the "hrusōgōnōn" or "hrusōspĕrmōn" or "thaspin" or "ōriganōn" or "arkōphthalmōn" is identified in the Syn. Diosc. with the "arilaria" of the Romans: L. chrysogonum is described by Morison iii. pl. 15; and was received by Barrelier pl. 1113 from Corvinus in Italy.

Hypecoum procumbens of the Mediterranean countries. Called in German "lappenblume"

(Grieb): the ΥΠΗΚΟΟΝ or ΥΠΟΦΕΙΩΝ growing according to Dioscorides in cultivated ground, its leaves ΠΗΓΑΝΩ-like, and medicinal properties those of poppy-juice, — is referred here by writers: H. procumbens was observed by Sibthorp, and Chaubard, in sand along the seashore of the Peloponnesus and Greek islands. Farther South, the "afikoon" is mentioned by Edrisi, and Ebn Baitar; but "H. patens" observed by Forskal p. 122, and Delile, on the Mediterranean border of Egypt, is given as a distinct species. Westward, the account of the "hypecoon" by Pliny xxvii. 68, seems taken from Dioscorides; H. procumbens is described by Dodoens p. 449, and Lobel adv. p. 330; is termed "h. latiore folio" by Tournefort inst. 230; was observed by myself on Malta; and is known to occur in cultivated ground as far as France (Lam. fl. fr., and Pers.).

Corydalis claviculata of Europe and the adjoining portion of Asia. Called in Greece "hionistra" from growing on high mountains near melting snow (Fraas): the ΙΟΟΠΥΡΟΝ called according to Dioscorides ΦΑΣΙΟΛΟΝ from its leaves in like manner terminating in a tendril, its numerous small seeds tasting like those of ΜΕΛΑΝΘΙΩ, — is referred here by Sprengel, and Lindley: C. claviculata was observed by Sibthorp, Chaubard, and Fraas, in the Peloponnesus: and farther South, the "aschkun" of Ebn Baitar is referred here by Sontheimer. Westward, the account of the "isopyron" by Pliny xxvii. 70 seems taken from Dioscorides; C. claviculata is termed "f. claviculis donata foliis latioribus" by Tournefort inst. 422; and is known to grow in moist stony places throughout middle Europe as far as Denmark (fl. Dan. pl. 340, and Pers.).

Capparis? oblongifolia of Nubia and Yemen. Called in Yemen "asal" or "redif" (Forsk.); and the acrid ΚΑΠΠΑΡΙΣ raising pustules in the mouth and ulcerating the gums, brought according to Dioscorides from Libya and the Red Sea, — is referred here conjecturally by Sprengel: C. oblongifolia was observed by Forskal p. 99 and xcviii in Yemen, and is enumerated among "fastiditæ et nocivæ" noxious plants.

Epimedium alpinum of middle Europe. Called in Britain *barren-wort* (Gerarde p. 389, and Prior), in Italy "epimedio" (Targ.), in which we recognize the ΕΠΙΜΗΔΙΟΝ of Dioscorides, — and Pliny xxvii. 53: E. alpinum is figured in manuscript v of the Anglo-Saxon transl. Diosc. 163 (Harley and Cockayne); is described by Anguillara p. 253, Matthioli, Lobel (Spreng.); is termed "epimedium" by Tournefort; and is known to grow wild in shaded situations in Switzerland (Batsch, and Pers.). Eastward, was observed by Sibthorp in woods in the environs of Constantinople.

Lepidium draba of the East Mediterranean countries. Called in Greece "vrŏmōlahanōn" or "marŏulaki:" the ΔΡΑΒΗ described by Dioscorides as herbaceous, a cubit high, with leaves ΛΕΠΙΔΙΟΥ-like but softer and whiter, and a terminal elder-like corymb of white flowers, the plant cooked and eaten especially in Cappadocia, and the seed substituted for pepper in seasoning, — is referred here by writers: the "marŏulla" is prescribed as esculent by Alexander Trallianus verm. 4, and the "marŏullŏspōrŏn" is mentioned by Maximus Planudae: L. draba was observed by Sibthorp, Chaubard, and Fraas, frequent in cultivated ground and along waysides from the Peloponnesus throughout Greece; is known to occur also in Roumelia and as far as Caucasus (Griseb., Bieb., and A. Dec.). Farther South, the "hurf moscharki" of Ebn Baitar is referred here by Sontheimer; and L. draba was observed by Delile along the Mediterranean border of Egypt. Westward, is termed "l. humile incanum arvense" by Tournefort inst. 216; is known to occur in situations more or less wild in Italy and Sardinia (Bertol., and Moris), and as a weed in cultivated ground in Spain and middle Europe as far as Britain (Boissier, Pers., and Engl. bot. 2683).

Biscutella lævigata of the Mediterranean countries. The ΑΛΥΣΣΟΝ growing according to Dioscorides in rough mountainous situations, single-stemmed and roughish with round leaves and fruit like a double shield, the seed within flattish, and the plant employed among other medicinal purposes against canine madness, — in the added Synonyms identified with the "aspithiōn" or "aplŏphullōn" or "akkusētōn" or "athĕsētŏn," may be compared: B. lævigata was observed by Sibthorp on Crete; and farther South, the "aalussun" of Dioscorides, Galen, and Gafeki, is mentioned by Ebn Baitar. Westward, B. lævigata is termed "leucoium alyssoides umbellatum montanum" by Columna ecphr. pl. 285; and is known to grow in Italy, Portugal, and as far as Germany and France (Scop., Brot., and Pers.).

Biscutella apula of the Mediterranean countries. Possibly included with the preceding by Dioscorides: — observed by Sibthorp, and Chaubard, from the Peloponnesus to Rhodes; and farther South, received by Jussieu from Egypt (Del.). Westward, is described by Columna ecphr. pl. 234; is termed "thlaspidium apulum spicatum" by Tournefort inst. 215; and is known to grow in Italy (Pers.).

Bunias erucago of the Mediterranean countries. Called in Greece "agria gŏulia" (Fraas), in which we recognize the ΑΓΡΙΑ: ΓΟΓΓΥΛΗ described by Dioscorides as growing in cultivated ground, a cubit high, having smooth leaves, an involucred pod with an additional inner pod, and mixed in preparations for cleansing the skin: — B. erucago was observed by Sibthorp, Chaubard, and Fraas, in Southern Greece, frequent in cultivated ground. Westward, is termed "erucago segĕtum" by

Tournefort inst. 232; and is known to grow in Austria and Southern France (Jacq. austr. pl. 340, and Pers.).

Aubrietia deltoidea of the East Mediterranean countries. The ΧΗΣΑΜΟΕΙΔΕΣ: ΤΟ: ΜΙΚΡΟΝ described by Dioscorides as growing in rough situations, the stems a span high, with ΚΟΡΩΝΟΠΟΔΙ-like leaves, purplish flowers white in the centre, in which the seed is ΧΗΣΑΜΩ-like bitter and yellow, — identified in the Syn. Diosc. with the "kōrōniōn" or "sēsamōn agriōn," is referred here by Fraas: A. deltoidea is termed "alyssum creticum foliis angulatis flore violaceo" by Tournefort cor. 15; and was observed by Sibthorp, Bory, and Fraas, frequent on the mountains of Crete and Southern Greece.

Sinapis erucoides of the West Mediterranean countries. The ΑΓΡΙΟΝ: ΕΥΖΩΜΟΝ described by Dioscorides ii. 169 and 187 as having leaves like ΕΡΥΣΙΜΟΝ and growing mostly in Spain, where the seeds are used for mustard, — or the "eruca agrestis acrioris virtutis" of Isidorus xvii. 10. 21, may be compared: S. erucoides is described by Barrelier pl. 132, is termed "sisymbrium erucoides" by Desfontaines (Steud.), and is known to grow in vineyards and along roadsides in Italy and Spain (Pers.; see Brassica eruca).

Hypericum quadrangulare of Europe and the adjoining portion of Asia. Called in modern English floras *St. Peter's wort*, from "flowering on his day, the 29th June" (Ainsw., and Prior): the ΑΣΚΥΡΟΝ according to Dioscorides a kind of ΥΠΕΡΙΚΟΥ with slender reddish leaves and yellow flowers, from its fruit of a resinous odour staining the fingers called ΑΝΔΡΟΣΑΙΜΟΝ, — seems referred here by Tournefort: H. quadrangulare was observed by Forskal, and Sibthorp, frequent in the environs of Constantinople. Westward, the account of the "ascyron" by Pliny xxvii. 20 seems chiefly taken from Dioscorides: H. quadrangulare is termed "h. ascyron dictum caule quadrangulo" by Tournefort inst. 255; and is known to grow throughout middle Europe as far as Denmark (fl. Dan. pl. 640, and Pers.).

Althaea cannabina of the Mediterranean countries. Called in Italy "canape selvatico" or "canapa selvatica" (Lenz), in which we recognize the ΚΑΝΝΑΒΙΣ: ΑΓΡΙΑ of Dioscorides, a cubit high with reddish flowers like ΛΥΧΝΙΔΙ, seed and root as in ΑΛΘΑΙΑ, and its bark twisted into cordage: — A. cannabina was observed by Forskal, Sibthorp, and Fraas, along hedges in Greece as far as Constantinople. Farther South, the "kunnab elbarri" of Ebn Baitar is referred here by Sontheimer; and A. cannabina was observed by Forskal not far from Cairo growing in the Desert. Westward, the "kannavis agria" or "uthrastina" is identified in the Syn. Diosc. with the "ferminalis" of the Romans: A. cannabina is described by C. Bauhin pin. p. 316 (Spreng.); is termed "alcea cannabina" by Tournefort inst. 98; and is known to grow in Hungary, Italy, and Southern France (Jacq. austr. pl. 101, and Pers.).

Malva alcea of the Mediterranean countries. The ΑΛΚΕΑ of Dioscorides, a kind of wild mallow having leaves incised after the manner of ΙΕΡΑΣ ΒΟΤΑΝΗΣ, stems with hemp-like bark, a small rose-like flower, and five or six roots nearly a cubit long, — mentioned also by Paulus Aegineta, is referred here by Brunfels i. f. 197, and others (Spreng): M. alcea was observed by Gittard in the Peloponnesus (Chaub.); and is enumerated by Clot-Bey and Figari as long known in Egypt. Westward, the account of the "alcea" by Pliny xxvii. 6 seems taken from Dioscorides; but M. alcea was observed by Tenore in Italy (Bory), and is known to grow in France and Germany (Lam. ill. pl. 582, and Pers.).

Stellaria holostea of Europe and the adjoining portion of Asia. Called in Britain *stitchwort* or *all-bone* (Prior), in Northumberland *dead-man's bones* (G. Johnst.); and the ΟΛΟΣΤΕΟΝ of Dioscorides — is referred here by Ainsworth, and others; S. holostea was observed by Sibthorp around Constantinople and in wooded portions on the Hæmus mountains. Westward, the "holosteum" according to Pliny xxvii. 65 has narrow leaves and is devoid of hardness, having been named on the principle of opposite qualities: S. holostea is figured in manuscript v as the "beowyrt" of the Anglo-Saxon translation of Diosc. 154 (Harley and Cockayne): "stich-wurt" occurs in a manuscript of the thirteenth century as a translation of "valeriane," a plant curing the sting of venomous reptiles (Mayer and Wright p. 140, and Prior): S. holostea is described by Gerarde; is termed "alsine pratensis gramineo folio ampliore" by Tournefort inst. 243; and is known to grow in shaded situations throughout middle Europe as far as Denmark (fl. Dan. pl. 698, Curt. lond. ii. pl. 30, and Pers.).

Polycarpum tetraphyllum of the Mediterranean countries. The ΠΑΡΩΝΥΧΙΑ growing according to Dioscorides in stony places and resembling ΠΕΤΡΩΛΩ but shorter, — is referred here by Anguillara and others: P. tetraphyllum was observed by Forskal, Sibthorp, and Chaubard, frequent along roadsides from the Peloponnesus to Constantinople and the Greek Islands; by Delile, at Alexandria on the Mediterranean border of Egypt. Westward, the "parōnuhia" or "athōkētōs" or "nēuras" or "phruniōn" is identified in the Syn. Diosc. with the "vōuinalis" of the Romans: P. tetraphyllum is described by Anguillara p. 264, and Matthioli p. 734 (Spreng.); is termed "herniaria

alsines folio" by Tournefort inst. 507; and is known to grow in vineyards and cultivated ground in Istria, Italy, Southern France, and Spain (Barrel. pl. 524, and Pers.). By European colonists, was carried to Northeast America, where it has become frequent in the outskirts of Charleston (Chapm.).

Polygala vulgaris of Europe and the adjoining portion of Asia. Called in Britain *milkwort*, or from flowering in time for garlands in certain religious processions, *gang-flower* or *procession-flower* or *rogation-flower* or *cross-flower*, in Anglo-Saxon "gang-dagas" (Prior), in Germany "kreuzblume" (Grieb), in which we recognize the ΠΟΛΥΓΑΛΟΝ, a span high according to Dioscorides and somewhat austere in taste, with lentil-like leaves, and drinking it believed to induce abundant milk: — P. vulgaris was observed by Sibthorp from the Peloponnesus to Constantinople. Westward, the account of the "polygala" by Pliny xxvii. 96 seems taken from Dioscorides: P. vulgaris is described by Gerarde p. 450, and Tournefort inst. 174; was observed by Lenz in North Italy, by Forskal near Marseilles, and is known to grow throughout middle Europe as far as Denmark (fl. Dan. pl. 516, and Pers.). *P. amara*, smaller in all its parts but by some writers regarded as not distinct, is described by Tragus f. 216 (Spreng.), is known to grow from Denmark throughout middle Europe (fl. Dan. pl. 1169, and Pers.) as far as the mountains of Servia (Fraas), but has not been observed in Greece.

Polygala venulosa of the East Mediterranean countries. Bitter in taste with leaves elliptic-lanceolate, and therefore agreeing better with the account of Dioscorides — according to Fraas: described by Sibthorp pl. 669; and observed by him, and Fraas, from the Peloponnesus to Cyprus.

Alhagi pseudalhagi of the East Mediterranean countries and middle Asia. The ΕΤΕΡΑΚΑΚΙΑ growing according to Dioscorides in Cappadocia and Pontus, resembling the Egyptian kind but much smaller and more tender, full of rigid spines, its seeds smaller than lentils and in follicles yoked in twos, threes, and fours, — may be compared: A. pseudalhagi was observed by Sibthorp, Chaubard, and Fraas p. 58, in maritime sand from Attica and Syra to Samos; is known to grow also in Tartary (Lerche, Bieb., and Fischer).

Poterium sanguisorba of the Mediterranean countries and middle Europe. Called in Britain *burnet* (Prior), in Germany "becherblume" (Grieb), in Italy "pimpinella minore" or "salvastrella" or "sorbastrella" (Lenz): the ΑΛΛΗ: CΙΔΗΡΙΤΙC two cubits high according to Dioscorides with leaves on long stalks and fern-like, and from the upper axils long slender shoots terminating in rough spheroidal heads, — is referred here by Columna ecphr. i. p. 124 (Spreng.), and others: P. sanguisorba was observed by Chaubard in the Peloponnesus. Farther South, the "sideritis achar" of Ebn Baitar is referred here by Sontheimer; and P. sanguisorba was observed by Delile on the Mediterranean border of Egypt near Alexandria. Westward, the account by Pliny xxv. 19 of the third "sideritin" corresponds, and seems taken from Dioscorides; P. sanguisorba is termed "pimpinella sanguisorba minor hirsuta vel lævis" by Tournefort inst. 157; was observed by Lenz in Italy; by Forskal, near Marseilles; and is known to grow throughout middle Europe (Curt. lond. ii. pl. 64, and Pers.). By European colonists, was carried prior to 1670 (Josselˌ) to Northeast America, but has since disappeared.

Poterium polygamum of Eastern Europe. Called in Greece "poluphulla," and is the "allē sitheritis" of Dioscorides — according to Fraas: P. polygamum was observed by him (and perhaps by Sibthorp) frequent in Attica and on Parnassus. Farther North, is described by Waldstein and Kitaibel pl. 128 as observed in Hungary (Pers., and Steud.).

Sedum rhodiola of Subarctic climates. Called in Britain *rosewort* or *rose-root* "from the odour and rosy tint of its rootstock," in mediæval Latin "rhodia radix" (Prior); in which we recognize the ΡΟΔΙΑ: ΡΙΖΑ or ΡΟΔΙΔΑ growing according to Dioscorides in Macedonia and yielding when bruised the odour of roses, — and the "herbam rhodiam ex aceto tritam" prescribed by Marcellus I: S. rhodiola is known to grow throughout Siberia as far as Ochotsk and Lat. 69° on the Yenesei (Gmel., and Pall.). Westward, is described by Tragus f. 344 (Spreng.); is known to grow on the mountains of Switzerland, the Pyrenees, and throughout Northern Europe to the extremity of Lapland (Dec., and Sab.). Farther West, is known to grow from Iceland as far as Lat. 65° in Greenland, also in Labrador, Newfoundland (Hook., and Wats.), New Brunswick (A. Gray), and recently found as far as the border of Maine; was observed by E. James on the Rocky mountains (Tor.), by Richardson along the shore of the Arctic Sea, is known to grow also in Alaska (Wats.).

Sedum cepæa of Europe and the adjoining portion of Asia. Called in Greece "krŏmmuthi" (Fraas): the ΚΗΠΑΙΑ resembling ΑΝΔΡΑΧΝΗ according to Dioscorides, its roots slender and with the leaves employed medicinally cooked or taken in wine, — is referred here by writers: S. cepæa was observed by Sibthorp, Grisebach, Chaubard, and Fraas, frequent in Greece, in waste ground; by Thirke, along the Northern shore of Asia Minor. Westward, the "cepaea" resembling "portulacae" is described by Pliny xxvi. 52 as bitter in taste and growing on the sandy shore; S. cepæa is described by Matthioli p. 666, and Clusius hist. ii. p. 68 (Spreng.); is termed "s. cepæa dictum" by Tournefort inst. 263; and is known to grow in Italy and throughout middle Europe as

far as the Northern shore of France and Maestricht in Lat. 50° 45′ (Allion. pl. 65, fl. Bat. i. p. 91, and A. Dec.).

Cotyledon lutea of Europe and the adjoining portion of Asia. The ΕΤΕΡΟΝ: ΚΟΤΥΛΗΔΟΝΟC also called ΚΥΜΒΑΛΙΟΝ according to Dioscorides, having softer leaves like little tongues, astringent, a slender stem and on the top ΥΠΕΡΙΚΩ-like flowers and fruit, its root rather large, and medicinal properties as in ΑΕΙΖΩΟΝ, — is referred here by Sprengel: C. lutea was observed by Sibthorp on rocks in Greece. Westward, the account by Pliny xxv. 101 of the "aliud" cotyledon seems in great part taken from Dioscorides; C. lutea is described by Dodart mem. pl 73; is termed "c. radice tuberosa longa repente" by Tournefort inst. 90; is known to grow in Southern Europe as far as Portugal, and even in England (Lam., Huds., Engl. bot. pl. 1522, and Pers.).

Saxifraga media of the mountains of Southern Europe. Called in Greece "matia," and the "ĕtĕrŏn kŏtulēthōnŏs" of Dioscorides — is referred here by Fraas: S. media was observed by Sibthorp on the summit of the Bithynian Olympus, and by Fraas on the summit of Parnassus. Westward, is known to grow on the Pyrenees (Gouan obs. p. 27, Lapeyr. i. pl. 12, and Pers.).

Myrrhis odorată of Europe and the adjoining portion of Asia. Called in Britain *sweet cicely* (Prior), in France "cerfeuil musqué" (A. Dec.), in Italy "mirride" (Lenz); in which we recognize the CΕCΕΛΙ: ΠΕΛΟΠΟΝΝΗCΙΑΚΟΝ of Dioscorides, growing on mount Ida as well as in the Peloponnesus, its leaves ΚΩΝΕΙΩ-like, stem larger than in the ΜΑCCΑΛΕΩΤΙΚΟΥ kind, with fragrant and more fleshy fruit, and the same medicinal properties: — M. odorata was observed by Sibthorp in shady woods in Asia Minor. Westward, is described by Anguillara, and Dodoens 701 (Spreng.); is termed "myrrhis major vel cicutaria odorata" by Tournefort inst. 315; was observed by Lenz wild in Italy; is known to grow in mountain woods as far as the Scandinavian peninsula (Jacq. austr. app. pl. 37, Pers., and Fries); is cultivated besides and has become naturalized in France and Britain; the taste according to Persoon especially of the fruit which is large "anisatus."

Rubia peregrina of Europe and the adjoining portion of Asia. Called in Greece "agriŏrizari" (Sibth.), and possibly included in the ΕΡΥΘΡΟΔΑΝΟΝ: ΑΓΡΙΑ of Dioscorides: — R. peregrina was observed by Sibthorp from Constantinople to the border of the Peloponnesus. Westward, is described by Morison ix. pl. 21; is termed "r. sylvestris monspessulana major" by Tournefort inst. 114; and is known to grow in Russia, Central France, and as far even as Britain (Engl. bot. pl. 851, and Pers.).

Gnaphalium arenarium of Europe and the adjoining portion of Asia. The ΑΓΗΡΑΤΟΝ named from its lasting flower according to Dioscorides, a shrub two span high and much resembling ΟΡΙΓΑΝΩ, simple, with an umbel of flowers full of golden bubbles and smaller than in ΕΛΙΧΡΥCΟΥ, — may be compared: G. arenarium was observed by Sibthorp on the summit of the Bithynian Olympus. Westward, the account of the "ageraton" by Pliny xxvii. 4 seems taken from Dioscorides: G. arenarium is termed "elichrysum seu stoechas citrina latifolia" by Tournefort inst. 453; is known to grow in sandy soil throughout middle Europe as far as Denmark (fl. Dan. pl. 641), and according to Persoon has occasionally crowded flowers "capitulam efformantibus subrotundis aurantiis."

Achillea ptarmica of Europe and Northern Asia. Called in Britain *sneeze-wort* from its powder causing to sneeze, in medieval Latin "sternutamentoria" (Prior), in Italy "sternutella" or "tarmica" (Lenz), and the ΠΤΑΡΜΙΚΗ of Dioscorides, having many small ΑΒΡΟΤΟΝΩ-like branches with elongate olive-like leaves around and a terminal ΑΝΘΕΜΙΔΟC-like capitulum, pungent in odour and exciting sneezing, — is referred here by Fuchsius, Sprengel, and others: A. ptarmica has not been observed in Greece; but is known to grow farther East in Siberia (Lindl.). Westward, is described by Tragus f. 61 (Spreng.); is termed "ptarmica vulgaris" by Clusius; and is known to grow in North Italy and from the Pyrenees throughout middle Europe as far as Denmark (fl. Dan. pl. 643, Dec. fl. 4. p. 211, Steud., and Lenz). By European colonists, was carried to Northeast America, and has become naturalized sparingly in New England. According to Lindley, "the whole plant is pungent, provoking a flow of saliva; its dried leaves produce sneezing."

Achillea magna of the Mediterranean countries. The ΑΧΙΛΛΕΙΟC of Dioscorides, with leaflets obliquely incised and white or purple flowers, — is referred here by Fraas: A. magna was observed by Sibthorp on Crete; and by Fraas, on continental Greece, for he speaks of finding the flowers sometimes red. Westward, is termed "millefolium maximum umbella alba" by Tournefort inst. 496; and is known to grow in various parts of Southern Europe (Pers., Poir., and Steud.).

Achillea umbellata of the East Mediterranean countries. The CΤΡΑΤΙΩΤΗC: Ο: ΧΙΛΙΟΦΥΛΛΟC of Dioscorides, diminutive, a span or more high, with leaves like the wing of a young bird, and a crowded umbel of small white flowers, — may be compared: the "land stratiŏtēs" is also mentioned by Galen simpl. 7 and 8: A. umbellata is termed "ptarmica humilis foliis laciniatis absinthii æmulis" by Tournefort inst. 496; and was observed by Sibthorp on the mountains of Greece "foliis tomentosis pectinato-pinnatifidis."

Artemisia campestris of Europe and middle Asia. The ΑΡΤΕΜΙCΙΑ with ΛΕΠΤΟΤΕΡΑ

leaves, flowering in summer according to Dioscorides, and its flowers small slender white and strong-scented, — is referred here by writers: A. campestris was observed by Sibthorp, and Chaubard, from the Peloponnesus to Cāria and Mysia in Asia Minor. Westward, is described by Matthioli p. 619 (Spreng); is termed "abrotanum campestre cauliculis albicantibus, etiam cauliculis rubentibus" by Tournefort inst. 459; was observed by Forskal near Marseilles, and is known to grow in arid sunny situations throughout middle Europe (Engl. bot. pl. 338, Pers., and Lenz). Is enumerated by Lindley among the species that "have been used medicinally."

Artemisia spicata of the mountains of Southern Europe. The ΑΡΤΕΜΙCΙΑΝ: ΜΟΝΟΚΛΩΝΟΝ growing in the Interior according to Dioscorides, a small simple-stemmed herb full of wax-coloured flowers, more agreeably scented than the preceding, — is referred here by Sprengel: A. spicata was observed by Sibthorp on the mountains of Greece. Westward, the account by Pliny xxv. 36 of his third "artemisia" as far as growing "in mediterraneis" and "simplici caule," seems taken from Dioscorides; but A. spicata is described by Jacquin austr. app. pl. 34, and is known to grow on the mountains of Switzerland and middle Europe (Allion. pl. 8, Vill., Pers., Whlbg., and Steud.). Is enumerated by Lindley among the species that "have been used medicinally."

Staehelina chamaepeuce of the East Mediterranean countries. Called in Greece "agriōlivanōs" (Fraas): the ΧΑΜΑΙΠΕΥΚΗ an herb entirely green according to Dioscorides, its leaves and branches incurved and flowers rose-like, — is referred here by Alpinus exot. p. 76, and others: Pliny xxiv. 86 describes the "chamaepeuce" as resembling in leaves "larici" larch; and S. chamaepeuce, agreeing except in the lanate under surface of the leaves, is termed "jacea cretica frutescens elichrysi folio flore magno purpurascente" by Tournefort cor. 32; was observed by Sibthorp, Chaubard, and Fraas, frequent from the Peloponnesus to mount Athos, Crete, and Cyprus; is known to grow also in Asia Minor (Spreng.); and farther South, was observed by Viviani in Lybia.

Cirsium stellatum of the Mediterranean countries. The ΙΠΠΟΦΑΙCΤΟΝ of Dioscorides, also by some called ΙΠΠΟΦΑΕC, a sort of ΓΝΑΦΙΚΗC: ΑΚΑΝΘΗC, stemless and flowerless, with spiny leaves and tumid capitula together with the thick tender root yielding a juice, — is referred here by Columna phyt. pl. 24, and Sprengel: C. stellatum, depressed unless flowering, and often continuing throughout the year without flowering (Spreng), was observed by Chaubard, in the Peloponnesus. Westward, the account by Pliny xvi. 92 and xxvii. 66 of the "spina fullonia hippophaeston" seems taken from Dioscorides, but he adds that the juice is expressed in summer: C. stellatum is described by Triumfetti pl. 96; is termed "c. stellatus foliis integris flore purpureo" by Tournefort inst. 440; was observed by Sibthorp on Sicily, and is known to grow as far as the border of France (Allion., and Pers.).

Silybum Marianum of the Mediterranean countries. Called in Britain *milk thistle* or *blessed thistle* or *lady's thistle* (Prior), in France "chardon-marie" (Fée), in Germany "marien-distel" (Fraas), in Bohemian "ostropés," in Polish "podgorzal," in Illyrian "osset" or "osgebad" (Moritz.), in Greece "gaithōuragkatha" (Fraas) or "kōuphagkathō" (Sibth.): its seeds found by Forskal mat. med. employed medicinally in Egypt, in accordance with the ΑΚΑΝΘΑ: ΛΕΥΚΗ of Dioscorides, two cubits high with the stem thick as the fore-finger, leaves prickly, flowers purple, seeds and root used medicinally: — the "akub" of Temimi, and Ebn Baitar, is referred here by Sontheimer: S. Marianum was observed by Forskal, and Delile, springing up spontaneously around Cairo; by Belon, Sibthorp, and Fraas, frequent from the Peloponnesus to Cyprus and Constantinople; is known to occur also as far as Caucasus (C. A. Mey.). Westward, the "akantha leukē" or "agriōkinaran" or "thōnakitis" or "ĕrusiskēptrōn" is identified in Syn. Diosc. with the "karthōus ramptaria" or "spina alva" or "rēgia" of the Romans; a garland of "spinae albae" according to Pliny xxiv. 66 alleviates headache, but his account of the seeds taken against scorpions seems in part from Dioscorides: the "herbe sancte marie" is mentioned by Nicolaus Praepositus, Franciscus Pedemontium, and Joannes de Sancto Amando: S. Marianum is described by Fuchsius p. 55, Dodoens, and Lobel (Spreng.); was already in Britain in the days of Gerarde p. 989; is termed "c. albis maculis notatus vulgaris" by Tournefort inst. 440; was observed by Munby in Algeria; is known to occur in waste places from Italy throughout middle Europe (Scop., and Pers.), is besides often cultivated (A. Dec.). By European colonists, was carried to Madeira (Lindl.); to Northeast America, where I have observed it springing up spontaneously in gardens; to Austral America, where it has become naturalized from the Uruguay and La Plata to Patagonia (A. Saint-Hil.); to Chili, and the East Indies, the "leaves said to be sudorific and aperient" (Lindl.).

Onopordum Græcum of the East Mediterranean countries. The ΑΚΑΝΘΙΟΝ of Dioscorides, having leaves like ΛΕΥΚΗ: ΑΚΑΝΘΗ but at the extremity the spinous prominences covered with spider-web down which is collected, — may be compared: Pliny xxiv. 66 adds, that the leaves are much smaller, and that the collected down is even made into garments in the East: O. Græcum is termed "carduus græcus parvus acanthi folio tomentoso flore minore" by Tournefort cor. 31; is described also by Gouan obs. pl. 25; was observed by Sibthorp, and Chaubard, from the Peloponnesus to Cyprus; and by Delile near Alexandria on the Mediterranean border of Egypt.

Sonchus arvensis of Europe and Northern Asia. Called in Greece "sōhōs" or "sōhōus" (Fraas), and the ΕΤΕΡΟC: COΓΧΟC described by Dioscorides as tender and ΔΕΝΔΡΩΔΕC with broad or wide-spread leaves and an unbranching stem, — is referred here by Fraas, and with a mark of doubt by Sibthorp ii. p. 361: S. arvensis was observed by Sibthorp in waste ground from Constantinople to Greece. Westward, according to Tournefort inst. 474 is by many called "hieracium majus;" is known to occur in Italy and throughout middle Europe as far as Denmark (fl. Dan. pl. 606, Curt. lond. iv. pt. 53, Scop., and Pers.). By European colonists, was carried to Northeast America, where it has been observed by myself in grass-grown clearings from the Lower St. Lawrence to Salem, and is known to occur as far as Staten Island and the neighbouring portion of New Jersey (A. Gray).

Sonchus palustris of Europe and Northern Asia. The "ětěrōs sōghōs" of Dioscorides — is however referred here by Sprengel: S. palustris was observed by Sibthorp in the marshes of the Peloponnesus. Westward, is termed "s. asper arborescens" by Tournefort inst. 474; and is known to grow throughout middle Europe as far as Denmark (fl. Dan. pl. 1109, Curt. lond. v. pl. 59, and Pers.).

Jasione montana of Europe and the adjoining portion of Asia. Called in Britain *sheep's-bit* or *sheep's-bit-scabious* (Prior); and the ΩΚΙΜΟΕΙΔΕC of Dioscorides, having ΩΚΙΜΩ-like leaves, hairy branches, and pods like ΥΟCΚΥΑΜΩ, — is referred here by Lobel iii. 90: J. montana was observed by Forskal, and Sibthorp, from the Dardanelles to the Bithynian Olympus. Westward, the "ŏkimŏcithĕs" or "prōvataian" or "ĕlaphiōn" or "antimimōn" or "porphuritha" is identified in Syn. Diosc. with the "ŏkimastrōum" of the Romans: J. montana is described also by Dodoens (Spreng.); is termed "rapunculus scabiosæ capitulo cæruleo" by Tournefort inst. 113; and is known to grow from Denmark throughout France to the Pyrenees (fl. Dan. pl. 319, Lapeyr., and Pers.).

Campanula medium of the East Mediterranean countries. Called in Italy "medion" (Riccio, and Targ.), and the ΜΗΔΙΟΝ of Dioscorides, — and Pliny xxvii. 79, is referred here by Matthioli and others: C. medium is described by Dodoens pempt. 163; is termed "c. hortensis folio et flore oblongo cæruleo" by Tournefort inst. 109; is known to occur in woods in France, Italy, and Germany; and was observed by Sibthorp in shady woods on the Bithynian Olympus and around Constantinople.

Globularia alypum of the Mediterranean countries. A small-leaved shrubby plant about two feet high, called in Greece "stouréki" or sometimes "sĕnna" (Sibth.); and the ΑΛΥΠΟΝ of Dioscorides, growing on the seashore of Libya and other countries, and possessing purgative properties, — prescribed also by Actuarius (Ruel. iii. 132), is referred here by writers. G. alypum was observed by Delile on the Mediterranean border of Egypt; by Sibthorp, and Chaubard, frequent from the Peloponnesus to the Greek islands. Westward, the "alypon" is mentioned by Pliny xxvii. 7: G. alypum is described by Lobel adv. 158; is termed "a. monspeliensium s. frutex terribilis" by Bauhin hist. i. 598, "g. fruticosa myrti folio tridentato" by Tournefort inst. 467; was observed by Garidel pl. 42 in Southern France; and according to Sprengel, and Lindley, is not rare on the rocky shores of the Mediterranean.

Calystegia soldanella of Temperate climates, of the shore of the Mediterranean and Atlantic as far as Britain and Madeira, and the Austral and Northern shores of the Pacific. The ΘΑΛΑCCΙΑ: ΚΡΑΜΒΗ of Dioscorides, with leaves resembling those of CΤΡΟΓΓΥΛΗ: ΑΡΙCΤΟΛΟΧΙΑ and arising singly from red branches, its juice milky and saltish and the cooked plant purgative, — mentioned also by Rufus Ephesius, is referred here by writers: C. soldanella was observed by Sibthorp, Chaubard, and Fraas, in sand of the seashore from Bithynia around the Peloponnesus. Westward, the account by Pliny xx. 38 of the "marina brassica" seems taken from Dioscorides: C. soldanella is described by C. Bauhin pin. 295, and Morison i. pl. 3; is termed "c. maritimus nostras rotundifolius" by Tournefort inst. 83; is known to grow on the seashore from Carniolia around Italy, Spain, Madeira, as far as Britain and Holland (Engl. bot. pl. 314, and Pers.); and in the Pacific, on the seashore of Chili, California, New Zealand, and Australia (R. Br., J. D. Hook., and A. Dec.). By European colonists, was carried to the Mauritius Islands, where it was observed by Bojer under cultivation and seldom flowering. The branches are described by Sprengel as reddish with bitter and saltish milky juice, and the root according to Lindley is "purgative."

Lithospermum fruticosum of the Mediterranean countries. Called in Greece "thathaki" (Sibth.); and the ΑΓΧΟΥCΑ: ΑΛΛΗ third kind of Dioscorides resembling the preceding but having smaller red fruit, the root expelling ΠΛΑΤΕΙΑΝ: ΕΛΜΙΝΘΑ *tape-worm*, — is referred here by Sprengel from the agreement in the carpels: L. fruticosum is described by Alpinus exot. pl. 68; and was observed by Sibthorp on the Greek islands and mountainous parts of Greece. Westward, the account of the third anchusa by Pliny xxii. 25 seems taken from Dioscorides, except that the word "karpōn" fruit is read "flore" flower: L. fruticosum is described by Barrelier pl. 1168, and Garidel pl. 15; is termed "buglossum fruticosum rorismarini folio" by Tournefort inst. 134; was observed

by Forskal near Marseilles; and is known to grow in various parts of Southern Europe (Pers., and Spreng.).

Frankenia hirsuta of the East Mediterranean countries and middle Asia. The ΕΤΕΡΑ: ΑΝΘΥΛΛΙΣ of Dioscorides, in leaves and branches resembling ΧΑΜΑΙΠΙΤΥΙ but more hairy shorter and rougher, flower purple, heavy-scented, and root as in ΚΙΧΩΡΙΟΥ,—is referred here by Fraas p. 114 and 171: F. hirsuta is termed "alsine cretica maritima supina caule hirsuto foliis quasi vermiculatis flore candido" by Tournefort cor. 45; was observed by Sibthorp, Chaubard, and Fraas, on the seashore from the Peloponnesus to Cyprus; by Hasselquist, on the Mediterranean shore of Egypt near Alexandria (Del.); and is known to grow in Siberia (Pers.). Westward, Pliny xxi. 103 adds to the account of Dioscorides, that the "alsera" kind grows in stony places: F. hirsuta is known to grow at the Southern extreme of Italy (Pers.).

Hyoscyamus reticulatus of the East Mediterranean countries. The black-seeded ΥΟCΚΥΑΜΟC, having according to Dioscorides purplish flowers, CΜΙΛΑΚΙ-like leaves, and the calyx-cup hard and spinescent,—is referred here by Sprengel: the "hyoscyamus nigro semine" with flowers "paene purpureis," is said by Pliny xxv. 17 to grow in Galatia: H. reticulatus is described by Clusius pannon. p. 502, and Camerarius hort. pl. 22; is known on Crete and in Syria (Pers., and Spreng.); and farther South on the border of Egypt, was observed by Delile near Salehyeh and Quatyeh, a vernal plant. The flowers according to Linnæus are red, beautifully reticulated with dusky veins.

Lycium Afrum of West Africa. The ΡΑΜΝΟC: ΛΕΥΚΟΤΕΡΑ one of the three kinds distinguished by Dioscorides,—is referred here by Sprengel: L. Afrum is described by Trew and Ehret pl 24; is termed "jasminoides linearifolium" by Moench; is known to occur in Spain and Barbary (Pers.), on the Canaries (Reichb.), the Cape Verd Islands (Schm.), in Guinea (fl. Nigr.); and was observed by Drège and Meyer in wild situations in Austral Africa (A. Dec.). Eastward, has been met with in Egypt, Palestine, and at Medina in Arabia (Pers.). By European colonists, has recently been "introduced from the Cape of Good Hope" into the environs of Bombay (Lush, and Graham).

Linaria spuria of the Mediterranean countries. The ΕΛΑΤΙΝΗ growing according to Dioscorides in grain-fields and cultivated ground, its root giving out five or six slender shoots a span long, leaves ΕΛΞΙΝΗ-like but smaller and rounder and hairy, austere in taste,—mentioned also by Paulus Aegineta, is referred here by Lobel, and with a mark of doubt by Sibthorp: L. spuria was observed by Sibthorp, and Link, frequent in vineyards and cultivated ground from the Peloponnesus throughout the Greek islands; and farther South, by Delile, at Damietta on the Mediterranean border of Egypt. Westward, the account by Pliny xxvii. 50 of the "elatine" seems chiefly taken from Dioscorides: L. spuria is described by Lobel adv. p. 197 (Spreng.); is termed by Gerarde, and others, *male fluellin* from its soft velvety leaves (Prior), "l. segetum nummulariæ folio villoso" by Tournefort inst. 169; is known to occur in Sicily, Spain, and throughout middle Europe as far as Denmark (fl. Dan. pl. 913, Pers., Brot., and Guss.), was clearly introduced into Britain, and only in Italy found outside of cultivated ground (Seb. and Mauri fl. rom. p. 203, and A. Dec.).

Linaria Graeca of the East Mediterranean countries. The "ĕlătinē" of Dioscorides—is referred here by Fraas: L. Graeca is described by Chaubard, and was observed by him, and Fraas, the most frequent kind in cultivated and fallow ground in Attica and the Peloponnesus.

Linaria elatine of the Tauro-Caspian countries. The "ĕlătinē" of Dioscorides,—and Pliny, is referred here by Montigiano (Targ.) and others: L. elatine was observed by Sibthorp in vineyards and cultivated ground throughout Greece as far as Constantinople, the Greek islands, and Cyprus; by Delile, at Alexandria on the Mediterranean border of Egypt; and farther East, is known to occur in the Crimea, and to all appearance indigenous in the country South of Caucasus (Hohen., C. A. Mey., and A. Dec.). Westward, is described by Matthioli p. 396 (Spreng.); is termed "l. segetum nummulariæ folio aurito et villoso flore luteo et flore cæruleo" by Tournefort inst. 169; is known as a weed in cultivated ground in Algeria, Italy, and throughout middle Europe as far as Denmark, and was clearly introduced into Britain (fl. Dan. pl. 426, Pers., Lenz, and A. Dec.). By European colonists, was carried to Northeast America, where it continues in waste ground from Eastern Massachusetts to North Carolina, "scarce" (A. Gray, and Chapm.). The plant according to Lindley "is said to be bitter and purgative."

Linaria Aegyptiaca of the Egyptian Desert. Called in Egypt "asjib ed dib" or "dorædse" (Forsk.), and perhaps the "elarasch" identified with the "elathini"—by Ebn Baitar: L. Aegyptiaca was observed by Lippi, Forskal, and Delile, from Memphis and Cairo to the Isthmus of Suez, indigenous in the Desert. Farther North, was observed by Sibthorp frequent in vineyards and fallow ground and along hedges on the Greek islands.

Linaria cymbalaria of the East Mediterranean countries. The ΧΑΜΑΙΚΙCCΟC growing according to Dioscorides in cultivated ground, its root slender and worthless giving out five or six leafy sprigs a span long, leaves ivy-like but more elongate, and flowers resembling ΛΕΥΚΟΙΟΙC and strongly bitter,—may be compared: L. cymbalaria was observed by Sibthorp, and Chaubard,

on maritime rocks of the Peloponnesus and Cyprus. Westward, the "hamaikissōs" or "kissōs akarpōs" or "hamaiĕukē" or "gēs stĕphanōs" or "sĕlēnitis" is identified in the Syn. Diosc. with the "ĕthĕra plōuviatika" of the Romans: the account by Pliny xxiv. 84 of the "chamaecissos" having the flower of "alba viola," seems chiefly taken from Dioscorides: L. cymbalaria is known to grow wild in Dalmatia and Italy (Vis., Chav., and A. Dec.); is termed "cymbalaria italica" in the Second edition of Gerarde in 1636, "l. hederaceo folio glabro" by Tournefort inst. 169, *ivy-leaved snapdragon* by Lindley; and escaping from cultivation made its appearance on old walls and in humid situations around Bale after the days of Bauhin (Hagenb.), around Iena in the Seventeenth century (Linn.), in Holland where it was previously unknown (Miq.), in Britain a little before 1640 (Park. theatr. p. 682), and in Ireland (Mackay). The plant according to Lindley "has a warm cress-like flavour, and has been recommended as an antiscorbutic."

Antirrhinum asarina of the Mediterranean countries. The "hamaikissōs" of Dioscorides — is referred here by Sprengel, and Fraas, and seems to agree better in the colour of its flowers, "albis leviter purpurascentibus:" A. asarina was observed by Fraas among ruins near Lamia in Greece. Westward, is described by Lobel obs. p. 329; is termed "asarina procumbens" by Miller; and is known to grow in Southern France and as far as Geneva (Pers., and Spreng.).

Mentha tomentella of the Mediterranean countries. The ΚΑΛΑΜΙΝΘΗ: ΟΡΕΙΝΟΤΕΡΑ described by Dioscorides as whitish, with "ŏkimŏ"-like leaves and the flower purple, — is referred here by Fraas: M. tomentella was observed in Greece by Link, and Fraas, not rare in dry situations. Westward, was observed by Brotero in Portugal (Steud.).

Polygonum hydropiper of Europe and the adjoining portion of Asia. Called in Britain *water pepper* or *cyderach* or *ciderage* or *culrage*, in France "curage" or "cidrage" (Prior), in Italy "erba pepe" or "idropepe" (Lenz), in Greece "agria pipŏuria" (Fraas) or by the Turks "su biberi" (Sibth.), in which we recognize the ΥΔΡΟΠΕΠΕΡΙ growing according to Dioscorides along slow-moving or stagnant water, its stem geniculate, leaves larger than in ΗΔΥΟΣΜΟΥ and acrid like pepper but not aromatic, and fruit in dense racemes arising in proximity to the leaves, — mentioned also by Galen simpl. 8: P. hydropiper was observed by Sibthorp, and Fraas, frequent in Greece in the situations described by Dioscorides; is known to grow also about Caucasus (Bieb.). Westward, is described by Fuchsius p. 842, Anguillara iv. 115 (Spreng.), and Gerarde p. 361; is termed "persicaria urens seu hydropiper" by Tournefort inst. 509; and is known to grow in Italy and throughout middle and Northern Europe as far as Sweden and Iceland (Pers., Hook., and Wats.). By European colonists, was carried prior to 1670 (Joss.) to Northeast America, where it continues in moist situations along roadsides and near dwellings, fairly naturalized. The plant according to Lindley "will dye wool yellow," and the leaves are "so acrid as to act as vesicants."

Passerina hirsuta of the Mediterranean countries. Called in Greece "agria gĕrŏklatha" (Fraas) or "agriŏ thĕrŏkallŏ" (Sibth.), in Egypt "metnan" (Forsk.); and the ΕΜΠΕΤΡΟΝ of Dioscorides, purgative, near the sea saline to the taste but farther inland more bitter, — identified in the added Synonyms with the "phakŏĕithĕs, is referred here by Dalechamp: the "phakŏithĕs" is mentioned also by Rufus Ephesius, and Oribasius vii. 25: P. hirsuta was observed by Sibthorp, Chaubard, and Fraas, frequent on the seashore, barren hills and plains from Crete and the Peloponnesus to Cyprus, flowering in November; by Forskal p. 81, and Delile, on the Mediterranean border of Egypt, brought in the dried state in great quantities into Alexandria to be used in cooking. Westward, is described by Dalechamp 1070, and Bauhin i. 595 (Spreng.); is termed "thymelæa tomentosa foliis sedi minoris" by Tournefort inst. 595; is known to grow in Italy, Barbary, and Southern France (Pers.), and was observed by Lapeyrouse as far as the Pyrenees (Steud.).

Statice sinuata of the shores of the Mediterranean. Called in Greece "prŏphasis," and the ΤΡΙΠΟΛΙΟΝ growing according to Dioscorides not on dry ground but in places inundated by the sea, a span high, its stem dividing above, and flower said to change colour thrice a day, white in the morning, purplish at noon, and in the evening red, — is referred here by Sibthorp, and Fraas: S. sinuata was observed by them, and Chaubard, one of the most frequent and elegant seaside plants of the Peloponnesus and Greek islands; according to Fraas, presenting a white summit before flowering, the flowers when expanded are blue, and in fading change to violet. Farther South, is known to grow on the seashore of Palestine (Pers.). Westward, the "tripŏliŏn" or "psuhēn" or "mēris" or "pŏtamŏgĕitŏn" or "stahuitĕs" is identified in the Syn. Diosc. with the "kŏliŏumarĕs" of the Romans; the "tripolium" growing by the seaside, and by some called "polium," changing colour thrice a day, is mentioned by Pliny xxi. 21 and xxvi. 22: S. sinuata is described by Clusius cur. pl. 33; is termed "limodorum peregrinum foliis asplenii" by Tournefort inst. 342; and is known to grow on the seashore of Sicily, and Barbary (Desf. atl. i. p. 276, and Pers.).

Statice limonium of the seashore in Northern climates. Called in Britain *sea-lavender* (Prior), in Greece "thalassŏgamvrŏs" (Sibth., and Fraas), in Egypt "e'rq angibar" (Del.): the "isatis"-like leaves but juiceless and broader, and fragrant root heating to the taste, in the description of the

"tripŏliŏn" by Dioscorides, — are referred here by Fraas: S. limonium was observed by him, Sibthorp, and Chaubard, everywhere frequent in the salt marshes of Greece; by Delile, along the Mediterranean shore of Egypt; and farther East, by Thunberg, on the seashore of Japan. Westward, is described by Matthioli p. 696 (Spreng.); is termed "limonium maritimum majus" by C. Bauhin pin. 192, and Tournefort inst. 341; and is known to grow on the seashore of Barbary, Portugal, and along the Atlantic as far as Sweden (Desf., Brot., fl. Dan. pl. 315, and Wats.). Farther West, was observed by Lapylaie in Newfoundland; by myself, in salt-marshes along the Atlantic from Lat. 43° to 39°; by Elliot, near Charleston; and by N. A. Ware, in Florida (Nutt.).

Euphorbia cyparissias of Europe and the adjoining portion of Asia. Called in Italy "titimalo cipressino" (Lenz), and the ΤΙΘΥΜΑΛΟC: ΚΥΠΑΡΙCCΙΑC named according to Dioscorides from resembling a young shoot of pine ΠΙΤΥΙ, a span or more high but the leaves on its reddish stem more tender and delicate, and the whole plant full of white juice, — is referred here by most writers: E. cyparissias was observed by Sibthorp, and Fraas, in Greece though rare; by Grisebach fl. rum., in Albania and Macedonia. Westward, the "cyparissian" or fifth kind of "herbam lactariam" is described by Pliny xxvi. 43 as growing in the open country "campestribus," and having a double or triple stem: E. cyparissias is described by Gerarde pl.; is termed "tithymalus cyparissias" by Tournefort inst. 86; was observed by Forskal near Marseilles; and is known to grow in barren situations throughout Italy and middle Europe as far as the Northern border of France (Jacq. austr. pl. 435, Pers., Spreng., and Lenz), but is regarded by Watson, and Bromfield, as introduced into Britain (A. Dec.). By European colonists, was carried to Northeast America, where it continues under cultivation around dwellings, and according to A. Gray has escaped "to road-sides in a few places in New England." The plant according to Lindley is "a virulent poison," but the "powder of the root" is given in small doses.

Euphorbia Aleppica of the East Mediterranean countries. Called in Greece "galatzithōhŏrtŏn" (Fraas): the ΠΙΤΥΟΥCΑ differing according to Dioscorides from the ΚΥΠΑΡΙCΣΙΟΥ: ΤΙΘΥΜΑΛΟΥ, more than a cubit high with leaves like those of pine ΠΙΤΥΟC slender and pointed, and small almost purple flowers, — identified in the added Synonyms with the "klēma" or "kramviŏn" or "paraliŏn" or "kanŏpikŏn," may be compared: E. Aleppica is described by Alpinus exot. pl. 64; is termed "t. orientalis cyparissias patulus foliis superioribus hastatis flore minimo" by Tournefort cor. 2; and was observed by Sibthorp, Chaubard, and Fraas, frequent in cultivated ground from the Peloponnesus to the Bithynian Olympus and Smyrna. Westward, the "pityusa" seems known to Pliny xxiv. 21 only from its medicinal uses and the account of Dioscorides.

Euphorbia dendroides of the East Mediterranean countries. Called in Greece "phlōmŏ" or "phlōmŏs" (Sibth., and Fraas): the ΤΙΘΥΜΑΛΟC: ΔΕΝΔΡΟΕΙΔΕC growing in stony places according to Dioscorides, full of juice and at its summit leafy with many crowns, the leaves around the reddish branches resembling the more tender ones of the myrtle, — is referred here by writers: E. dendroides was observed by Sibthorp, Chaubard, and Fraas, in stony mountainous situations exposed to the sea in Crete and the Peloponnesus, a tree with a trunk six or eight inches in diameter though only three to five feet high. Westward, the account by Pliny xxvi. 45 of the seventh "herbam lactariam" called "dendroides" or "cobiŏn" or "leptophyllon," seems chiefly taken from Dioscorides: E. dendroides is described by Barrelier pl. 910; is termed "tithymalus arboreus" by Tournefort inst. 85; and is known to grow as far as Italy and Sicily (Lam. fl. fr., Pers., and Spreng.).

Euphorbia platyphylla of the Crimea and middle Asia. Called in Greece "galatzitha" (Fraas): the ΤΙΘΥΜΑΛΟC: ΠΛΑΤΥΦΥΛΛΟC resembling the ΦΛΟΜΟΣ according to Dioscorides, and if bruised and mingled in water destroying fish like the other kinds, — is referred here by writers: E. platyphylla was observed by Chaubard, and Fraas, in waste and cultivated ground in the Peloponnesus and Greek Islands; farther East, by Bieberstein, in barren stony situations wild in the Crimea (A. Dec.). Westward, the sixth "herbam lactariam" called "platyphyllon" or "corymbiten" or from resemblance "amygdaliten," its leaves broader than in other kinds, is mentioned by Pliny xxvi. 44: E. platyphylla is described by Linnæus; is known to occur in cultivated and fallow ground in Italy and middle Europe as far as Paris (Thuil., Jacq. austr. pl. 376, Scop., and Lenz), and from the silence of writers, appears to have been only recently introduced into Britain (Bromf.). According to A. Decandolle p. 753, has also been introduced into Northeast America.

Alisma plantago of Temperate climates. Called in Britain *water-plantain* (Prior), in Italy "piantaggine aquatica" or "barba silvana" or "erba alisma" (Lenz), in Greece "plĕmŏnŏhŏrtŏn" or "lappa" (Sibth.), in which we recognize the ΑΛΙCΜΑ growing according to Dioscorides in watery places, its leaves resembling those of the plantain, stem simple more than a cubit high bearing capitula thyrsus-like, the flowers pale-yellowish and white, — identified in the added Synonyms with the "alkĕan" or "thamasŏniŏn" or "akurŏn" or "lurŏn:" A. plantago was observed by Forskal, Sibthorp, and Chaubard, frequent along river-margins from the Peloponnesus to Constantinople, but is regarded by Fraas as belonging properly to the salt water; is known to grow also in the Tauro-

Caspian countries and throughout Siberia to Kamtschatka (Gmel., and Bieb.). Farther South, the "mizmar elrai" of Ebn Baitar, is referred here by Sontheimer: A. plantago was observed by Delile on the Mediterranean border of Egypt near Rosetta; was received by Fresenius from Abyssinia (A. Dec.). Westward, the account by Pliny xxv. 77 of the "alisma" or "damasonion" or "lyron," seems chiefly taken from Dioscorides: A. plantago is described by Valerius Cordus f. 60 (Spreng.), and Fuchsius 42; is termed "ranunculus palustris plantaginis folio ampliore et angustiore" by Tournefort inst. 292; and is known to grow in Italy, Barbary, Portugal, and middle and Northern Europe as far as Lapland (fl. Dan. pl. 561, Desf., Brot., Wats., and Lenz). Farther West, was observed by Drummond in Lat. 54° in central North America at Cumberland House; by Nuttall, on the Arkansas; by E. James, at the sources of the Platte; by Short, in Kentucky; and is known to grow as far South as Newbern and upper Georgia (Croom, and Chapm.), but so far as observed by myself along the Atlantic from Lat. 43° to 38°, chiefly near inhabited places. In the Southern Hemisphere, was observed by R. Brown gen. rem. p. 60 in Australia.

Serapias grandiflora of Europe and the adjoining portion of Asia. The ΑΓΡΩΣΤΙΣ·ΕΝ·ΤΩ·ΠΑΡΝΑΣΣΩ growing according to Dioscorides on Parnassus, and having ΚΙΣΣΩ-like leaves, a white fragrant flower, and five or six white roots thick as the finger and very sweet, — mentioned also by Pliny xxiv. 118, is referred here by Fraas: S. grandiflora was observed by Sibthorp in shady situations on mount Hymettus, and by Fraas frequent on Parnassus. Westward, is termed "helleborine flore albo vel damasonium montanum latifolium" by Tournefort inst. 436; and is known to grow in Switzerland and throughout middle Europe as far as Sweden (Hall. helv. pl. 41, Engl. bot. pl. 271, Pers., and Wahl.).

Helleborine lingua of the Mediterranean countries. Called in Greece "glŏssari" (Fraas), in which we recognize the ΛΟΓΧΙΤΙΣ of Dioscorides, having leek-like but broader leaves, and on the stem yellow flowers like caps or comic masks with a tongue hanging downwards, — referred here by writers: H. lingua was observed by Sibthorp, Chaubard, and Fraas, in grassy mountainous situations in the Peloponnesus and as far as Parnassus. Westward, the "lōghitis" or "kĕstrōn" or "mēthōusa" is identified in the Syn. Diosc. with the "vĕnĕrĕa" or "lagkĕōla" of the Romans; but the account by Pliny xxv. 88 of the "lonchitis" seems taken from Dioscorides: H. lingua is described by Matthioli pl. 636, and Columna ecphr. pl. 322 (Spreng.); is termed "orchis montana italica lingua oblonga altera" by Tournefort inst. 434; and is known to grow in Italy, and Southern France (Allion., Lapeyr., Pers., and Dec. fl. fr.).

Anthericum ramosum of middle Europe. The ΦΑΛΑΓΓΙΟΝ growing on hills according to Dioscorides, and giving out two three or more branches distant from each other, its flowers white and ΚΡΙΝΩ-like, seeds black and like half a lentil, its small slender root greenish while fresh, and the leaves seeds and flowers employed against scorpion and phalangium bites, — identified in the added Synonyms with the "phalaggitiōn" or "lĕukakanthan," and termed "phalaggitēs" by Galen fac. simpl. viii. p. 150, is referred here by writers: but A. ramosum has not at the present day been observed in Greece. Westward, the account by Pliny xxvii. 98 of the "phalangites" by some called "phalangion" or "leucanthemon" or in some copies "leucacantha," seems chiefly taken from Dioscorides: A. ramosum is described by Dodoens p. 106 (Spreng.); and is known to grow in limestone districts in Austria and France (Jacq. austr. pl. 16, Lam. fl. fr., Pers., and Steud.).

Narcissus odorus of the Mediterranean countries. The ΒΟΛΒΟΣ called ΕΜΕΤΙΚΟΣ, having according to Dioscorides longer and more thong-like leaves than the ΕΔΩΔΙΜΟΥ kind, and a black-skinned bulbous root that if eaten excites vomiting, — is referred to this tribe by Dodoens, Camerarius, and Sprengel: N. odorus was observed by Gittard in the Peloponnesus (Chaub.). Westward, the account by Pliny xx. 41 of the "bulbus vomitorius" with black and longer leaves than the other kinds, is perhaps taken from Dioscorides: N. odorus is described by Rudbeck elys. ii. pl. 50; and is known to grow in various parts of Southern Europe (Hall. helv. 1451, and Pers.). Is according to Lindley one of the species having emetic properties.

Muscari spicatum of the East Mediterranean countries. Called in Greece "vōrvōi" (Sibth.), and agreeing better with the "vōlvōs ĕmĕtikōs" of Dioscorides: — M. spicatum was observed by Sibthorp, and Chaubard, in the Peloponnesus, its leaves narrow, linear-lanceolate, a span long; but nothing is said of the properties of its root.

Scilla pancratium of the Mediterranean countries. The ΠΑΓΚΡΑΤΙΟΝ by some called ΣΚΙΛΛΑΜ, having according to Dioscorides leaves like ΚΡΙΝΩ but longer, a great reddish bulb, and properties like ΣΚΙΛΛΗ but milder, — mentioned also by Galen simpl. viii. 16. 1, is referred by Anguillara sempl. p. 120 to the red-bulbed variety of S. maritima, but by Steinheil to S. pancratium, recognized by him as a distinct species. Westward, the "pancration" by some called "scillam pusillam" is described by Pliny xxvii. 92 as having the leaves of "albi lilii" but longer and "crassioribus" thicker, the large bulbous root "rufo" reddish: S. pancratium the "bulb about half the size" and "pale green or whitish green or occasionally red, leaves much shorter more acute erect and nar-

rower, stem more glaucous, flowers smaller more compactly arranged with shorter bracts, flower-stalks shorter, flower-bud more blunt, petals and sepals spread fully out white oval obtuse mucronulate marked with a pale pink line along the middle of the back" has been found in the environs of Cadiz and on Malta (Lindl.).

Polygonatum multiflorum of Europe and Northern Asia. Called in Italy "sigillo di Salomone" or "sigillo di S. Maria" (Lenz), in Greece "pōlugōnatōn" (Sibth.), in which we recognize the ΠΟΛΥΓΟΝΑΤΟΝ growing according to Dioscorides on mountains and more than two cubits high, its leaves laurel-like but smoother and broader, with white flowers at the base of each, the long white root hairy and geniculate, and as thick as the finger: — P. multiflorum was observed by Sibthorp, and Chaubard, in the Peloponnesus; by Gmelin, as far as East Siberia; and by Thunberg, on mount Fakon in Japan. Westward, is described by Matthioli p. 678 (Spreng.); is termed "p. latifolium vulgare" by Tournefort inst. 78; and is known to grow on the Appenines and throughout middle Europe as far as Sweden (fl. Dan. pl. 152, Engl. bot. pl. 279, Wats., Savi, and Lenz).

Polygonatum vulgare of Europe and the adjoining portion of Asia. Called in Britain *Solomon's seal* or *seal-wort* (Prior), and perhaps included in the "pōlugōnatōn of Dioscorides, — referred here by Clusius pannon. p. 264, and Sibthorp: P. vulgare was observed by Sibthorp in woods on mount Parnassus. Westward, is termed "p. latifolium flore majore odoro" by Tournefort inst. 78; and is known to grow in Italy and throughout middle Europe as far as Denmark (fl. Dan. pl. 337, Pers., Spreng., and Lenz).

Streptopus amplexifolius of Subaretic climates. The ΙΔΑΙΑ: ΡΙΖΑ having according to Dioscorides ΟΞΥΜΥΡΣΙΝΗ-like leaves, and next them little tendrils bearing the flower, — is referred here by Anguillara p. 259, and Sprengel. Westward, the account of the "idaeae herbae" by Pliny xxvii. 69 seems taken from Dioscorides; but S. amplexifolius was observed by Anguillara frequent in the forests of Italy; is described by Matthioli 841, and Columna phyt. pl. 15; and is known to grow on the Pyrenees, Jura, and other mountains of middle Europe (Pers., and Dec.). Farther West, was observed by Wormskiold in Greenland (Meyer); by Colmeister, and Herzberg, in Labrador from Lat. 57°; by Lapylaie, in Newfoundland; is known to grow throughout Canada and our Northern States as far as Lat. 43° (near Utica, A. Gray), and farther South on the mountains of Pennsylvania (Pursh); also in Northwest America at Unalascha, and across the Pacific in Kamtschatka (Cham.).

Sparganium ramosum of Northern climates. Called in Britain *bur reed* (Prior): the ΣΠΑΡΓΑΝΙΟΝ having according to Dioscorides ΞΙΦΙΩ-like leaves, balls at the summit of the stem, and its root and fruit taken in wine against poisonous animals, — identified in the added Synonyms with the "xiphithiōn" or "vŏlōn," and mentioned by Galen simpl. viii. 18. 34, may be compared: S. ramosum was observed by Sibthorp, and Gittard, growing in water from the Peloponnesus to Constantinople; is known to grow also in the Tauro-Caucasian countries and Siberia (Bieb., and Wats.). Westward, the "sparganion" is mentioned by Pliny xxv. 63 as taken in wine against snake-bites: S. ramosum is described by Matthioli pl. 702 (Spreng.), and Tournefort inst. 531; is known to grow in Barbary and throughout Europe as far as Sweden (Curt. lond. v. pl. 66, Pers., and Wats.). Farther West, was observed by Lapylaie in Newfoundland; by Drummond, in Lat. 54° near Cumberland House in central North America; by Short, in Kentucky; by myself, along the Atlantic from Lat. 43° near Portsmouth to 40°; and apparently the same species by Elliott in Georgia, and by Chapman in Florida.

Sparganium simplex of Northern climates. Agreeing better with the description of the leaves, — according to Sprengel: S. simplex has not been observed in Greece; but is known to grow in Siberia (Wats.). Westward, is known to grow in Barbary and Switzerland, and throughout middle and Northern Europe as far as Russia and Sweden (Engl. bot. pl. 748, Pers., and Wats.). Farther West, was observed by Drummond in Lat. 54° near Cumberland House in central North America; by myself, along the Atlantic from Lat. 44° to 42°, subaquatic and the terminal peduncle sometimes branching, but a more humble plant than the preceding.

Calamagrostis epigeios of Northern climates. The ΚΑΛΑΜΑΓΡΩΣΤΙΣ larger in every way than the ΑΓΡΩΣΤΕΩΣ according to Dioscorides, and if eaten by cattle killing them, especially along roadsides in Babylonia, — is referred here by Lobel, and others: C. epigeios was observed by Chaubard frequent in humid situations in the Peloponnesus; is known to grow also in Siberia (Wats., and Kunth). Westward, is described by Lobel adv. pl. 6 (Spreng.); and is known to grow in Barbary and throughout Europe as far as Russia and Lapland (Poll., Lightf. fl. Scot., Steud., and Wats). Farther West, was observed by Hooker on Iceland (but compare C. stricta of the Alpine portion of the White Mountains in New England and the mountains of Europe). This grass according to Sprengel is in general avoided by cattle, and if eaten through necessity, is known to induce internal inflammation and occasionally death.

Molinia cærulea of Europe and the adjoining portion of Asia. The ΚΙΝΝΑΜ so called in Cilicia where it grows, and further according to Dioscorides iv. 32 if eaten moist by cattle often

inducing inflammation, — may be compared with this reedy grass: M. cœrulea was observed by Sibthorp growing among heath near Constantinople. Westward, is termed "gramen paniculatum autumnale panicula angustiore e viridi nigricante" by Tournefort inst. 521; is known to grow throughout middle Europe as far as Britain (Curt. lond. v. pl. 11, Thuil., Gaud., and Pers.); and according to Sprengel, has been observed to injure cattle.

Gastridium lendigerum of the Mediterranean countries and middle Europe. Called in Britain *nit-grass* (Prior): the ΦΑΛΑΡΙC of Dioscorides, two palms high with slender useless roots giving out several geniculate stems reedy and like those of ΖΕΑC, its seeds oblong white as large as millet and with the bruised plant relieving pain in the bladder, — mentioned also by Galen, and Paulus Aegineta, may be compared: G. lendigerum was observed by Sibthorp in the sand of the seashore of Asia Minor; by Gittard, in the Peloponnesus (Chaub.); by Delile, on the Mediterranean border of Egypt near Alexandria. Westward, the "phalaris" is described by Pliny xxvii. 102 as having a long slender "thyrsum" and seeds like "sesamae:" G. lendigerum is described by Plukenet alm. pl. 33 1 is termed "panicum serotinum arvense spica pyramidata" by Tournefort inst. 515, "agrostis australis" by Linnaeus; and is known to grow in Southern France and as far even as Britain (Gouan hort. 39 pl. 1, Huds., and Pers.).

Equisetum limosum of Northern climates. The ΙΠΠΟΥΡΙC: ΕΤΕΡΑ described by Dioscorides as more than a cubit high with whiter shorter and softer foliage, — is referred here by Sprengel, and Fraas: E. limosum was observed by Fraas in Greece, more frequent than other kinds and called "polutrihia." Westward, the account of the "aliam hippurin" by Pliny xxvi. 83 is taken from Dioscorides; E. limosum is described by Tragus f. 264; and is known to grow in Italy (Lenz) and throughout middle and Northern Europe. Farther West, has been observed by myself in North America, from Lat. 48° on the Lower St. Lawrence to Salem in New England and 39° beyond Philadelphia.

Aspidium lonchitis of Europe and the adjoining portion of Asia. Called in Britain *holly-fern*, "from its prickly fronds" (Prior): the ΛΟΓΧΙΤΙC: ΕΤΕΡΑ having according to Dioscorides CΚΟΛΟΠΕΝΔΡΙΩ-like fronds but larger rougher and more deeply incised, — is referred here by writers: A. lonchitis was observed by Sibthorp, and Fraas, from the mountains of Crete to the Bithynian Olympus. Westward, the "lōghitis ětěra" or "loghitin trahĕian" is identified in the Syn. Diosc. with the "lōggina" or "kalavrina" of the Romans: A. lonchitis is described by Matthioli p. 666 (Spreng.); is termed "lonchitis aspera" by Tournefort inst. 538; and is known to grow in Italy and throughout middle Europe as far as Britain (Engl. bot. pl. 797, and Lenz).

Agaricus dryinus of middle Europe. The ΑΓΑΡΙΚΟΝ: ΘΗΛΥ distinguished by Dioscorides by having within straight lamellæ, — is referred here by Sprengel: the agaricon "femina" is mentioned also by Pliny xxv. 57: A. dryinus is described by Persoon; and is known to grow on oaks and beeches in middle Europe (Spreng.).

Agaricus ostreatus of middle Europe. Regarded by Sprengel as perhaps included in the "agarikŏn thēlu" of Dioscorides: A. ostreatus is described by Jacquin; is known to grow in middle Europe, and like the preceding on oaks and beeches (Spreng.).

Zonaria pavonia of the coasts of the Mediterranean and North Atlantic. The ΦΥΚΟC: ΘΑΛΑC CΙΟΝ: ΠΛΑΤΥ of Dioscorides — is referred here by Sprengel, and Fraas: Z. pavonia was observed by Forskal, Sibthorp, and Bory, from the Peloponnesus throughout the Greek islands as far as Imros; and by Delile, near Alexandria in Egypt. Westward, is termed "f. maritimus gallo-pavonis pennas referens" by Tournefort inst. 568; was observed by Forskal near Marseilles; is known to grow throughout the Mediterranean (Bory), and as far North in the Atlantic as Britain (Engl. bot. pl. 1276).

Wormskioldia granatea of the coasts of the Mediterranean. The ΦΥΚΟC: ΘΑΛΑCCΙΟΝ distinguished by Dioscorides as oblong and ΦΟΙΝΙCCΟΝ red, — is referred here by Sprengel: W. granatea is described by Lamouroux, and Turner; and according to Sprengel, is not rare in the Mediterranean.

Valeriana Hardwickii of the Himalayan mountains. The ΝΑΡΔΟΥ: ΙΝΔΙΚΗ: ΟΡΕΙΝΗ of Dioscorides — is referred here by Sprengel. V. Hardwickii is described by Wallich (in Roxb. fl. ind. i. 166, as. research. vi. 350); and its thick "fleshy strong-scented root is used in medicine in Nepal and the North of India" (Royle lect. 82, and Lindl.).

Gardenia lucida of Tropical Hindustan. Its resin called by the Arabs at Bombay "kunkham" (Birdwood 44, 269, and J. F. Wats. index); in which we recognize the ΚΑΓΚΑΜΟΝ described by Dioscorides as the exudation of an Arabian tree, in some measure resembling myrrh; — and mentioned by Pliny xii. 44 as brought by the Nabathean Arabs to the Mediterranean countries. G. lucida was observed in Hindustan by Roxburgh, and Wight; and is described by Graham as "a large shrub or small tree, in gardens Bombay, grows wild on Elephanta, Kennery jungles, S. M. country (Law)," and "furnishes the gum called 'decamalee.'" Farther East, enumerated by Mason as "exotic" in Burmah. As transported to Europe, described by Plukenet pl. 367.

Mesua ferrea of Tropical Hindustan. An elegant Clusioid tree called in Sanscrit "canchana" or "champeya" or "cesara" or "nagacesara" (W. Jones), in Bengalee "nagkushur," in Malabar "belutta-champagam" (Drur.), in the environs of Bombay "nag chumpa" (Graham); and the NAC ΚΑΦΘΟΝ or ΝΑΡΚΑΦΘΟΝ of Dioscorides, imported from India on account of its fragrance, mixed in perfumes, and employed medicinally, — may be compared. Eastward, M. ferrea is sacred in Hindu mythology (Mason v. 401), and in the Naishadha poem, Cama is whetting his arrows on an alabaster wheel compared to a "nagacesara" flower (W. Jones as. res. iv. 295); the "kesara" is mentioned by Dhanvantari (Susrut. sutr. 37), and Kalidasa kum. iii. 55; and flowers of the "mesua," by Valmiki ramayan. vi. 96 (transl. Gorr.): M. ferrea was observed by Rheede iii. pl. 53 in Malabar; by Nimmo, and Graham, in the environs of Bombay, the flowers "regularly picked as they expand for sale in the bazar, and preserve their fragrance even when dried;" by Burmann, Roxburgh, and Wight, in other parts of Hindustan, the dried flowers "used for perfuming ointment," employed also "medicinally" (Drur.). Farther East, was observed by Wallich in Burmah, by Mason "exotic" there, the dried anthers according to Drury stuffed in pillows; is described also by Rumphius vii. pl. 2; and is known to be much cultivated on Java (Drur.).

"64 A. D. = 7th year of the 'young-ping' of Ming-ti" (Chinese chron. table), beginning of the Forty-sixth cycle.

"The same year" (the Tching-tseu-thong, Khang-pi, and Pauth. 256 and 490), by the emperor Ming-ti, *Budhism* or the "religion of Fo" introduced from Hindustan into China. — The new religion "was not fully established till A. D. 310" (De Guignes, and Elphinst. ii. 4); but at the present day, includes "at least half of the population of China."

Ptychotis involucrata of Northern Hindustan. An Umbelliferous plant called there "aneeson," in Bengal "chanoo" or "raahooni" (Lindl.), and known from early times: — observed by Royle, used as a substitute for parsley by resident Europeans.

Ferula hooshee of Eastern Persia. The gum called in Beloochistan "hooshee," long known though not collected,* — according to Mrs. Macneill resembles opoponax and is produced by a plant in size and appearance like F. asafœtida; is also described as resembling opoponax by Royle ill. p. 231. The plant according to Lindley "has a distinct smell of asafœtida."

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* *Polygala crotalarioides* of Nepal. Shrubby, decumbent, the stems branching from the base; and from early times, the root employed by the hill-people to cure snake-bites: — sent by Colvin to Royle him.; but according to Buchanan, Wallich pl. as. rar.; and Drury, the plant is "common on the Himalaya." From transported specimens, described by Decandolle prodr. i. 327 (Lindl.).

Brucea (*Nima*) *quassioides* of Nepal and the Himalayas. A woody Simaruboid plant, its bark exported from early times — and sold in Bengal under the name of "bharangi;" its root also according to Royle ill. p. 158 bitter as quassia: described by Buchanan, and Don prodr. 248 (Lindl., and Drur.).

Xanthoxylum alatum of the mountainous district North of Bengal as far as Nepal. A low tree called in Hindustanee "durmur" (Lindl.), and from early times an aromatic essential oil procured from it by the natives: — observed by Roxburgh, and known to grow "in Rohilcund and Oude" (Drur.).

Cerasus capricida of Nepal. A species of *wild cherry* known there from early times from being so poisonous as to kill goats: — described by Don prodr. 239, and Wallich cat. 718 (Lindl.).

Cucumis Hardwickii of the lower portion of the Himalayas. Climbing, called there "puharee indrayun" hill colocynth (Lindl.), and from early times: — observed by Royle, its fruit two to three inches long and about half as broad, very bitter and in quality similar to colocynth. (See Citrullus pseudo-colocynthis.)

Luffa? bindaal of Northern Hindustan. A climbing Cucurbitaceous plant, from early times regarded there as a powerful drastic in cases of dropsy: — observed by Roxburgh iii. 717, and Royle, its "fruit round, echinate with long firm straight ciliate bristles" (Lindl.: see Cucumis? prophetarum).

Ptychotis sylvestris of Northern Hindustan. Called there "arub ajwain" (Lindl.), and long known as an Indian carminative: — observed by Royle.

Carum nigrum of Central Asia. A species of *wild caraway*, from early times imported into Hindustan as a carminative — and called "zeera seeah:" found by Royle brought "from Kunawur" (Lindl.).

Gentiana kurroo of the Himalaya mountains. Its root from early times in Northern Hindustan used like *gentian*: — observed by Royle ill. pl. 68 at Mussooree, Simla, and in other parts of the Himalayas (Lindl.).

Picrorhiza kurroo of the Himalaya mountains. A low Rhinanthaceous perennial, its intensely bitter root from early times used medicinally: — observed by Royle ill. pl. 71, and Wallich cat. 404, at

Plantago ispaghula of Central Asia. A low annual called in Persian and Hindustanee "ispagool" (Lindl.); carried to Hindustan, and from early times cultivated there for medicinal use: — observed by Fleming as. res. xi. 174, Ainslie, Roxburgh, and Royle, its seeds of a very cooling nature sold in the bazaars and used to prepare a mucilaginous drink often prescribed as emollient (Drur.).

"The same year" (Sueton. 16, Tacit. xv. 44, Tertull. apol. v., and Clint.), conflagration at Rome, destroying a large portion of the city: followed by the "First persecution" of Christians. Josephus at the age of "twenty-six" visiting Rome and introduced to Poppaea wife of Nero.

"65 A. D." (Dionys. of Corinth, Tertull., Euseb., and Clint.), war commencing in Judæa, with the defeat of the Romans under Cestius Gallus. In Rome, Paul put to death. The charge of the Christians there devolving on Linus (2 Tim. iv. 21, Iren., and Euseb.).

Peter "about the same time" put to death (Dionys. of Corinth): was crucified with his head downwards, at his own request — (according to Origen, Euseb. h. e. ii. 25 and iii. 1). The gospel of John xxi, 18 was written subsequently to this event.

Greek manuscripts written as early as this year and found at Herculaneum (Sylvestre) presenting the following form of the letter Θ.

The same year (= 326 B. C. — "140 — 130 — 120" = 56 B. C. "—120 yrs." of Masudi, Wilford as. res. ix. 181), a date possibly marking the accession of the Andra dynasty. The capital of the kings of Andra or inland Telingana was Varangul (Elph. iv. 2).

"66 A. D." (Clint.), arrival of Nero in Greece. — Where, in the following year ("two years after the true period") he celebrated the Olympic games.

"67 A. D." (Jos., and Clint.), Josephus taken prisoner at the capture of Jotapata in Galilee by the Romans under Vespasian.

One hundred and thirty-first generation. A. D. 67, Sept. 1st, mostly beyond youth: the Chinese historian Pan-kou, and his sister Pan-hoeï-pan: Justus of Tiberias: the Greek philosophers, Musonius Rufus, Ammonius of Lamprae, and Euphrates; the rhetors, Isaeus, and Ardys: the Christian writers, Glaucias, Menander the Simonian; the Latin writers, Quintilianus, Silius Italicus, Statius, and Frontinus; the Roman painters, Cornelius Pinus, and Accius Priscus (Bryan).

"68, June 9th" (Sueton., and Clint.), Nero succeeded by Galba, sixth Roman emperor. The hieroglyphic ovals of Galba occur on Egyptian monuments. His name occurs besides on coins issued in Egypt; and in a Greek inscription at the Great Oasis, dated in his brief reign.

Cachrys Sicula of the Mediterranean countries. Called in Greece "pĕtrōanarthēkōs" (Sibth.): the ΚΡΑΤΙΠΠΟΥ: ΝΑΡΘΗΚΟC prescribed by Andromachus the younger — (Gal. comp. med. vi. 6) may be compared: C. Sicula was observed by Sibthorp in stony situations in Boeotia and on Cyprus. Westward, is described by Morison ix. pl. 1, and Boccone pl. 18; is termed "c. semine fungoso sulcato aspero foliis peucedani latiusculis" by Tournefort inst. 325; and is known to grow in Sicily, Barbary, and Spain (Pers.).

As early perhaps as this date, arrival of Pliny in Spain, having been appointed procurator "towards the close of the reign of Nero." — He continued in Spain in "71," and returned to Rome shortly before "73" (Sm. b. d.).

Gossain Than, Kamaon, and Kedarkonta, its root "fleshy," and flowers "deep blue, in dense spikes" (Benth., and Lindl.); by Irvine mat. med. patn. 38, used as a tonic, and called in Hindustanee "kootki" (Drur. 162).

Dioscorea deltoidea of Subtropical Hindustan. A species of *yam*, from early times in Cashmere, its roots used for washing woollen cloths and silk for shawls — (Powel punj., and Drur.): D. deltoidea was observed by Rumphius v. 487 and pl. 180 "circa castellum Victoriam," and by Wallich 5110 in Nepal (Grisebach and A. Dec.); the "mu-kelengue" observed by Rheede viii. pl. 51 in Malabar, and the "common yam, cultivated" according to Graham around Bombay, may also be compared.

Xyris Indica of Hindustan and Burmah. Annual, a foot high, and called in Bengalee "cheena ghauza" or "dabi dooba" (Lindl.) or "dali doob," in Malabar "kotsjelleti-pullu" (Drur.); from early times, its leaves and root used to cure ringworm, itch, and leprosy: — observed by Rheede ix. pl. 71 in Malabar; by Nimmo, in the "S. Concan" (Graham), nearly as far as Bombay; by Roxburgh, as far as Coromandel and Bengal; by Mason, in Burmah, enumerated as indigenous. Transported to Europe, is described by Plukenet alm. pl. 416.

Andropogon iwarancusa of the skirts of the mountains of Northern Hindustan. A fragrant grass three to six feet high and called in Bengalee "kurankusha" or "ibharankusha" or "iwarankusha" (Lindl.) or "iwaran-kussa" (Drur.); and from early times in Northern Hindustan, its aromatic roots used in intermittent fevers: — observed by Ainslie, Roxburgh, and Royle, as far as Hurdwar. A grass regarded by Graham as probably identical, was observed by him as far as Bombay, in the "Concans, rare."

Rosa canina of Europe and Northern Asia. Called in Britain *brier-rose* or *dog-rose* (Prior), in Italy "rosa di macchia" or "rosa canina" or "rosa selvatica" (Lenz), in Greece "agria triantaphulla," in which we recognize the "cynorrhodon" or "silvestris rosae" whose root sent out to a Roman soldier in Lacetania in Spain was found to cure hydrophobia — (Plin. viii. 63 and xxv. 6): R. canina is termed "r. sylvestris vulgaris flore odorato incarnato" by Tournefort inst. 638; was observed by Forskal near Marseilles; and is known to grow also in Italy and throughout middle Europe as far as Denmark (Curt. lond., v. pl. 34, and Pers.). Eastward, was observed by Forskal, Sibthorp, Chaubard, and Fraas, frequent from Constantinople to the Peloponnesus; by Kaempfer, and Thunberg, in Japan, and called "foosen" or usually "ibara." *Conserve of roses* according to Lindley is prepared "from the pulpy fruit of this and probably other allied species."

Arum crinitum of the West Mediterranean countries. The "dracunculum" with a variegated stem an inch in diameter, recently found in the same province of Spain — (Plin. xxv. 6), may be compared: A. crinitum is described by Aiton, and the younger Linnæus; and is known to grow on Minorca (Pers.).

"69, Jan. 15th" (Sueton., Tacit., and Clint.), Galba succeeded by Otho, seventh Roman emperor. The hieroglyphic ovals of Otho occur on a propylon at Thebes; and his name, on coins issued in Egypt.

"April 19th" (Tacit., and Clint.), news received at Rome of the death of Otho. He was succeeded by Vitellius: whose name also occurs on coins issued in Egypt.

"Dec. 21st" (Jos., Dio, and Clint.), Vitellius succeeded by Vespasian, now ninth Roman Emperor. The hieroglyphic ovals of Vespasian occur on the temple at Esneh, on a building at Thebes, and on an obelisk (now in Rome).

"70 A. D." (Jos., Sueton., Clint., and Kitt. cycl. bibl. lit.), after a siege of "nearly five months," Jerusalem captured by the Romans under Titus; bringing the Jewish war to a close. With the temple, the city was now destroyed, "three towers and a part of the Western wall" being alone left standing.

"In this year" (Abyss. chron., and C. Mull. geogr. min. p. xcvii), Za-Adgaba succeeded by Za-Agba, now king of Abyssinia. — He reigned "six months," and was succeeded by Za-Malis, who reigned "six years"

"In the reign of Kei-ko" (San-kokf transl. Klapr.), the barbarians of the East (Ainos) making an irruption inflicted much damage on the Japanese; a thing that never before happened.*

"71 A. D." (Jos., and Clint.), at Antioch, persecution of the Jews repressed by Titus. At Rome (Oros. vii. 9), "Sixth" closing of the temple of Janus; the Romans being at peace with all nations.

"In this year" (Jap. centen. comm. 88), accession of . . . . the son of Keiko, as dairo of Japan.

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* *Agaricus eburico* of Yeso and the neighbouring countries. A fungus growing on the trunks of *Larix leptostachys* and called "eburico" by the Ainos; one of the two medicines known to them, employed internally against cholic, affections of the heart, vomiting, and worms — (San-kokf transl. Klapr., and Sieb.).

Larix leptostachys of Yeso and the neighbouring countries. Called by the Japanese "fuzi mats," and on account of the wood, — enumerated by Siebold among the useful plants of the Ainos. Observed by Schrenk on Krafto (Sachalin) as far North as Lat. 50° (Sieb. p. 90).

Urostelma ikema of Yeso and the neighbouring countries. An Asclepiaceous plant called "ikema" or "penpu" by the Ainos, being the other medicine known to them; employed both internally and externally in tumours, wounds, "rhumes très forts," and fevers, — further described in the San-kokf transl. Klapr. as creeping, growing also in the districts of Sendai and Simotske in Japan. Known to Siebold only as growing on Yeso.

Andropogon sp. of Yeso and the neighbouring countries. Called "nino," or by the Japanese "kaze gusa?" (Sieb.); apparently the "koutsi gousa" or mouth herb of the Japanese, so named from being employed by the Aino women to paint their lips green; *tattooing* around with black material figures of flowers or other objects, and the same on the back of the hands and feet — (San-kokf transl. Klapr.).

Urtica mosl of Yeso and the neighbouring countries. Called "utarpe," or by the Ainos "mosl," and the fibres used by them for weaving coarse cloth — (San-kokf transl. Klapr., and Sieb. p. 169).

Broussonetia? ats'ni of Yeso and the neighbouring countries. A tree called "ats'ni" by the Ainos, the fibrous bark used by them for weaving coarse cloth — (San-kokf, and Sieb. p. 116 and 170).

He removed the *sword** of Amateraszu "to the temple of Atsuta, Owari, — where it still remains, but is never shown" (Jap. c. c.).

"Other almost equally ancient swords — are preserved in various places, but sword making in Japan is of comparatively much more recent origin" (Jap. c. c.).

"74 A. D." (Sm. b. d.), at Rome, censors appointed for the last time.

Fumaria officinalis of middle and Eastern Asia? Called in Britain *earth-smoke* or *fumitory*, by Treveris gr. herb. 171 "fume or smoke of the earth," in the Ortus sanitatis 176 "fumus terrae," in France "fume-terre" (Prior), in Italy "fumosterno" or "fumaria" (Lenz), in Greece "kapnia" (Sibth.), in which we recognize the ΦΟΥΜΑΡΙΑ of the Romans identified in Syn. Diosc. with the ΚΑΠΝΙΤΗC or ΚΑΠΝΟC among barley: — the "capnos" growing in gardens and barley fields of Pliny xxv. 99, may also be compared: F. officinalis is described by Brunfels i 99; is termed "f. officinarum" by Tournefort inst. 422; was observed by Lenz frequent in Italy; and is known to occur in cultivated ground throughout middle Europe (Curt. lond. ii. pl. 52, and Pers.). Eastward, was observed by Sibthorp, Chaubard, and Fraas, in vineyards and waste ground throughout Greece and the Greek islands: by Forskal, and Delile, in Egypt and called "sjætaredj," in which we recognize the "shahtarraj" of Ebn Masawia, Ebn Amran, Elisraeli, Rhazes, Elgafaki, and Ebn Baitar; "aqua" and "syrupus fumariae" are besides enumerated by Forskal mat. med. as employed medicinally in Egypt; and F. officinalis was observed by him in the higher mountain-region of Yemen and called "summina." Farther East, was observed by Thunberg frequent everywhere in Japan and called "karas no ninsin" or "fingosakf." By European colonists, was carried to Northeast America, where it has become a weed in waste and cultivated ground. The juice according to Lindley "was formerly administered in cutaneous diseases and obstructions of the liver." (See F. parviflora and F. capreolata.)

Geranium pratense of Europe and the adjoining portion of Asia. Called in Britain *crowfoot craneshill* (Prior), and the ΓΕΡΑΝΟΠΟΔΙΟΝ of Syn. Diosc. iii. 104 — (mistaken for Agrostemma coronaria?), may be compared: G. pratense was observed by Sibthorp around Constantinople; and is known to grow as far as Northern Japan (Sieb.). Westward, is termed "g. batrachioides gratia Dei Germanorum" by Tournefort inst. 266; and is known to grow throughout middle Europe as far as Britain (Cav. iv. pl. 87, Curt. lond. iv. pl. 49, and Pers.).

Erodium moschatum of Europe and the adjoining portion of Asia. Called in Greece "mōskō-labanōn," and the ΜΥΡΡΙC or ΜΕΡΤΡΥΞ of Syn. Diosc. iii. 121, — identified by Pliny xxvi. 68 with the "geranion" resembling "cicutae" but having a shorter stem, finer leaves, and agreeable in taste and odour, is referred here by Fraas: the "herbae moschatae" is mentioned by Nicolaus Myrepsus iii. 46: E. moschatum was observed by Sibthorp, Bory, and Fraas, frequent in the Peloponnesus; is known to grow also in Siberia (Pers.). Westward, is termed "acus moschata" by Euricius Cordus (Spreng.), "g. cicutae folio moschatum" by Tournefort inst. 268; and is known to grow in Barbary and throughout middle Europe as far as Britain (Jacq. hort. i. pl. 55, and Engl. bot. pl. 902). By European colonists, was carried to Austral Africa, Brazil, and Peru (Pers.).

Berberis vulgaris of Europe and the adjoining portion of Asia. Called in Britain *barberry* or *berberry* (Prior), in France "epine-vinette" (Nugent), in Italy "berberi" or "crespino" or "trespino" (Lenz), in Greece "oxuakantha" (Sibth.); in which we recognize the ΟΞΥΑΚΑΝΘΑ of Syn. Diosc. i. 123, — identified by Serapion with the "amir beris" or "berbaris" or "atsfar;" the "amyrberis" is mentioned by Avicenna (Prior), and the "azrur" by Ebn Baitar: B. vulgaris was observed by Sibthorp, and Chaubard, in the Peloponnesus; is known to grow on Lebanon (Pers.); and its fruit, imported "from Greece," is enumerated by Rhazes, Alpinus, and Forskal mat. med. as employed medicinally in Egypt. Westward, the "spina appendix" having according to Pliny xxiv. 70 scarlet berries called "appendices," is referred here by writers: B. vulgaris is described by Matthaeus Sylvaticus 38, Valerius Cordus, and Gerarde; is identified with the "amyberberis" of the Arabs in the Ortus sanitatis 55 (Prior); is termed "b. dumetorum" by Tournefort inst. 614; is known to grow in Italy and throughout middle Europe as far as Norway (A. Dec.), but is regarded by Watson as perhaps exotic in Britain. By European colonists, was carried to Northeast America, where it has become naturalized from Newfoundland to the environs of Boston. The bark according to Lindley

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* *Magnolia hypoleuca* of Japan, as far as Yeso. Called by the Ainos "ikajubni" (Sieb.), in Japan "honoki," and possibly as early as this date used for scabbards by the Japanese — (see Jap. centen. comm. 31 and 88); by the Ainos, for quivers (Sieb.).

Isolepis sp. of Japan. A rush from early times used for "mattings of better quality" in the province of Bingo — (Jap. centen. comm. 74).

Hydropyrum latifolium of Japan. From early times used in Japan "for commoner mattings" — (Jap. centen. comm. 74). The plant, from transported specimens, described by Grisebach.

is "astringent," and "a refreshing drink prepared by crushing the fruit in water is considered serviceable in fevers." (See Cratægus pyracantha).

Hippuris vulgaris of Northern climates. Called in Italy "coda di cavallo" (Lenz), in Britain in old herbals "female horsetail," and by modern botanists *mare's-tail* (Prior), the ΓΥΝΟΝ or ΕΚΥΤΙΟΝ identified in Syn. Diosc. iv. 47 with the CΑΛΙΞ.: ΕΚΥΝΑ of the Romans, — may be compared: H. vulgaris has not been observed in Greece, but is known to grow from "Lat. 44°" in Italy throughout middle and Northern Europe as far as Lapland, the Shetland Islands, and Iceland (Hook., Dec., Fries, Bertol., and A. Dec.), is figured in manuscripts T and G of the latin Apuleius 40, and is described by Matthioli p. 676, and Dodoens p. 113 (Spreng.). Eastward, is known to grow in the river Terek, and from Affganistan throughout Siberia to the mouths of the Obi and Lena and to Kamtschatka. Farther East, is known to grow from Bering's Straits and "Lat. 60°" to Norfolk Sound, the Saskatchewan, Newfoundland (Mert., Drumm., and Hook.), Labrador (Mey.), and Greenland (Wats.); was observed by myself at the Southern extreme of Nova Scotia, by Eaton in "Lat. 43°" in the Hudson river, and by Short in Kentucky. In the Southern Hemisphere, was observed by J. D. Hooker fl. ant. ii. p. 73 at the abandoned settlement at Port Famine in the Straits of Magellan.

Linum Gallicum of the Mediterranean countries. Called in Greece "linōn" (Sibth.), in Italy "lino silvestre" (Riccio, and Targ.), and possibly the ΛΙΝΟΝ: ΑΓΡΙΟΝ identified in Syn. Diosc. ii. 125 with the ΛΙΝΟΥΜ: ΑΓΡΕCΤΕΜ or ΛΙΝΟΜΥΡΟΥΜ of the Romans: — L. Gallicum is termed "lino salvatico" by Matthioli (Targ.), "L. sylvestrę minus luteum annuum folio latiore" by Tournefort inst. 340, "L. maritimum" by Lamarck fl. fr., and is known to grow from Montpellier to the hills near Genoa (Ger. prov. pl. 15, Viviani, and Pers.); was observed by Sibthorp, and Chaubard, from the Peloponnesus to the Greek islands.

Iberis amara of the Mediterranean countries. Called in Germany "bitterer bauernsenf" (Fraas), and the CΙΝΗΠΙ: ΑΓΡΙΟΝ or CΙΝΗΠΙ: ΠΕΡCΙΚΟΝ of Syn. Diosc. ii. 185 — may be compared: I. amara is described by Linnæus; was observed by Fraas not rare in Greece; by Lenz, to all appearance wild in Italy; is known to grow as far as Switzerland and Germany (Crantz, and Pers.); but in Britain occurs only in cultivated ground (engl. bot. pl. 52, and A. Dec.).

Picridium perenne of the East Mediterranean countries. Called in Greece "agria pikralitha" (Fraas), and the ΑΓΡΙΑ: ΠΙΚΡΙC of Syn. Diosc. ii. 159 — may be compared: P. perenne is described by Sprengel; and was observed by Fraas frequent in rocky situations in and around the Peloponnesus.

Rhinanthus minor of Northern and Subarctic climates. Called in Britain *rattle-box* or *yellow rattle* (Prior), in Italy "cresta di gallo" (Lenz), in which we recognize the ΚΡΙCΤΑ: ΓΑΛΛΙΝΑ ΚΕΛ of the Romans in Syn. Diosc. iv. 60, — or the "crista" described by Pliny xxvii. 23 as having leaves that resemble a cock's comb, a slender stem, and pods containing black seeds which when placed under the eyelids traverse around and finally come out: R. minor, distinguished by C. Ch. Gmelin (Steud.), is known to grow on the Appenines and in Spain, and throughout middle and Northern Europe as far as Lapland and Iceland (Ehrh. 46, Fries, Hook., and A. Dec.). Eastward, has not been observed in Greece, but is known to grow on the Taurian mountains and in Persia and throughout Siberia as far as Lake Baikal (Gmel., Pall., and Bieb.). Farther East, was observed by Chamisso on Unalascha; by Scouler on the Lower Columbia, by Drummond on the Rocky mountains; is known to grow also from Slave Lake and Fort Franklin throughout Canada to Newfoundland and Greenland (Hook., and Wats.); has been observed by myself in grass-grown clearings from the Lower St. Lawrence to Salem in New England, and is known to occur as far as Lat. 42° at Plymouth (A. Gray).

Rhinanthus alpinus of Eastern Europe. The "alectorolophos" supposed by Pliny to be identical with the Italian plant, — mentioned also by Aelian (Ainsw. dict.), is referred here by Fraas: R. alpinus is described by Baumgarten, and was observed by Fraas on mount Pindus at the elevation of "four thousand" feet.

Veronica anagallis of Northern climates. Called in Britain by Lyte *water-pimpernell* (Prior), in accordance with the ΑΝΑΓΑΛΛΙC: ΕΝΥΔΡΟC of Syn. Diosc. ii. 153 — indirectly referred here by Fuchsius (Spreng.): V. anagallis was observed by Forskal, Sibthorp, and Chaubard, frequent in rills and ditches from the Peloponnesus to the Greek islands and Smyrna; is known to grow also from Northern Hindustan throughout middle Asia to China and Kamtschatka (Gmel., Ledeb, and Benth.), and was observed by Thunberg in Japan, called there "kalen so." Southward from Greece, the "karrat elain" of Gafeki, and Ebn Baitar, is referred here by Sontheimer: V. anagallis was observed by Delile around Rosetta, is known to grow on mount Sinai (Benth.), was observed by Forskal among the mountains of Yemen, and is known to grow in Abyssinia (Rich.). Westward, is termed "v. aquatica major et minor folio oblongo" by Tournefort inst. 145; and is known to grow in Italy, Algeria, Portugal, the Canary Islands, Madeira, the Azores, and throughout middle and North-

ern Europe as far as Sweden and Iceland (Brot., Savi, Wats., Hook., and A. Dec.). Farther West the "blew-flowered pimpernel" was observed by Josselyn in New England prior to 1670; V. anagallis is known to grow throughout Canada and our Atlantic States as far as South Carolina and Texas (Beck, Berland., and Hook.), also on the Platte, the Rocky mountains (E. James, and Drumm.), and along the Pacific coast to Sitka and Norfolk Sound (Cham., Mert., and Bong.). Probably by European colonists, as suggested by Bentham, carried to Austral Africa, where it continues rare (A. Dec.).

Veronica beccabunga of Northern climates. Called in Britain *brooklime*, in Old English "brok-lempe" or "brok-lympe" (Prior), in Icelandic "lemiki" (Cockayne), by the Turks "becabunga," and possibly included in the "anagallis ĕnuthrōs" of Syn. Diosc.: — V. beccabunga was observed by Sibthorp, and Chaubard, in the outflowing water of springs from Constantinople to the Peloponnesus; is known to grow also on Caucasus, and from Cabul and the Himalayas throughout Siberia to Behring's Island (Gmel., Bieb., and Ledeb.). Southward from Greece, is enumerated by Clot-Bey and Figari as observed in Egypt; and is known to grow on the mountains of Abyssinia (A. Dec.). Westward, the "hleomoce" growing in brooks of the Anglo-Saxon Leechbook i. 38. 4 is referred here by Cockayne: V. beccabunga is described by Fuchsius 725; is termed "v. aquatica major folio subrotundo" by Tournefort inst. 145; and is known to grow in Italy, Algeria, Spain, Portugal, and throughout middle and Northern Europe as far as Finland and Sweden in "Lat. 63°" and Iceland (Savi, Brot., Hook., and Wahl.). Farther West, is known to grow from Norway House throughout Canada and as far South as Lat. 40° in our Atlantic States (Hook., and Conrad).

Cyclamen Europaeum of the West Mediterranean countries. Called in Spain "pan de puerco," in France "pain de pourceau" (Spreng.), in Italy "pamporcino" or "artanita" or "ciclamino" (Lenz), in which we recognize the "cyclaminos" identified by Pliny xxv. 67 with the "tuber terrae;" the ΠΑΝΟΥΜ: ΤΕΡΡΑΙ or ΟΥΜΒΙΛΙΚΟΥΜ: ΤΕΡΡΑΙ or ΑΡΚΑΡΑ of the Romans in Syn. Diosc. ii. 193 — may therefore be compared: the "cyclaminos" is described by Pliny as growing in Italy in shaded situations and sometimes cultivated, but his account seems in part taken from Dioscorides: C. Europaeum is termed "c. orbiculato folio inferne purpurascente" by Tournefort inst. 154, and is known to grow in Italy and as far as middle Europe (Jacq. austr. pl. 401, Pers., and Lenz). Farther South, the "kuklaminōs" is identified by Apuleius with the "palalia;" C. Europaeum is called in Arabic "arthanitsa" (Spreng., the origin of one Italian name), and the "bachur mariam" of Ebn Baitar is referred here by writers.

Juniperus excelsa of the East Mediterranean and Tauro-Caspian countries. The ΑΡΚΕΥΘΟC: ΜΕΓΑΛΗ of Syn. Diosc. i. 103, resembling the ΚΥΠΑΡΙCCΩ and generally known, growing in rough broken situations and along the sea, — may be compared: J. excelsa is termed "j. sabina var. taurica" by Pallas; was observed by Fraas in Greece, often "twenty feet high;" by Grisebach, on the Greek islands and in Asia Minor (Daub.); is known to grow in Tauria and towards the Caspian (Willd., Pers., and Bieb.), also in Syria and Arabia (Lenz. See J. drupacea).

Orchis morio of Europe and the adjoining portion of Asia. Called in Britain *gandergoose* (Ainsw.), in Germany "knabwurz" (Fraas), in Greece "ōura tōu lagōu" (Sibth.); and the ΚΥΝΟC: ΟΡΧΙΝ of Syn. Diosc. iii. 131, — and Galen (Orib. xiv. 23), written "cynosorchin" by Pliny xxvii. 42, is referred here by writers: the "chusa elkalb" is mentioned also by Ebn Baitar: O. morio was observed by Sibthorp, and Fraas, frequent from Attica to Cyprus and Constantinople, its dried root cooked and eaten. Westward, the "altera satyrios orchis" considered "femina" and its root worn as an amulet according to Pliny xxvi. 62, may be compared: O. morio is described by Fuchsius p. 554 (Spreng.); is termed "O. morio fœmina" by Tournefort inst. 433; and is known to grow throughout middle Europe as far as Britain (Vaill. pl. 31, Curt. lond. iii. pl. 59, and Pers.).

Orchis mascula of Europe and the adjoining portion of Asia. Included at least in the old English *ragwort*, and German "ragwurz" (see Prior, and Lenz); and associated with the preceding as early perhaps as this date: — O. mascula was observed by Sibthorp, Chaubard, and Fraas, in the Peloponnesus and on Parnassus, its dried root cooked and eaten. Westward, a double root is attributed to the "satyrion" by Pliny xxvi. 62; O. mascula is described by Brunfels p. 104, and Fuchsius p. 554; is termed "o. morio mas foliis maculatis" by Tournefort inst. 432; was observed by Haller pl. 33 in Switzerland; and is known to grow throughout middle Europe as far as Scotland and Denmark (fl. Dan. pl. 457, Pers., and A. Dec.).

Orchis coriophora of Europe and the adjoining portion of Asia. Possibly included: — observed by Sibthorp, Chaubard, and Fraas, from the Peloponnesus to Constantinople, its dried root cooked and eaten. Westward, is termed "o. odore hirci minor" by Tournefort inst. 443, "o. cimicina" by Crantz; was observed by Haller pl. 34 in Switzerland; is known to grow in various parts of Southern Europe, and as far as the environs of Paris (Vaill. par. pl. 31, Jacq. austr. ii. pl. 122, and Pers.).

"75 A. D." (Sueton., Dio, Euseb., and Clint.), the temple of Peace near the Roman Forum completed; together with a colossal statue "one hundred and twenty-eight cubits" high.

Asperugo procumbens of Europe and the adjoining portion of Asia. Called in Britain *madwort* (Prior); in Greece "kŏllētzitha," and the ΑΛΥCCOC of Antonius of Cos, — described by Galen antid. ii. p. 168 as resembling horehound, more rough and prickly about the balls and the flower blue, may be compared: A. procumbens was observed by Sibthorp, Chaubard, and Fraas, in waste places in the Peloponnesus, Attica, and Cyprus. Westward, the "alysson" named from preventing madness from a dog's bite is further described by Pliny xxiv. 57 as differing from "rubiam" madder "foliis tantum et ramis minoribus:" A. procumbens is described by Gerarde; is termed "a. vulgaris" by Tournefort inst. 135; is known to occur in waste places in Italy and throughout middle Europe as far as Denmark (fl. Dan. pl. 552, and Pers.); but has not been observed in Ireland (Mackay, and Power), was known to Ray in only one locality in Britain, and is regarded by A. Decandolle as a naturalized exotic.

"76 A. D. = 'kian-tsou,' 1st year of Hiao-tchang-ti" or Tchang-ti, of the Han or Seventh dynasty — (Chinese chron. table).

"The same year" (Abyss. chron., C. Mull. geogr. min. p. xcvii, and M. Russel p. 109): Za-Malis succeeded by Za-Hakale, now king of Abyssinia. — He is called Zoskales in the Erythræan periplus.

The ΠΕΡΚΗ of the Rhine of Xenocrates aquat., — is referred by writers to the *perch*, P. fluviatilis, inhabiting the rivers and lakes of middle and Northern Europe.

"77 A. D." (Hieronym., and Clint), the celebrated rhetor Gabinianus teaching in Gaul.

"In this year" (Plin. i. 1, Sm. b. d., and C. Mull.), Pliny dedicating his "Naturalis Historia" to Titus, now for the sixth time consul.

In the days of Pliny . . . , commerce with India in no year drained the Roman Empire of less than "five hundred and fifty millions of sesterces." (estimated by Major "at about £1,400,000"), the return being wares sold at fully one hundred times their prime cost.

The "jamben" of Pliny vi. 33 is identified by C. Muller (geogr. min. i. p. 169) with Yambo on the Red Sea. At Zanzibar the Soahili salutation is "yambo," and the word has appeared to me to belong to the Negro class of languages. The Arabs on the Red Sea and outer coast of Arabia doubtless held commercial intercourse with Zanzibar as early as the time of Pliny. (See Amomum zingiber.)

The city of "Omanæ" is mentioned by Pliny vi. 149 as one of the "oppidi Omanorum." The name may have been derived from the Persian deity "Omanōs," mentioned by Strabo xi. 8. 4 and xv. 3. 15. — In conversing with inhabitants of Mocha, I found the term "Oman" extended to the whole Eastern extremity of Arabia.

The ASTROBOLVS of Pliny, described as "a gem like a fish's eye," may be compared with the lens or hardened portion of the eye of *cuttle-fish*, Sepiadæ. Hemispheroidal pearl-like granules that seemed to have this origin, were observed by myself among gems exhumed in Egypt.

The earliest notice of SAPO *soap* is by Pliny; who terms it an "invention of the Gauls" (F. Adams): — "sapŏn" is also mentioned by Galen, Aretæus, and Paulus Aegineta; and "sabŭn," by Serapion, Avicenna, and Ebn Baitar.

Ranunculus polyanthemus of Western Europe. The POLYANTHEMVM, ulcerating according to Pliny xxvii. 90 and by some called BATRACHION, — is referred here by Linnæus, and Sprengel: R. polyanthemus is known to grow in France and middle Europe (Crantz, Pers., Gilib., Neck., and Steud.).

Actæa spicata of Europe and Northern Asia. Called in Britain *baneberry* (Prior), in Italy "barba di capro" (Lenz): the ACTAEA growing according to Pliny xxvii. 26 in deep-shaded rough watery places, its stems geniculate and ASPERIS, berries soft SEMINE·NIGRO, — is referred here by writers: A. spicata is termed "christophoriana vulgaris nostras racemosa et ramosa" by Tournefort inst. 299; is known to grow in Italy, Switzerland and throughout middle and Northern Europe (Hill herb. p. 320, Hall. helv. 1076, fl. Dan. pl. 589, and Pers.). Eastward, was observed by Sibthorp in wooded situations on the mountains of the Peloponnesus; is known to grow also on Caucasus and in Siberia (Lindl.). The roots according to Lindley are "antispasmodic, expectorant, astringent."

Fumaria capreolata of the Mediterranean countries. Called in Greece "staktĕri" ashes, or "kapnōhōrtōn" (Sibth.), in which we recognize the CAPNOS·PRIMA or PEDES·GALLINA CEOS growing according to Pliny xxv. 98 on walls and along hedges, its branches extremely slender, flower PVRPVREO·VIRIDIS, and juice removing dimness from the eyes: — the "kapnōs hĕlithōniōn" of the collyrium of Martianus is mentioned by Aetius ii. 3. 109 and iii. 2 (Dod.): F. capreolata is termed "f. viticulis et capreolis plantis vicinis adhærens" by Tournefort inst. 422; is known to grow in Italy and Southern France, and even in England (Curt. lond. vi. pl. 47, Pers., and Lenz). Eastward, was observed by Sibthorp, and Chaubard, on walls and in cultivated ground in Greece and on the Greek islands: and by Forskal, and Delile, around Alexandria and Cairo. (See F. parviflora).

Elatine hydropiper of Western Europe. Called in Britain *water-wort* or *water-pepper* (Prior), and the CALLITRICHE hot to the taste according to Pliny xxv. 86, growing in wet shaded situations, its leaves lentil-like, stems resembling a slender rush, and root diminutive, — may be compared: "waeter-wyrt" is mentioned in the Anglo-Saxon transl. Apul. 48; "piper aqua." is enumerated among potherbs by Franciscus Pedemontium; and E. hydropiper is known to grow throughout middle Europe (Vaill. par. pl. 2, Hoffm. germ., Schuhr pl. 109, and Pers.).

Sinapis juncea of Eastern Asia. The *Indian mustard* is called in Egypt "kabar" and the seeds "khardel" (Forsk., and Del.), in Sanscrit "sarshapa" (J. F. Wats.), in Hindustanee "sarsaf," in Bengalee "sarshapa" or "sarshya" (D'roz.) or "rai," in Tamil "kudaghoo" (Drur.); and the third or GRACILE kind of SINAPI, mentioned by Pliny xix. 54 to xx. 87, as well as the mustard seed brought from Egypt. — may be compared: S. juncea was observed by Delile in the cultivated fields of Egypt. Eastward, the protecting flour on a boy's forehead mentioned by Bhavabhuti 9 — is referred by H. H. Wilson to white mustard; and the "sarshapa" as an external application is prescribed in the stanzas of the Ayurvedas (Susrut. chik. 5): S. juncea, according to Wight i. 20, and Drury, is cultivated all over India; is known to occur also in China (Pers.).

Dentaria enneaphylla of the mountains of Austria as far as Italy. The ENNEAPHYLLON having according to Pliny xxvii. 54 nine long leaves and exciting pustules if applied externally, — is referred here by writers: D. enneaphylla is described by Linnæus; was observed by Scopoli in Carniolia; and is known to grow in calcareous soil on the mountains of Austria as far as Silesia (Jacq. austr. pl. 316, Pers., Grabowsk., and A. Dec.).

Reseda alba of the Mediterranean countries. Called in France with other species "reseda" (Nugent), in Germany "resede" or "resedenkraut" (Grieb), in Greece "aggĕiōtra" or "ōhētra" (Sibth.), and the RESEDAM herb of Pliny xxvii. 106 — is referred here by Sprengel: R. alba is termed "r. foliis calcitrapæ flore albo" by Tournefort inst. 423?; was observed by Forskal among rubbish on Malta; and is known to grow in Barbary, Spain, and as far as Montpellier in France (Pers., Dec. fl. fr., and Steud.). Eastward, was observed by Sibthorp in the Peloponnesus.

Lychnis vespertina of Europe and the adjoining portion of Asia. The MALVNDRVM herb, growing according to Pliny xxvi. 24 in meads and grain-fields, its flower white and fragrant, — is referred here by Clusius, Sprengel, and others: L. vespertina is termed "l. sylvestris alba" by Tournefort inst. 334; and is known to grow throughout middle Europe as far as Denmark (fl Dan. pl. 792, and Engl. bot. pl. 1580), its flowers becoming fragrant at night (Pers.). Eastward, was observed by Sibthorp in shaded situations around Constantinople.

Lychnis dioica, having purple flowers — but usually regarded as not distinct: termed "l. sylvestris" by Dodoens pempt. 171, "l. s. seu aquatica purpurea simplex" by C. Bauhin pin. 204, "l. diurna" by Sibthorp oxon., and known to grow throughout middle Europe (Pers.): observed by Roehling in Germany (Steud.); by Linnæus, in the mountain-valleys of Lapland, but the flower more frequently white "quæ naturaliter purpurea est." Westward, "L. dioica" was observed by Sabine in Greenland (Hook.).

Lychnis flos-cuculi of Europe and the adjoining portion of Asia. Called in Britain *cuckoo flower* or *cuckoo gilliflower* or *ragged robin*, in France "robinet dechiré" (Prior), in Italy "oculus Christi" (Riccio, and Targ.), and the ASYLA or FERVS OCVLVS of Pliny xxv. 92, sought by cattle that have eaten the blue ANAGALLIDA, — may be compared: L. flos-cuculi is described by Tragus 403 (Spreng.); is termed "l. pratensis flore laciniato" by Tournefort inst. 336; is known to grow from Denmark throughout middle Europe (fl. Dan. pl. 590, Curt. lond. i. pl. 33, and Lam. fl. fr.); was observed by Sibthorp, and Chaubard, in moist grassy meads in the Peloponnesus.

Cucubalus bacciferus of Western Europe. The CVCVLVS of Pliny xxvii. 44, by some called STRVMVM, by others STRYCHNON, having black berries and its leaves used against the stings of serpents and scorpions, — may be compared: C. bacciferus was observed by Lucas Ghini (Dalech. 1429, and Spreng. comm. Dioscor. ii. 194); by Scopoli, in Carniolia; termed "lychnanthus volubilis" by S. G. Gmelin (Steud.); known to grow in woods as far as Paris and Maestricht (Mill. pl. 112, Pers., and fl. Bat.), and formerly on an islet in Thames (A. Dec.).

Gypsophila struthium of Spain. The imported root called in Italy "strutio" or "struzio" (Targ.), and possibly the RADICVLA mentioned by Pliny xix. 18 as preserved or stored for washing woolen garments: — G. struthium was sent by Ferrandus Imperatus to C. Bauhin, its root used by the Neapolitans as a substitute for soap, and believed to be the "khondus" of the Arabs (C. B. pin. 206, and Spreng.): G. struthium is termed "radicetta" by Matthioli (Targ.), is described also by Boccone mus. ii. pl. 122, and Barrelier rar. pl. 119, is known to grow in Spain (Pers.), and its root is imported from Spain into Italy (Targ.).

Silene spinescens of the East Mediterranean countries. The STRVTHION described by Pliny xix. 18 as SPINOSA·ET·CAVLE·LANVGINOSO spinous and with a woolly stem, — may be compared: S. spinosa, described by Sibthorp as having opposite spinescent branches and leaves pubescent on all sides, was observed by him in Asia Minor.

Saponaria vaccaria of Europe and the adjoining portion of Asia. The CONDVRDVM herb, belonging according to Pliny xxvi. 14 to the time of the Solstice and bearing a red flower, — is referred here by Sprengel: S. vaccaria was observed by Sibthorp frequent in Greece and on the Greek islands; is known to occur in the Ukraine and about Caucasus and along the Altaian mountains as far as Semipalatinsk (Kar. and Kir. in Ledeb.). Westward, is described by Lobel adv. p. 148; is termed "lychnis segetum rubra foliis perfoliatæ" by Tournefort inst. 335; and is known to occur in waste and cultivated ground throughout middle Europe as far as the Baltic and "Lat. 54° 30′," occasionally making its appearance in Britain (Wats., and A. Dec.). By European colonists, was carried to Northeast America, where it has been observed by A. Gray "escaped from gardens and becoming spontaneous in some places" in our Middle States.

Vicia cracca of Europe and the adjoining portion of Asia. A *vetch* called in Denmark "fuglevikker" (Cockayne), in Germany "vogelwicke," in Italy "vezzon" (Lenz), in Greece "agriōs vikōs" (Fraas): the CRACCA according to Pliny degenerating from legumes and grateful to pigeons — is referred here by writers; and the "fugeles bean" of gloss. Laud. 567, is referred here by Cockayne; V. cracca is described by Clusius ii. 235; is termed "v. multiflora" by Tournefort inst. 397; and is known to grow in Italy, Barbary, and throughout middle and Northern Europe as far as Lapland (Lam. fl. fr., fl. Dan. pl. 804, Pers., and Wats.). Eastward, was observed by Sibthorp, Chaubard, and Fraas, frequent from the Peloponnesus to Caria and Cyprus; and is known to occur in cultivated ground in the Tauro-Caspian countries (Bieb.). By European colonists, was carried to Iceland (Hook.), Greenland (Wats.), Newfoundland (Hook.), and thence perhaps to Canada and our Atlantic States, where it has been observed by myself, sometimes in wild situations, from the Lower St. Lawrence throughout New England; is known to occur also as far inland as Kentucky (A. Gray).

Anthyllis barba-jovis of the Mediterranean countries. The BARBA·IOVIS enumerated by Pliny xvi. 31 among woody plants avoiding water, and further mentioned as clipped in ornamental gardens into roundness, the leaves silvery, — is referred here by writers: A. barba jovis is termed "barba jovis pulchre lucens" by Tournefort inst. 651; was observed by Sibthorp on the isle of Capri, and is known to grow on rocks in other parts of Italy and as far as Spain (Mill. pl. 41, Lam. fl. fr., Pers., and Lenz). Eastward, was observed by Gittard on the mountains around Philiatra in the Peloponnesus (Bory).

Ononis natrix of Europe and the adjoining portion of Asia. Called in Italy "erba bacaja" (Lenz): the NATRIX herb of Pliny xxvii. 83, — is referred here by writers: O. natrix is termed "natrix" by Rivinus tetr. pl. 69, "anonis viscosa spinis carens lutea major" by Tournefort inst. 409; and is known to grow from Italy throughout France and middle Europe (Mill. pl. 37, Pers., and Lenz). Eastward, was observed by Sibthorp in the Peloponnesus, and along roadsides near Smyrna.

Cotoneaster vulgaris of Europe and the adjoining portion of Asia. The GALLICVM mentioned among the three kinds of MESPILIS by Pliny xv. 22 — may be compared: C. vulgaris is described by Linnæus; and is known to grow in Switzerland and on the Pyrenees and throughout middle and Northern Europe as far as "Lat. 58°" in Norway (fl. Dan. pl. 112, Pers., Fries, and A. Dec.). Eastward, was observed by Veit in Asia Minor (Fraas); and is known to grow on the mountains of the Crimea, Caucasus, and in Siberia (Ledeb.).

Pyrus (*Aria*) *torminalis* of Europe and the adjoining portion of Asia. Called in Italy "ciavardello" or "sorbo torminale" (Lenz), in which we recognize the TORMINALE described by Pliny xv. 23 as a fourth kind of SORBA, having the smallest fruit and leaves almost those of PLATANI, — referred here by writers: A. torminalis is termed "c. folio laciniato" by Tournefort inst. 633; is known to grow in Italy and Austria (Jacq. austr. pl. 443, Crantz, Pers., and Lenz); and was observed by Sibthorp on mount Athos and around Constantinople.

Sorbus aucuparia of Northern Europe and Asia. Called in Britain *mountain ash*; or *wild service tree* or *rowan* or *roan tree*, in the Northern counties *ran* or *royne*, in Danish and Swedish "rönn" or "runn" (Prior); and the SORBIS·TRITIS with which CINNABARI was adulterated in the days of Pliny xxxiii. 39 — may be compared: S. aucuparia has long been held sacred in the North, "supposed to have power to avert the evil eye," and its wood used for carving runes or charms upon (Jamieson, and Prior); is known to grow in Labrador (Meyer), Greenland (Wats.), Iceland, and from Cape North in Lat. 71° to 47° 30′ in Bretagne, and on mountains as far as Switzerland and the Pyrenees (Martins, and A. Dec.). Eastward, was observed by Sibthorp on mount Athos; is known to grow also on the mountains of the Crimea and Caucasus, and as far as Obdosk and beyond in Siberia (A. Dec.). By European colonists, was carried to Northeast America, where it continues to be planted for ornament.

Rosa villosa of Europe and the adjoining portion of Asia. The ALABANDICAM·VILIOREM ALBICANTIBVS·FOLIIS of Pliny xxi. 10 — is referred here by Sprengel: R. villosa is termed

"r. sylvestris pomifera major" by Bauhin, and Tournefort inst. 638, and is known to grow in the woods of middle Europe (Pers., and engl. bot. pl. 583); was observed by Sibthorp on mount Athos.

Rosa montana of Western Europe. A white-flowered species called in Italy "rosa di macchia" or "spine bianche" (Targ.), and the SPINA ALBA of Pliny xv. 34, its POMVM being the stem itself, — may be compared: R. montana is termed "r. myrtifolia" by the younger Haller, "r. oleicarpa" and "r. sepium" by Thuillier, "r. biserrata" by Merat, was observed by Villars in Dauphiny, by C. Ch. Gmelin near Baden and termed "r. agrestis" (Steud.); by O. Targioni-Tozetti, in open uncultivated places and along hedges in Italy.

Rosa pimpinellifolia of the Mediterranean countries. A small species called in Italy "rosa pimpinella" (Targ.), and the SPINEA or SPINEOLA of Pliny xxi. 10, a kind of rose with small leaves — (Ainsw.), may be compared: R. pimpinellifolia is described by Linnæus, and is known to grow in Southern Europe (Pers.).

Rosa alba of Western Europe. The PRAECOX CAMPANA rose of Pliny xxi. 10, one of the two CELEBERRIMA species, — is referred here by Sprengel: R. alba is described by Duhamel, Linnæus, and in fl. dan. pl. 1215; is termed "r. usitatissima" by Gatereau (Steud.); is well known in the gardens of Europe (Pers.); and was observed by Delile in gardens at Cairo.

Rosa Provincialis of Western Europe. Called in Britain *Province rose* from the village of Provins near Paris where it used to be cultivated (Prior), in France "roses pompones" (Pers.): the PRAENESTINA rose of Pliny xxi. 10, one of the two CELEBERRIMA kinds, — is referred here by Clusius (Spreng.): R. Provincialis is described by Ehrhart, Poiret, Dumont de Courset, and Roessig (Steud.); was observed by C. Ch. Gmelin near Baden; is known to grow also in Bohemia, Italy, France, and Spain (Pers.).

Rosa rubiginosa of Europe and the adjoining portion of Asia. Called in Britain *sweetbriar* (Prior), and the RVBORVM ROSA growing according to Pliny xxi. 10 and xxiv. 74 on the RVBO and even there having a pleasant odour, — may be compared: the "bramble flour that bereth the red hepe" of Chaucer 13676, may also be compared: the "swete brere" is mentioned by Turner pl.: R. rubiginosa is termed "r. sylvestris foliis odoratis" by Tournefort inst. 638, "r. fol. subtus rubiginosis" by Haller; and is known to grow throughout middle Europe as far as Denmark (fl. Dan. pl. 870, Lightf., Jacq. austr. pl. 56, and Pers.). Eastward, was observed by Sibthorp in the Peloponnesus. By European colonists, was carried prior to 1670 (Josselyn) to Northeast America, where it has become naturalized; was also carried to Hindustan, where it continues "in gardens, a delicate plant" (Graham); and to Burmah (Mason).

Geum urbanum of Europe and the adjoining portion of Asia. Called in Britain *avens* or *herb bennet*, by Topsell and Askham "avance," by Galfridus pr. pm. "avence," in mediæval Latin "avencia" or "avantia" (Prior), in Germany "nelkenwurz," in Italy "cariofillata" (Lenz), and the GEVM having according to Pliny xxvi. 21 slender black fragrant roots of an agreeable flavour, — is referred here by writers: the "herba benedicta" is mentioned by Platearius, and the "anancia" in the Ortus sanitatis (Prior): G. urbanum is termed "caryophyllata vulgaris" by Tournefort inst. 294, and is known to grow in Italy and throughout middle Europe as far as Denmark (Pet. h. brit. pl. 40, fl. Dan. pl. 672, and Pers.). Eastward, was observed by Forskal, Sibthorp, and Fraas, in shaded situations from Constantinople to mount Athos and Corax. The root according to Lindley is "astringent, and in some degree aromatic, said to give an agreeable clove-like flavour to beer and even to wine."

Mesembryanthemum Copticum of the Egyptian Desert. — The ACINOS EPIPETRON VOCANT that never flowers, enumerated by Pliny xxi. 52 among the esculent plants of Egypt, — may be compared: capsules of "M. geniculiflorum" were found by Forskal p. 98 soaked and dried by the Bedouins and the seeds separated for making bread, which however is not eaten by other Arabs; the plant was observed by him, growing in the Desert around the Pyramids, and called "ghasul" or "samhh;" and by Delile, not far from Cairo in the Desert. (See M. nodiflorum.)

Myrrhis temula of Western Europe. The ANTHRISCVS having medicinal properties according to Pliny xxii. 38, — is referred here by Dalechamp 791 (Linn.): M. temula is described by Morison 9, pl. 10, is termed "scandix nutans" by Moench, and is known to occur along waysides and in cultivated ground throughout Western Europe, the young umbels nodding. (Curt. lond. pl., Jacq. austr. pl. 65, and Pers.); was observed by Linnæus in Sweden; by Roth, in Germany; by Pallas, as far as Russia (Steud.).

Oenanthe phellandrium of Northern Europe and Asia. Called in Britain *water-fennel* (Prior), in Germany "weierfenchel" or "wilden fenchel" (Trag.); and the PHELLANDRION of Pliny xxvii. 101, growing in marshes, its leaf like APII, and its seed used against calculus and other affections of the bladder, — is referred here by writers: Oe. phellandrium is described by Tragus 427, and Matthioli 812 (Spreng.); is termed "phellandrium aquaticum" by Linnæus; is known to grow in Siberia and the Crimea (Lindl.), and throughout middle and Northern Europe (Engl. bot. pl. 684, fl. Dan. pl. 1154, Crantz, and Pers.). The plant according to Lindley is "poisonous like" Oe. crocata "but in a less degree."

Eryngium maritimum of the seashore along the Mediterranean and Atlantic as far as Denmark. Called in Britain *sea-holm* or *sea-holly* (Ainsw.), and the ERYNGE or ERYNGION distinguished by Pliny xxii. 8 as growing by the seaside, APII-leaved and more rigid, — may be compared: also the "hiringiu" identified with the "cardus marinus vel benedictus" by Symon Januensis sinon.: E. maritimum is described by Parkinson theatr. p. 988, Morison vii. pl. 36, and Tournefort inst. 327; and is known to grow on the seashore of Western Europe (fl. Dan. pl. 875, Engl. bot. pl. 718, and Pers.). Eastward, was observed by Forskal, Sibthorp, and Chaubard, in maritime sand from Constantinople to the Peloponnesus and Greek islands. Having according to Lindley "similar properties" with E. campestre "but in a less degree;" E. maritimum may furnish a portion of the "eryngium" root found by Forskal mat. med. employed medicinally in Egypt.

Cnidium silaus of middle Europe. Called in Britain *meadow saxifrage* or *pepper saxifrage* (Prior), in Germany "seselkraut" (Grieb), and the SILAVS growing according to Pliny xxvi. 56 in gravelly places along streams, a cubit high and resembling APII, cooked as an acid potherb and besides used medicinally, is referred here by writers: C. silaus is described by Tabernaemontanus, and Rivinus pl. 59; and is known to grow in moist situations from Switzerland and Southern France throughout middle Europe as far as Britain (Jacq. austr. pl. 15, Pers., and Spreng.).

Filago Germanica of Europe and the adjoining portion of Asia. Called in Britain *herb impious* (Prior), and the HERBA-IMPIA hoary with the aspect of RORISMARINI according to Pliny xxiv. 113, capitate and giving out branchlets that are capitate, like children rising above their parent, — is referred here by writers: F. Germanica is termed "f. seu impia" by Tournefort inst. 454; and is known to occur in pastures and cultivated ground throughout middle Europe as far as Denmark (fl. Dan. pl. 997, Lam. fl. fr., and Pers.). Eastward, was observed by Sibthorp, and Chaubard, frequent from the Peloponnesus to the Greek islands; and by Delile, around Alexandria and Cairo. By European colonists, was carried to Northeast America, where I have occasionally met with it in waste ground in our Northern and middle States.

Bellis perennis of Europe and the adjoining portion of Asia. Called in Britain *daisy*, in Old English and by Chaucer "da eseyghe," in Anglo-Saxon "dæges-eage" (Prior), in Germany "ganseblume" or "ganseblumchen" (Grieb), in France "marguerite" (Nugent), in Italy "margheritina" or "primo fiore" or "pratolina" or "bellide" (Lenz), in Greece "asprōlōulōutha," in which we recognize the BELLIS growing IN-PRATIS among grass according to Pliny xxvi. 13, its flower white ALIQVATENVS-RVBENTE to some extent blushing, and when mixed and smeared rendering ARTEMISIA more efficacious: — B. perennis is termed "masslieben premula veris" in the Ortus sanitatis pl. 333, "primula veris" by Brunschwygk ii. 8, and Fuchsius pl. 145, "fior di primavera" in French "marguerites" by Matthioli p. 653 (Prior), and is known to grow in grassy situations from Italy throughout middle Europe as far as Denmark (fl. Dan. pl. 503, and Pers.), extensively multiplied in consequence of the removal of the forest. Eastward, was observed by Sibthorp, and Chaubard, throughout Greece and the Greek islands. By European colonists, was carried to Northeast America, where it continues under cultivation only as a favourite greenhouse plant.

Hyoseris minima of Western Europe. A small annual called in Britain *swine succory* (Prior), a translation of the HYOSERIS of Pliny xxvii. 64: — H. minima is termed "arnoseris pusilla" by Gaertner pl. 157; was observed by Allioni in Northern Italy (Steud.); and is known to grow in sandy soil throughout middle Europe as far as Denmark (fl. Dan. pl. 201, Lam. fl. fr., and Pers.).

Hyoseris scabra of the Mediterranean countries. Possibly the plant in question, the name being of Greek origin, and the HYOSERIS described by Pliny as INTVBO-SIMILIS-SED-MINOR-ET-TACTV-ASPERIOR bruised and applied to wounds: — H. scabra is termed "hieracium minimum supinum tragopogoni capitulis" by Boccone pl. 106 as observed in Sicily; was observed by Allioni in Northern Italy (Steud.); is known to grow also in France and Barbary (Pers.); and was observed by Sibthorp in Caria and on Cyprus.

Bellium bellidioides of the Mediterranean countries. The BELLIO described by Pliny xxi. 25 as crowned with flowers in the form of little balls, — mentioned also by Apuleius Barbarus 57, is referred here by Billerbeck, and others: B. bellidioides is termed "bellis maritima minima roris solis folio Cyrnæa" by Boccone pl. 107; is described also by Tournefort inst. 491; and is known to grow in Italy, Corsica, and on the Balearic Islands (Pers.). Eastward, was observed by Sibthorp on the islands of Eubœa and Rhodes.

Doronicum scorpioides of the mountains of Western Europe. The SCORPION described by Pliny xxv. 75 as GENICVLATA and growing in the shade, — may be compared: D. scorpioides, distinguished by its geniculate root, is described by Matthioli p. 762, and Columna (Spreng.); and is known to grow on the mountains of Corsica and France (Pers., Mohl, and A. Dec.).

Callistephus Chinensis of Eastern Asia. Called in Britain *China aster*, in France "reine marguerite" (queen daisy, see Prior, and Graham), in Italy "adoni" or "adonide" (Targ.), in which we recognize the ADONIVM sown in the summer of Pliny xxi. 34: — C. Chinensis continues a

favourite garden flower; is described by Dillenius elth. pl. 34, and Knorr del. i. 3; was observed by Forskal in gardens at Constantinople; by Lush, at Dapooree near Bombay (Graham); by Thunberg, in vases in Japan, but no native name given. By European colonists, was carried to Northeast America, where it continues frequent in gardens.

Artemisia maritima of the North shore of the Mediterranean, and along the Atlantic as far as Norway. The second ARTEMISIA, described by Pliny as tender with more slender leaves and growing only in maritime situations, — may be compared: A. maritima was observed by Sibthorp on the shore of the Bosphorus, near Constantinople. Westward, is termed "absinthium seriphium belgicum" by Tournefort inst. 458; and is known to grow on the seashore of Italy and from Belgium to Norway (Engl. bot. pl. 1706, Pers. and Lenz).

Echinops ritro of Europe and the adjoining portion of Asia. Called in English *globe thistle:* the ECHINOPODE according to Pliny xi. 8 one of the two plants from which bees do not procure wax, — mentioned also by Plutarch frat. am. 13, is referred to this tribe by Tournefort: E. ritro is termed "ritro flor. caeruleis" by Lobel ic. ii. 8, is described also by Miller pl. 130, and is known to grow on barren hills in France (Lam. fl. fr., and Pers.). Eastward, was observed by Forskal at the Dardanelles; and by Gmelin ii. pl. 46, in Siberia. (See E. Graecus)

Inula bubonium of the Uralian plains. The ASTER AB ALIQVIBVS BVBONION of Pliny xxvii. 19 — is referred here by Scopoli and others: I. bubonium is described by Tabernæmontanus 543; was observed by Scopoli pl. 58 in Carniolia; by Jacquin app. pl. 19, in Austria; is termed "i. salicina" by Pallas (Steud.); and is known to grow as far as the river Donez and Tauria (Pers.).

Carduus erisithales of the mountains of Eastern Europe. The ERISITHALES of Pliny xxvi. 85, — is referred here by Sprengel, and others: C. erisithales is described by Linnæus; was observed by Scopoli in Carniolia; and is known to grow in subalpine meads on the mountains of Austria (Jacq. austr. pl. 312, Pers., and Steud.).

Carduus leucographus of the Mediterranean countries. The LEVCOGRAPHIS known to Pliny xxvii. 88 only as reported useful against spitting blood, — is referred here by Sprengel: C. leucographus is termed "cirsium maculis argenteis notatum" by Tournefort inst. 448; and is known to grow in Italy and Southern France (All. pedem. 529, and Pers.). Eastward, was observed by Sibthorp, and Chaubard, in places somewhat moist in the Peloponnesus.

Cerinthe maculata of Europe and the adjoining portion of Asia. The "leucographis" of Pliny — is referred here conjecturally by Dodoens pempt. v. 1. pl. 13: C. maculata is termed "c. quinquemaculata" by Wahlenberg; was observed by Allioni in Piedmont; by Pallas, and Bieberstein, in the Tauro-Caspian countries (Steud.).

Oxycoccus palustris of Northern climates. Called in Britain *cranberry* or *fen-berry* or *marsh-worts*, by Lyte vi. 11 "marrish whorts" (Prior): the SAMOLVM HERBAM growing according to Pliny xxiv. 63 in HVMIDIS wet situations, — is referred here by Ainsworth, and Billerbeck: O. palustris is described by Bauhin i. pl. 525; and is known to grow from Switzerland throughout middle and Northern Europe as far as Lapland and Iceland (Hook., Pers., Dec., and Wats.): and Eastward, throughout Siberia to Kamtschatka (Gmel.). Farther East, was observed by Chamisso on Unalascha, by Mertens at Norfolk Sound, by Drummond in Lat. 54° on the Saskatchewan; and is known to grow from Baffin's Bay and Greenland to Newfoundland (Lapylaie, and Wats.) and Lat. 43° in our Atlantic States.

Samolus Valerandi of Temperate Climates. Called in Britain *brook-weed* or *water pimpernell* (Prior), in Italy "samolo" (Targ.), and probably the "samolum" in question: — S. Valerandi is termed "s. valerandi" by Bauhin hist. iii. 791, "anagallis aquatica rotundo folio non crenato" by C. Bauhin pin. 252, and known to grow throughout Europe and Northern Asia (Tourn. inst. 103, fl. dan. pl. 198, Curt. lond. iv. pl. 20, Pers., and Wats.): observed by Linnæus, and Wahlenberg, on the seashore of Sweden; by A. Decandolle, inland as far as Switzerland; by Lemann, on Madeira; by Braun, on the Cape Verd Islands; was received by R. Brown from Bornou in Central Africa; by Decandolle, from North Africa; was observed by Forskal on Malta; by Sibthorp, and Chaubard, from Crete to mount Athos and the Bithynian Olympus; by Aucher 2597, in Persia; was received by Bieberstein from Tauria; by Ledebour from Lithuania and Siberia from the Southwest to the Southeast; by Duby from Coromandel in Tropical Hindustan. Westward, by Watson from the Azores; by Hooker from Canada and the Northwest coast of America; was observed by myself along the Atlantic from 43° to 38°; by Pursh, from Canada to Carolina; by Elliot, in South Carolina; by Chapman, in "brackish marshes, Florida to Mississippi, and northward;" by H. Little, near New Orleans; by Short, in Kentucky; by E. James, on the Canadian branch of the Arkansas. In the Southern Hemisphere, by R. Brown in Australia; by Drège, and Burchell, in Austral Africa; by Gay, near Coquimbo in Chili; and was received by Duby from Montevideo. Probably distributed through its seeds enduring transport by ocean currents.

Gentiana asclepiadea of the mountains of Southern Europe and the adjoining portion of Asia. Called in Switzerland "grosse bitterwurz," and the CALATHIANA of Pliny, a flower springing up in autumn without smell — (Ainsw.), is referred to this or an allied species by Gesner ii. fig. 82: G. asclepiadea was observed by Gesner in Switzerland, flowering in the autumn; is termed "g. asclepiadis folio" by C. Bauhin phyt. 343, and Tournefort inst. 80; is known to grow in the mountainous portion of Spain, Italy, and Austria (Pers.); and was observed by Sibthorp in woods on the Bithynian Olympus.

Vinca major of Western Europe. With V. minor called in Britain *periwinkle*, by Chaucer and other old poets "pervenke" or "pervinke" (Prior), in which we recognize the VINCAPERVINCA identified with the CHAMAEDAPHNE of the Greeks by Pliny xxi. 39 and 99, evergreen and employed for TOPIARIA ornamental garden-work, supplying the want of flowers, and having besides medicinal properties: the Latin name — is derived by Prior from "vincire" to bind, and "a garland of pervenke" is mentioned in the Ballad against the Scots (Rits. i. p. 33): V. major is known to grow wild in Italy and Southwestern France (A. Dec., and Lenz), is cultivated for ornament throughout Europe, and had become naturalized in Britain before the days of Ray. (See V. minor.)

Cynanchum (*Sarcostemma*) *pyrotechnicum* of the Egyptian and Arabian Desert. The SCORPIONEM·VEPREM·SINE·FOLIIS growing in Asia, further described by Pliny xiii. 37 and xxii. 17 as having the stem of asparagus and a single terminal spine, — may be compared: S. pyrotechnicum was observed by Forskal p. 53 everywhere in Tropical Arabia, and the pith used to receive the fire procured by rubbing together pieces of wood; was observed by Delile near Suez on the Red Sea, and called "mareh;" by myself, along the border of the Desert in Upper Egypt. (See Ephedra distachya).

Anchusa officinalis of Western Europe. Called in Britain *bugloss* (Prior), in Italy "buglossa" or "buglossa volgare" (Lenz), in which we recognize the BVGLOSSO of Pliny xxvi. 71 said to arrest intermittent fever if gathered and applied in a specified manner, — also the medicinal "vŏuglŏssŏn" of Galen, and the "buglossa" of Macer Floridus 34 referred here by Baudet: A. officinalis is described by Lobel nov. stirp.; is known to occur in waste ground throughout middle Europe as far as Denmark (fl. Dan. pl. 572, Pers., and A. Dec.), but is regarded by Watson and others as not indigenous in Britain. Farther South, "anchusa" root procured by way of Alexandria is enumerated by Forskal mat. med. as employed medicinally in Egypt; and the living A. officinalis according to Clot-Bey has been recently introduced. The "buglossum" of European shops is referred here by Lenz.

Echinospermum spinocarpos of Egypt. The LAPPAGO of Pliny xxvi. 65, distinguished as MOLLVGO and resembling the ANAGALLIDI but more branching, — may be compared: E. spinocarpos was observed by Forskal p. 41 at Alexandria, its leaves "mollia;" by Delile in the Desert on reaching Sâlehyeh; but is not known to yield a medicinal fetid juice, nor to grow North of Egypt.

Echinospermum lappula of Siberia. The LAPPAGO distinguished as ASPERVGO, resembling according to Pliny xxvi. 65 the preceding but with rougher leaves, — may be compared: E. lappula is described by Tragus 196, and Columna ecphr. pl. 179, is termed "buglossum angustifolium semine echinato" by Tournefort inst. 134; occurs along walls and in waste places from Northern Sweden throughout middle Europe, but only recently has been introduced into Britain (Haller helv. 589; Pers., and Bab.). Eastward, was observed by Sibthorp, and Chaubard, in the Peloponnesus; and is known to grow around Caucasus, and throughout Siberia (C. A. Mey., and A. Dec.). Probably by European colonists, was carried to Northeast America, observed by A. Gray in "waste places, common" in Central New York, by myself around Montreal, and according to A. Decandolle occurs in Oregon.

Convolvulus Cantabrica of the Mediterranean countries. The CANTABRICA of Pliny xxv. 55 — is referred here by writers: C. Cantabrica is termed "cantabrica quorumdam" by Clusius hist. ii. 224, "c. linariæ folio assurgens" by Tournefort inst. 83-4; is known to grow in Southern Europe and the neighbouring portion of Africa as far as Tauria (Pers.); was observed by Sibthorp, and Chaubard, from the Peloponnesus to the Greek islands.

Lamium maculatum of Europe and the adjoining portion of Asia. Called in Italy "ortica morta" or "lamio macchiato" (Lenz), in which we recognize the LAMIVM included among nettles by Pliny xxii. 16, and having ALBVM·IN·MEDIO·FOLIO that cures erysipelas; the LEVCE of Pliny xxvii. 77, resembling MERCVRIALI and called MESOLEVCON from a white line along the middle of the leaf, employed against fistula and cancer, — mentioned by Caelius Aurelianus as sometimes called "polium," is referred here by F. Columna i. p. 192, and Sprengel: L. maculatum is termed "l. alba linea notatum" by Tournefort inst. 183; is known to grow in Algeria, Italy, and throughout middle Europe as far as Sweden (Pers., and Benth.); was once introduced and cultivated in Britain, and within the present century has made its appearance springing up spontaneously in a few localities (Wats., and A. Dec.). Eastward, was observed by Sibthorp, and Chaubard, from the Peloponnesus to mount Athos; and is known to grow as far as the Altaian mountains (Benth.)

Lamium purpureum of Europe and Northern Asia. With other species called in Britain *deaf-nettle* or *dead-nettle* (Prior), in Germany "taubnessel" (Grieb), in Italy "lamio" (Lenz), and possibly one of the kinds mentioned by Pliny xxii. 16 as distinguished by the Romans: — the "urtica mortua" is mentioned in Ortus sanitatis; L. purpureum is described by Brunfels i. p. 153, and Tragus f. 2 (Spreng.); is termed "l. purpureum fœtidum folio subrotundo" by Tournefort inst. 183; and is known to occur in waste and cultivated ground from Italy throughout middle and Northern Europe as far as Lapland in Lat. 69° and Iceland (fl. Dan. pl. 532, Hook., and A. Dec.). Eastward, was observed by Sibthorp, and Chaubard, frequent from Constantinople to the Peloponnesus and Greek islands; by Bieberstein, in waste places along the Taurian mountains; and by Thunberg, frequent along roadsides in Japan and called "fiofuki" or "kakidosi." By European colonists, was carried to Northeast America, where it continues a weed in gardens in our Middle States, as yet rare (Darl.).

Salvia calycina of the East Mediterranean countries. A species of wild *sage* called in Greece "agria alisphakia" (Fraas), and the SILVESTRIVS kind of ELELISPHACOS mentioned by Pliny xxii. 71 — may be compared: S. calycina is termed "s. orientalis frutescens foliis circinatis acetabulis molucçæ" by Tournefort cor. 10; and was observed by Sibthorp, Chaubard, and Fraas, frequent in Attica and the Peloponnesus.

Stachys arvensis of Europe and the adjoining portion of Asia. Called in Italy "stache" (Sod., and Targ.); and possibly included in the STACHYS of Pliny xxiv. 86: — S. arvensis is termed "marrubiastrum vulgare" by Tournefort inst. 190; is known to occur in cultivated ground from Denmark to the Mediterranean (fl. dan. pl. 587, Curt. lond. iv. pl. 41, Villars delph., and Pers.); was observed by Sibthorp, and Chaubard, from the Peloponnesus to Caria. By European colonists, has been carried to Northeast America, found in "waste places E. Massachusetts, scarce" (A. Gray).

Scutellaria hirta of the mountains of Crete. The scordotin ALTERIVS GENERIS of Pliny xxv. 27 — is referred here by Honorius Bellus (Pona bald. pl. 93, and Sibth.): S. hirta is termed "cassida cretica minor catariæ folio flore subcæruleo" by Tournefort cor. 11; and was observed in shady places on the mountains of Crete by Sibthorp.

Teucrium spinosum of the West Mediterranean countries. The CVNILAGO MOLLIS having according to Pliny xx. 64 more hairy leaves and pricking branches, and emitting if bruised the odour of honey, — is referred here by Cornuti pl. 124: T. spinosum is mentioned by him in 1634 as recently brought from Spain, and is termed "scordium spinosum odoratum;" is termed by Tournefort inst. 205 "chamædrys multifida spinosa odorata;" and is known to grow on hills as well as in cultivated ground in Portugal and Spain (Barr. rar. pl. 202, Cav., and Pers.). Eastward, was observed by Sibthorp in cultivated ground around Smyrna.

Euphrasia odontitis of Europe and the adjoining portion of Asia. Called in Britain *eyebright cow-wheat* (Prior), in Germany "zahntrost" (Grieb): the ODONTITIS growing according to Pliny xxvii. 84 in meads CAVLICVLIS DENSIS AB EADEM RADICE, and having a diminutive purple flower, — is referred here by writers; E. odontitis is described by Gerarde p. 91; is termed "pedicularis serotina purpurascente flore" by Tournefort inst. 172; and is known to grow in Northern Italy and throughout middle Europe as far as Denmark (fl. Dan. pl. 625, Huds., Curt. lond. i. pl. 44, Pers., and Lenz). Eastward, was observed by Sibthorp, and Gittard, in the Peloponnesus and around Constantinople.

Scrophularia canina of Europe and the adjoining portion of Asia. The CANARIAM eaten by dogs according to Pliny xxv. 51, — may be compared: S. canina is termed "s. ruta canina dicta vulgaris" by Tournefort inst. 167; and is known to grow in Switzerland, Germany, and France (Schleich., Lam. fl. fr., and Pers.). Eastward, was observed by Sibthorp, and Chaubard, frequent from the Peloponnesus to Crete, and Cyprus, and called "skrōpithōhōrtōn."

Armeria vulgaris of Northern climates. Called in Britain *thrift* or *sea-gilliflower* (Prior), in Sweden "strandblomster" (Linn.), in Greece "hōlavrōhōrtōn" (Sibth.); and the STATICE SEPTEM CAVLIBVS of Pliny xxvi. 33, — "statika kōlluria" of Aetius, and "statikē pōa" of euporist. i. 116 and ii. 82, are referred here by Sprengel: A. vulgaris is mentioned by Anguillara 247 (Spreng.); is termed "gramen polyanthemum majus" by Dodoens pempt. 564, "armerius montanus tenuifolius major" by Clusius hist. i. 287, and is known to grow on the seashore and in exposed situations on mountains from the Arctic Ocean throughout Europe and Northern Asia (C. Bauh. pin. 211, Tourn. inst. 341, engl. bot. pl. 226, and Hook.): observed by Linnæus on the seashore of Sweden; by Brotero, in Portugal, both on the seashore and on mountains; by Decandolle, on the mountains of Switzerland; by Sibthorp, on the mountains of the Peloponnesus; by Pallas, at 67° on the Oby. Westward, by Sabine in Greenland; by Colmaster, in Labrador (herb. Collins); is known to grow along the Arctic American seashore (Hook.), and as far as Alaska (Wats.). Is besides cultivated for ornament in gardens, both in Europe (Linn. fl. suec.) and the United States.

Salicornia herbacea of the seashore of the Mediterranean and North Atlantic, and Interior salines throughout Northern America and Asia. Called in Greece "krithmōs" (Sibth.), and the CRETHMOS

AGRIOS of Pliny xxv. 96 and xxvi. 61, applied externally in affections of the eyes and having other medicinal properties, — may be compared: S. herbacea is termed "s. geniculata annua" by Tournefort cor. 51; is known to grow along the seashore from Sweden to the Mediterranean (fl. Dan. pl. 303, Engl. bot. pl. 415, and Wats.); was observed by Brotero in Portugal; by Desfontaines, in Barbary; by Sibthorp, frequent on the seashore of Crete and other Greek islands; and by Delile, on the Mediterranean shore of Egypt. Farther East, was observed by Bieberstein in salines along Taurus; by Pallas, on the shores of the Caspian; and by Gmelin, around salt lakes throughout Siberia. Westward from Europe, was observed by Lapylaie in Newfoundland; and is known to grow on our Atlantic seashore as far as Florida (Ell., Nutt., Chapm., and myself); as well as around Interior salines, at Onondaga towards Lake Ontario, and in Lat. 49° on Red river of Lake Winnipeg (Long's exp., Schw., and Nutt.). The plant according to Prior is called in Britain *glasswort* "from furnishing the kali for glass-making" called according to Guibourt "soda of Narbonne," and containing fourteen or fifteen per cent of the carbonate of soda (Lindl.).

Kochia scoparia of Central and Eastern Asia. Called in the gardens of Europe "belvedere" (Forsk.), by the Greeks "axuris" (Anguill.): the SCOPIA·REGIA of Pliny xxi. 15 and xxv. 19 having strong-scented leaves, — is referred here by Sprengel: K. scoparia is described by Anguillara p. 290, and Dodoens pempt. pl. 101; is termed "ch. lini folio villoso" by Tournefort inst. 506; is known to occur in Carniolia (Pers.), and around Constantinople (Sibth.), was observed in gardens there by Forskal; and by Bieberstein, in the Tauro-Caucasian countries. Farther East, is known to grow in Songarian Tartary (Sievers, and Pall.); and in China (Pers.); was observed by Kaempfer, and Thunberg, in Japan, employed medicinally and called "tsisu" or usually "fawa kingi" or "niwa gusa" or "fooki gusa."

Atriplex hastata of maritime and subsaline situations in Northern climates. The ALIMON·SILVESTRI of Pliny xxii. 33 having TENVIORA thinner leaves and more powerful medicinal properties, — may be compared: A. hastata is described by Morison v. pl 32; was observed by Delile on the Mediterranean shore of Egypt near Damietta; by Sibthorp, on the shore of the Greek islands; by Gmelin, and Pallas, from the Caspian to the salt lakes of the Yenisei; and is known to grow from the Mediterranean along the Atlantic as far as Britain and Iceland (Sm. in Engl. bot., Pers., Hook., Dec., and Wats.). Farther West, is known to grow along the Atlantic shore of North America from at least 44° to 34°, extending inland sometimes to situations hardly saline (Walt., Pursh, A. Gray, and myself). "A. rosea," termed "a. sylvestris fructu roseo compresso" by C. Bauhin pin. 119, and known to grow in Southern Europe (Pers.), was observed by Bory frequent in the Peloponnesus.

Amaranthus tricolor of Tropical Eastern Asia. Called in Britain *florimer* or *floramor*, in France "fleur d'amour" (Prior): the GROMPHAENA having leaves according to Pliny xxvi. 23 ALTERNIS·VIRIDIBVS·ROSEISQVE, and used against spitting blood, — may be compared: the "gelisia" of Hildegarde ii. 153 is referred here by Sprengel: A. tricolor is described by Lobel pl.; was observed by Forskal in gardens at Constantinople; and the "bustan abruz" of Elmadshusi, and Soliman Ben Hassan, identified by Ebn Baitar with the "dadschdsch elemir" of the Persians, is also referred here by Sontheimer. Eastward, A. tricolor was observed by Graham "in gardens" at Bombay; by Roxburgh iii. 668, in Bengal; by Thunberg, in Japan; by myself, on the Feejee Islands, aboriginally introduced. "A. melancholicus," received by Linnæus from "India orientali" (Willd. pl. 9. f. 18, and Pers.), and cultivated in the gardens of Europe (Moench) and Northeast America (A. Gray), is regarded as a variety only (A. Dec.).

Polygonum bistorta of Europe and the adjoining portion of Asia. Called in Britain *bistort* (Prior); and the DRACVNCVLVS having according to Pliny xxiv. 91 a root after the manner of a convoluted dragon, — may be compared: the "serpentaria viperina" of Apuleius Barbarus 5, is referred here conjecturally by Fraas: P. bistorta is described by Brunfels, Gesner hort. germ. 265, and Matthioli (Spreng.); is termed "twice-writhen" by Turner, "bistorta major" by Tournefort inst. 511; is known to grow throughout middle and Northern Europe as far as Denmark (fl. Dan. pl. 421, and Curt. lond. i. pl. 22). Eastward, was observed by Sibthorp on the Bithynian Olympus and in the Peloponnesus; "bistorta" root is enumerated by Forskal as used medicinally in Egypt; and the living plant according to Clot-Bey has been recently introduced there. According to Lindley, the plant is "a powerful astringent."

Rumex (*Acetosa*) *tuberosus* of the East Mediterranean countries. A species of *sorrel* called in Greece "xinitra" (Sibth.); and the ALIVD·HIPPOLAPATHVM of Pliny xx. 85, larger than the SATIVO kind CANDIDIVSQVE·AC·SPISSIVS and having RADICES, — may be compared: R. tuberosus is described by Dodoens 649; is termed "acetosa tuberosa radice" by Tournefort inst. 503; is known to grow in Italy (Pers., and Pollini); and was observed by Sibthorp, and Chaubard, from the Peloponnesus to Cyprus and Asia Minor.

Urtica dioica of Northern Asia or America. Called in Britain *nettle*, in Anglo-Saxon and Dutch "netel," in Denmark "naelde," in Sweden "naetla," in Germany "nessel," from supplying "the

thread used in former times by the Germanic and Scandinavian nations" and till a late period in Scotland and Friesland (Prior), in France "ortie" (A. Dec.), in Italy "ortica" (Lenz), in Greece "tziōuknitha" (Forsk.) or "tziknitha" (Sibth.); in which we recognize the VRTICA·SILVESTRI called CANIA described by Pliny xxi. 55 as more virulent with fringed leaves and even the stem stinging: — U. dioica is described by Brunfels, Fuchsius pl. 107, Tragus, Gesner, Turner, Matthioli, Lobel, Thalius, and Bauhin; is termed "u. urens maxima" by Tournefort inst. 534; was observed by Lenz frequent in Italy; and is known to occur about dwellings throughout middle and Northern Europe as far as Lapland and Iceland (fl. Dan. pl. 746, Pers., Hook., and Wats.). Eastward, was observed by Forskal, Sibthorp, and Chaubard, about dwellings and along roadsides from the Peloponnesus to Constantinople and Smyrna; by Hasselquist, and Clot-Bey, in Lower Egypt; is known to occur also along the Taurian mountains (Bieb.); was observed by Thunberg here and there in Japan, called "hatji kusa," and sought by bees; by Gmelin, throughout Siberia; but in Kamtschatka is regarded by Chamisso as exotic and introduced. Farther East, was known to Gmelin before 1743 as occurring on the neighbouring continent of America; but at Norfolk Sound was observed by Mertens only around trading establishments, has however an American aspect. By European colonists, was carried to Northeast America, where it continues in waste places in our Atlantic States and as far South as Kentucky (Short); to Brazil, observed by A. Saint-Hilaire in the outskirts of towns in the Interior (A. Dec.).

Aristolochia sempervirens of the East Mediterranean countries. The PLISTOLOCHIA or fourth kind of ARISTOLOCHIAE known to the Romans, having according to Pliny xxv. 54 numerous radical fibrils, and by some termed POLYRRHIZON (known therefore to the Greeks), — may be compared: A. sempervirens is termed "pistolochia altera" by Clusius hist. ii. 260, "a. pistolochia altera" by Tournefort inst. 162; and was observed by Sibthorp, and Chaubard, from the Peloponnesus to Crete and the Greek islands. Westward, is described by Sabbati hort. ii. pl. 82 (Pers.); and is enumerated among the officinal species by Lindley.

Pinus pinaster of the West Mediterranean countries. The PINASTER or PINVS·SYLVESTRIS growing according to Pliny xvi. 17 IN·PLANIS, and MIRA·ALTITVDINE exceedingly lofty, branching from the middle upwards, — is referred here by writers: P. pinaster is termed "p. maritima major" by Duhamel (Steud.); is described also in Lam. encycl. v. p. 337, and by Santi, and Lambert ix. pl. 4 and 5; is known to grow in Italy as far South as Genoa, also in Southern France and in Spain and Portugal (Tenore, Lenz, and Daub.). The tree according to Lindley yields "*Bordeaux turpentine*, which has the property of solidifying with magnesia."

Luzula maxima of Western Europe. The COMBRETVM described by Pliny xxi. 16 to 77 as resembling the BACCHAR and employed medicinally, its leaves attenuated into threads, — is referred here by Anguillara 179: L. maxima is termed "j. nemorosus latifolius major" by Tournefort inst. 246, "j. sylvaticus" by Hudson, Curtis, and Smith brit. p. 385; and is known to grow throughout middle Europe as far as Denmark (Retz fl. dan. 441, Roth germ. i. 157, Wulfen, Villars, and Pers.).

Crocus odorus of Italy and Sicily. The CROCVM·SILVESTRE of Pliny xxi. 17, the best kind but its cultivation hardly succeeding in Italy, — may be compared: C. odorus was observed by Bivona iii. pl. 2 in Sicily, is known to grow wild there, and according to Gussone i. pl. 11 yields *saffron* (Lindl.).

Orchis (*Habenaria*) *bifolia* of Europe and the adjoining portion of Asia. Called in Britain *butterfly orchis* (Prior), and the OPHRYS herb, according to Pliny xxvi. 93 like DENTICVLATO-OLERI and having two leaves, — may be compared: H. bifolia is termed "o. bifolia minor calcari oblongo" by Tournefort inst. 433; and is known to grow from Denmark throughout middle Europe (fl. Dan. pl. 235, Vaill. pl. 30, Hall. helv., and Pers.); was observed by Sibthorp in the environs of Constantinople.

Allium ursinum of middle and Western Europe. The allium SILVESTRE·QVOD·VRSI NVM·VOCANT·ODORE·MOLLI·CAPITE·PRAETENVI·FOLIIS·GRANDIBVS of Pliny xix. 34, — is referred here by Linnæus; and the "greata crauleac" of an Anglo-Saxon leechdom, is referred here by Cockayne i. p. 377: A. ursinum is described also by Bernhardi; is a vernal species known to grow in woods and moist grassy situations in Britain, France, and Denmark (fl. Dan. pl. 757, Lam., and Pers.).

Dactyloctenium mucronatum of Equatorial Africa. Called in Egypt "na'ym el-salyb" or "rigl el herbayeh" (Del.): the DACTYLON: ALTERO of Pliny xxiv. 119, a prickly grass resembling AIZOO and employed to cure whitlow and maladies around the nails, — may be compared: D. mucronatum is termed "gramen dactylon ægyptiacum" by Tournefort inst. 521; is known to grow in Barbary (Pers.); was observed by Sibthorp not rare in Greece; by Alpinus, Forskal, and Delile, in Egypt; by Forskal, farther South in Tropical Arabia; and is known to grow along the Atlantic in Equatorial Africa (Benth. fl. nigr. p. 566). Eastward, in the absence of Sanscrit names, one in Hindustanee is given by Roxburgh (A. Dec.); D. mucronatum is described by Rumphius vi. pl. 4;

was observed in Hindustan by Rheede xii. pl. 69; by Graham, "a very common grass on pasture grounds;" by myself, frequent in waste ground around Bombay: farther East, was observed by Mason in Burmah, but no native name is given. By European colonists, was carried to Northeast America, where it continues around dwellings and in cultivated ground in our Southern States as far as Virginia and Illinois (Walt., Mx., A. Gray, and Chapm.).

Eriophorum polystachium of Northern climates. The wool or Orchomenian flax procured according to Pliny xix. 2 from the panicle DVNTAXAT-PANICVLA of a reed-like plant growing in marshes — is referred here by Sprengel: E. polystachium is described by Tragus, and C. Bauhin (Spreng.); is known to grow from Lapland to Switzerland (engl. bot. pl. 563, and Wats.); was observed by Brotero in Portugal, by Bieberstein on Caucasus, and by Gmelin throughout Siberia. Westward, by Hooker on Iceland; by myself, along the Atlantic as far South as 42°; by A. Gray, in Central New York; by Muhlenberg, in Pennsylvania; by Chapman, "in the upper districts, Georgia."

Secale cereale of Northeastern Europe and the adjoining portion of Asia. Called in Anglo-Saxon "ryge" and in current English *rye*, in Welsh "rhyg," in Ancient Danish "rugr," in Lithuanian "ruggei," in Esthonian "rukki," in Russian "rosh," in Polish "rez," in old high German "roggo" (Prior) and in current German "roggen" (Grieb), in Celtic "secal" (Reynier) or "segal" (Theis) and in current French "seigle" (Nugent), in Italy "segala" or "segale" (Lenz), in Greece "sikali" or "vriza" (Fraas), in which we recognize the SECALE of Pliny xviii. 39, at TAVRINI Turin under the Alps called ASIAM — (a seeming indication of its origin): S. cereale is a Northern grain, cultivated as far as "Lat. 67°" (A. Dec.). Eastward, occurs along roadsides and in waste ground in Hungary and Transylvania (Sadler, and Baumg.); the "vriza" is mentioned by Galen alim. fac. i. 13 as a kind of grain known in Thrace; and S. cereale was observed by Chaubard, and Fraas, under cultivation in Greece. Farther South, is known to occur in Syria; and was observed by Alpinus in Egypt. Farther East, is called in Hindustanee "deogandum" in Bengalee "shasya bishesh" (D'roz.), but has not been met with in Hindustan by European observers. By European colonists, was carried to Northeast America, where it continues extensively cultivated in our Northern States; and to the Mauritius Islands, where it was observed under cultivation by Bojer.

Setaria glauca of Tropical and Subtropical Asia. A millet-like species called in Egypt "safia" or "sar afar" mouse-tail (Forsk.), and the MILIARIA HERBA according to Pliny xxii. 78 destroying millet, — may be compared (see Spreng.): S. glauca is described by Plukenet alm. pl. 190; was observed by Forskal on Malta; and is known to occur throughout middle Europe as far as Sweden, in cultivated ground and especially after harvest (Schreb. pl. 25, Pers., Beauv., and A. Dec.). Eastward, was observed by Forskal, and Sibthorp, from Zante to Smyrna; by Forskal, and Delile, from Damietta to Cairo; by Roxburgh, and Graham, in Hindustan; is known to occur also on Ceylon (Linn fl. zeyl.). By European colonists, was carried to Northeast America, where it continues in waste and cultivated ground extending along roadsides as far as Kentucky (Short), Arkansas (Nutt), and the Saskatchewan (Hook.).

Setaria viridis of Tropical and Subtropical Asia? Also closely allied, and possibly included with the preceding: — described in Johnson's Gerarde 17, observed also by Parkinson, and Ray, in waste ground in Britain (A. Dec.); termed "p. vulgare spica simplici et molliori" by Tournefort inst. 515; observed by Forskal near Marseilles; and known to occur with the preceding species throughout middle Europe as far as Denmark (fl. Dan. pl. 852, Curt. lond. iv. pl. 5, and Pers.). Eastward, was observed by Sibthorp in pastures and cultivated ground around Constantinople; and by Delile, at Rosetta in Egypt. By European colonists, was carried to Northeast America, where it continues "common in cultivated grounds" (A. Gray).

Ophioglossum Lusitanicum of the Mediterranean countries. The CERATIA of Pliny xxvi. 34 having a single leaf, a large nodose root, and used medicinally, — is referred to this genus by Billerbeck: O. Lusitanicum is described by Linnæus; is known to grow near Rome, also in Corsica, Tripoli, Algeria, Spain, and as far North as Brest and the outlying Glenan islets (Bory); was observed by Link near Lisbon; by Webb, on the Canaries and Madeira; and by Bory, in the Peloponnesus.

Ophioglossum vulgatum of Northern climates. Called in Britain *adder's tongue*, in Old manuscripts "nedderis-tonge" or "nedderis gres," in medieval Latin "serpentaria," in Holland "adderstong" (Prior), in Germany "natter zünglin" (Trag.), in Italy "herba senza costa" (Dod.), and the LINGVA HERBA or LINGVLACA of Pliny xxiv. 108 and xxv. 84, growing about springs and its root used against baldness, — is referred here by some writers: O. vulgatum from early times employed medicinally, was observed by Tragus i. pl. 106 in Germany; is described also by Baptista Sardus, and Dodoens pempt. i. 5. 21; and is known to grow throughout Northern Europe. Westward, was seen in New England 1669 by Josselyn, who doubted its being indigenous; by J. H. Emerton in 1872, in one locality near Salem (J. Robinson); by Conrad, in the environs of Philadel-

phia; by A. Gray in Central New York, in "bogs and meadows, not common;" by Chapman, "Tennessee, and northward;" and by Nuttall, on the Arkansas. *O. bulbosum*, seen by Walter in South Carolina, by Michaux, and Chapman, from Georgia and Florida to Louisiana, may prove distinct.

Marchantia polymorpha of Northern climates. Called in Britain *liverwort* (Prior): the LICHEN of Pliny xxvi. 10, an herb growing in stony places and having a single broad leaf at the root, one small stem with long pendent leaves, and used against the cutaneous disease bearing the same name, — is referred here by Sprengel and others: M. polymorpha is described by Brunschwygk ii. 11 (Prior); is termed "lichen fontanus major stellatus æquè ac umbellatus et cyathophorus" by Dillenius 523 pl. 76; was observed by Sibthorp from the Peloponnesus to Cyprus and Constantinople; and is known to grow throughout Europe. Westward, is also frequent in North America (Sullivant, and myself).

Ramalina fastigiata of Europe and Northern Asia. The BRYON HERBA CORALLINA ET MVSCVS IN ARBORIBVS of Pliny xxvii. 8 — (Billerb.), may be compared: R. fastigiata is termed "lichen cinereus latifolius ramosus" by Tournefort inst. 550, "lichenoides coralliforme rostratum et canaliculatum" by Dillenius pl. 23. f. 62; was observed by Sibthorp, and Bory, on rocks and trees in Greece and on the Greek islands; and is known to grow throughout Europe (Engl. bot. pl. 890).

Sticta pulmonacea of Northern climates. Called in Britain *tree lungwort* (Prior), and the PVLMONARIA HERBA LICHEN of Pliny xxvi. 4, — is referred here by Billerbeck, and others: S. pulmonacea is described by Matthioli p. 733 (Spreng.); is termed "l. arboreus sive pulmonaria arborea" by Tournefort inst. 549; is known to grow throughout middle and Northern Europe (Dill. pl. 29, Engl. bot. pl. 572, and Achar.). Eastward, was observed by Sibthorp, and Bory, from the Peloponnesus to Constantinople; and is known to grow in Siberia. According to Lindley, besides being "employed in pulmonary affections, its nutritious properties resemble those of Cetraria islandica; in Siberia it is used for giving a bitter to beer."

Evernia prunastri of Northern Europe and Asia. The LIMVS ARBORVM called LICHENA by the Greeks growing according to Pliny xxiii. 69 on the garden plum tree and employed medicinally against RHAGADIIS and CONDYLOMATIS, — may be compared: E. prunastri is termed "l. cinereus cornua damæ referens" by Tournefort inst. 549; was observed by Sibthorp, and Bory, on the branches of plums and other trees throughout Greece and around Constantinople; and is known to be frequent also on trees throughout Europe (Ach. syn. 245, and Engl. bot. pl. 859). According to Forskal p. 193, is imported in ship-loads from Greece into Egypt, and mixed in bread: and according to Lindley, "has a peculiar power of imbibing and retaining odours."

Agaricus integer of Europe and the adjoining portion of Asia. Called in Italy "rossola," and the poisonous mushroom described by Pliny xxii. 46 as DILVTO RVBORE, — is referred here by Lenz: A. integer was observed by him in Italy; is termed "a. emeticus" by Schaeffer i. pl. 15 and 16; and is known to grow in middle Europe (Sowerb. pl. 201). Eastward, was observed by Sibthorp on mount Parnassus and in the environs of Constantinople.

Agaricus alutaceus of Europe. The kind of FVNGORVM commended as safest by Pliny xxii. 47, MINVS DILVTO RVBORE, — is referred here by Lenz: A. alutaceus was observed by him in Italy, where it is called "rossola buona di gambo lungo" or "rossola mezzara" or at Verona "fungo rossetto."

Conferva rivularis of Northern climates. Called in North Italy "lino acquatico" or "conferva" (Lenz), in which we recognize the CONFERVA according to Pliny xxvii. 45 mostly peculiar to the rivers of the Alps, and in an instance under his own observation employed successfully, wound around the body and kept moist, to cure fractured bones: — C. rivularis is termed "c. fluviatilis sericea vulgaris et fluitans" by Dillenius xii. pl. 2; was observed in Greece by Sibthorp; and is known to grow throughout middle Europe as far as Britain (Dillw. pl. 39, and Engl. bot. pl. 1654).

Amyris heptaphylla of Eastern Hindustan. A shrub called in the environs of Bombay "karunphul" (Graham); in which we recognize the GARYOPHYLLON of Pliny xii. 15, produced in India and resembling grains of pepper, but larger and more fragile and imported for the sake of their odour: — A. heptaphylla was observed in Hindustan by Roxburgh, and Colebrooke (linn. trans. xv. p. 365); by Graham, in a garden at Bombay, "probably introduced from Bengal," the "leaves when bruised have the fragrance of fresh anise seed."

Calamus draco of the Malayan archipelago. Ascertained by Royle to yield the best "d'jurnang" or *dragon's blood*: the SANIEM DRACONIS used according to Pliny xxxiii. 38 as a pigment, and also medicinally, but sometimes confounded with and called CINNABARI a decided poison, — is referred here by writers: "kinnabari inthikōn" is mentioned in the Erythraean periplus, and as the product of trees on Socotra; and the resinous astringent substance called dragon's blood is men-

tioned also by Paulus Aegineta, Constantinus, and Arab medical writers (Royle fibr. ind.). C. draco was observed by Rumphius v. pl. 58 in the Malayan archipelago; and the *red ratan* of Burmah called "kyeing-nee," producing according to Mason v. 485 "a red exudation like dragon's blood," is regarded by him as probably identical. (See Dracæna draco).

Borassus flabelliformis of Tropical Eastern Asia. The *fan palm* is called in Hindustan "tarh" or "tar" (Graham, and Royle fibr.), and the TARVM brought according to Pliny xii. 44 by the Nabathean Arabs, — may be compared with the sweet and edible juice of its fruit; inspissated into solid plates after the manner of bdellium, at least on the Moluccas (Herbertus de Jager, Rumph. i. pl. 10, and Spreng.): the "taur" is mentioned in the Mahabharat conclud. sect. (D. Price in Orient. transl. lond.): B. flabelliformis was observed in Hindustan by Rheede i. pl. 9, and Roxburgh cor. i. pl. 71; by Graham, overshading cottages, "in elevated and hilly situations;" by myself, under cultivation; and according to Royle fibr., yields toddy, its young seeds are eaten, its leaves are made into fans called "vissaries," and are almost universally used for writing on with an iron style. Farther East, was observed by Mason v. p. 425 and 522 "exotic" in Burmah and called "htan," more "generally diffused than any other" palm, and by an exception "the orders that are issued from the Burmese courts are written on" its leaves; was observed by myself aboriginally introduced and cultivated and made into fans on the Feejean, Tongan, and Samoan Islands.

"78, midsummer" (Tacit., and Clint.), Julius Frontinus succeeded by Agricola, as Roman governor in Britain.

"The same year" (Elphinst. iii. 3 and iv. 2), the *Salivahana era*; named after the Hindu king reigning at Paitan on the Godaveri, — and continuing in use in the surrounding district "the Deccan" (compare also the Prome era).

"The division of India into four empires happened in the first century A. D." — (Wilford as. res. ix. p. 182).

Dowlutabad (not far from Paitan) may have been the real attraction: that the rocky sides of this mountain were already cut away to a perpendicular wall all around, — may be inferred from the name "Tagara" in the periplus of the Erythræan Sea, corresponding as remarked by writers with Deogiri or Dowlutabad (see Elphinstone). Dowlutabad was visited by Ebn Batuta.

Of the neighbouring cave-temples at Ellora, some may have been already constructed. The series is Braminical, distinguished by many-handed and many-headed personages and other evidence of Polytheism: including as if by an attempt at union a few cave-temples of the Budhist pattern,* devoid however of signs of acknowledgment by Budhists and of inscriptions in the "cave character." The Kailas temple hewn there out of the solid rock, the "splendid masterpiece of Brahminism" (according to Lübke and Lütrow) "is said to have been excavated and built during the earliest half of the ninth century."

"79 A. D." (Mason iii. 38), the *Prome era*; — used by the Burmese "about seven hundred years" (compare Salivahana era).

"June 23d" (Sueton., and Clint.), Vespasian succeeded by his son Titus, tenth Roman emperor. The hieroglyphic ovals of Titus occur on temples at Esneh and in the Oasis of Dakkeh; and his name, on coins issued in Egypt during each year of his reign.

"In the summer" (Tacit., and Clint.), Second campaign of Agricola in Britain.

"Aug. 24th" (Plin. Secund. vi. 16, Sueton., Dio, and Clint.), eruption of Vesuvius, overwhelming the cities of Herculaneum and Pompeii. (A striking chronological landmark; the brief reign of Titus, leaving slight room for error in date; the attendant death of Pliny, limiting his Encyclopedic summary of the state of human knowledge; while coeval illustration of the whole condition of society is accessible in the vast variety of objects disinterred. Seeds and fruits are included, which have been deposited in the museum of Naples, but I have not met with any published account of them).

Among the surgical instruments: the *catheter* — is figured by Vulpes pl. 3; relief afforded by using the catheter, is expressly mentioned by Aretaeus acut. ii. 9 (Cockayne):

An instrument for *tying arteries*, — very similar to the forceps used by the French surgeon who towards the end of the Sixteenth century revived the art (Vulp.): the practice of tying arteries during surgical operations, is mentioned by Archigenes (Cockayne).

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* *Ficus tsiela* of Hindustan. A species differing from the Banian tree in the fruit having no involucre, figured in the cave-temples at Ellora, — as observed by myself; also seen near Ahmednugger, growing around and overshadowing a temple of Krishna, evidently planted and regarded as sacred. F. tsiela was observed in Hindustan by Rheede iii. pl. 63, and Roxburgh; is described by Graham as "a large tree" called "datira," growing "on the Ghauts," and one "near Kennery caves;" and was observed by Rumphius iii. pl. 89.

VIII. THE EARLY CHRISTIAN PERIOD.

Two Heathen cities thus by extraordinary means have been preserved, and from about the latest moment possible: there are no traces of Christian relics, but perhaps at this very time Josephus was announcing the continued existence of the new religion.

Anastatica Hierochuntica of the North African and Syrian Desert. The BAAPAC herb described by Josephus bell. jud. vii. 23 as running away from him who tries to gather it, — may be compared: A. Hierochuntica being easily uprooted, and contracting in the form of a ball, is said to be sometimes driven by the wind over the sands of the Desert; in this state also, is imported as a curiosity under the name *rose of Jericho*. In Egypt, A. Hierochuntica is called "kaf maryam" (Mary's hand); in which we recognize the "kaff marjam" identified with Ebn Baitar with the "schadscharat elkaff" of S. E. Hasan (Ebn Joljol): the plant was seen by Forskal, Delile, and myself, in the Desert of Lower and Middle Egypt; and according to Forskal p. 117, in the dry contracted state is used superstitiously in parturition, facility being prognosticated according to quickness in unfolding when moistened. Farther West, A. Hierochuntica is known to grow in Barbary (Pers.). As transported to Europe, is described by Euricius Cordus, Valérius Cordus (Spreng.), Jacquin hort. pl. 58, and Lamarck ill. pl. 555; and by European colonists was carried to the Mauritius Islands, where it was seen under cultivation by Bojer.

"80 A. D." (Sueton., Dio, and Clint.), at Rome, the Great amphitheatre or the "colosseum" completed and dedicated by Titus. Baths also built by him.

"The same year" (Tacit., and Clint.), in Britain, Third campaign of Agricola; making known "new" tribes and nations.— Solinus' account of Britain, not earlier therefore than this date.

"81, Sept. 13th" (Sueton., Dio, and Clint.), Titus succeeded by his brother Domitian, eleventh Roman emperor. The hieroglyphic ovals of Domitian occur on temples at Philæ, Esneh, and Dendera, on a propylon at Thebes, and on obelisks (now in Rome and at Benevento in Italy): and his name, on coins issued in Egypt during each year of his reign.

Tamarindus Indicus of Tropical Africa and Arabia. The *tamarind* tree is called in Tagalo Pampango and Camarines "sampaloc" or "macasampaloc," in Bisaya "sampaloc" or "sambac" or "sumalagui" or "sampalagui" or "camalagui" (Blanco), in Burmah "mag-gee" (Mason), in Bengalee "tentool" or "tintil" or "tintiree," in Sanscrit "tintiree" or "tintri," in Hindustanee "amli" or "umli," in Telinga "chinta-chittoo" (Lindl.), in Tamil "poolie," in Malabar "balam poolie," in Canara "hoonise" (Drur.), in the environs of Bombay "umlée" (Graham), in Yemen "homar" (Forsk.), on Madagascar "monte" (Flac.) or "voua-matouri" (Boj.), in Equatorial Africa "looquajoo" (Grant); a hieroglyphic character (Leps. ausw. 14, Buns. and Birch) resembling a three-jointed pod, may be compared with the Egyptian "phōinianko̅," — translated "dactyli Indici" by Edwards: the "oxuphoinikon" is mentioned by Porphyrius, Oribasius, Nicolaus Myreps. i. 24, Actuarius, and Maximus Planudes; tamarinds by Mohammed kor. xxxiv. 15; the "tamr Hindi" by Abu Hanifa, A. Hassam, and Ebn Baitar; and "tamarendi" were seen by Marco Polo 184 in "Gozurat;" T. Indicus was seen by Belon, Alpinus, Forskal, Delile, and Clot-Bey, under cultivation in Egypt; by Forskal, everywhere wild among the mountains of Yemen; by Bruce, and Salt, on the Taranta Mountains of Abyssinia (Grev.); by Cailliaud iv. 323, quantities of the pods brought by the Darfour caravans; by Grant, growing in Equatorial Africa from "6° 46′ S. Rumuma to 4° N." on the Nile; by Flacourt, and Bojer, long known on Madagascar. Eastward, by Rheede i. pl. 23 in Malabar; by Graham, "common about villages" in the Bombay district; by myself to the end of my journey in the Deccan, frequent, but only planted and naturalized; by Ainslie, Roxburgh, Wight, and Drury, as far as Ceylon and Bengal; by Mason v. 457, in Tenasserim and Pegu, "exotic" and cultivated extensively by the natives for its leaves and fruit; by Blanco, well known on the Philippines; is described also by Rumphius ii. pl. 23. By European colonists, was carried to the Mauritius Islands (Boj.); and to Tropical America (Jacq. am. pl. 13).

Anthemis nobilis of Western Europe. Called in Britain *chamomile*, in France "camomille" (Nugent), at Smyrna "hamomilla" (Forsk.); and its flower seems to form a hieroglyphic character : powdered "hamomilla" flowers mixed with oil were applied as a medicinal ointment by Nechepson the Egyptian — (Aet., and Ruel iii. 68): the "hamaimelon" called by Archigenes "anthemitha" is mentioned as good for the headache by Galen comp. med. ii. 2: the "anthemision" of Alexander Trallianus viii. 2. 20, may also be compared: "A. chamomilla" having a paleaceous receptacle was observed by Forskal at Smyrna; the "babunaj" is mentioned by Ebn Baitar; dried flowers of A. nobilis were found by Alpinus employed medicinally in Egypt; and the living plant according to Clot-Bey has recently been introduced. Westward, the "anthemin" is identified by Macer Floridus 14 with our "chamaemelum" or "chamomillam:" A. nobilis is described by Lobel obs. 455 (Spreng.), and Blackwell pl. 526; and is known to grow wild in France and middle

Europe as far as Britain (All. ped. 673, Lam. fl. fr., Engl. bot. pl. 980, and Pers.). Chamomile flowers according to Lindley "contain a volatile oil, resin, and bitter extractive," and are stimulant and tonic.

"82 A. D." (Sueton., Plut., and Clint.), at Rome, the capitol which had been destroyed by fire, restored with increased splendour by Domitian.

"In the reign of Domitian" (Sm. b. d.), Plutarch lecturing on philosophy in Rome.

Lunaria rediviva of the Mediterranean countries. Called in Britain *satin-flower* or *honesty* (Prior): the CЄΛΗNΗ plant with which shepherds in the days of Plutarch inach. anointed their feet for protection against reptiles, — may be compared: L. rediviva is termed "l. graeca perennis" by Besler hort. Eyst. pl. 21, and was observed in the Peloponnesus by Sibthorp, and Chaubard. Westward, is described by Clusius hist. pl. 297; is termed "l. major siliqua longiore" by Tournefort inst. 218; is known to grow as far as the border of Germany, central France, and the Pyrenees (Pers., and A. Dec.), and is besides cultivated throughout Europe. By European colonists, was carried prior to 1670 (Jossel.) to Northeast America, where it continues under cultivation in gardens (A. Gray).

"83 A. D." (Sueton., and Clint.), Domitian's expedition into Germany and Dacia, against the Catti and Sarmati.

"The same year" (Tacit., and Clint.), Sixth campaign of Agricola in Britain; among the towns beyond "Bodotria" with an accompanying fleet examining the harbors; and a victory gained by him over the Caledonians.

"The same year" (Philostrat., Euseb., and Clint.), three delinquent Vestal virgins put to death. The making of *eunuchs*, also prohibited by Domitian.

"The same year" (Mason iii. 41), Adetya succeeded by Nagarisingna as king at Prome. Nagarisingna was the first conqueror; he carried on wars; and in his reign "Burmah" is first mentioned.

The first balhara or king of Guzerat may have been at this time reigning: — he is called Di-Saca or Deva-Saca in the Vansavali, and Dabshelim by the Muslims. His capital on the Narmada is called Minnagara in the Erythraean periplus as well as by Ptolemy, Mankir by Masudi, and at the present day Manhawer.

By his direction, Pilpai his prime minister wrote the Javidan-khird or the "will of Hushenk:" a work — that continues extant in Persian (Wilf. l. c.).

"86 A. D." (Euseb., and Clint.), beginning of the Dacian war. — In the course of four years, the Romans were worsted; Domitian at length consenting to pay an annual tribute to the Dacian king Decebalus (Sm. b. d.).

Hardly later than this year ("80 to 89 A. D.," C. Mull. geogr. min. p. xcvii), the Erythraean periplus written. Axum and its king Zoskales are mentioned; also a Hindu king Pandion.

The ΠЄΤΡΟC of the Erythraean periplus, regarded by writers as the nut of *Areca catechu*, implies the use of *betel:* a *Malayan* invention, — to the present day chiefly confined to men of the Malayan Race, well known however throughout Hindustan even among Muslims, but farther West making no progress among the Arabs and African tribes.

"87 A. D." (Alst. p. 142), the evangelist John writing his Third epistle; as shown by his naming Diotrephes.

"89 A. D. = 'young-yonan,' 1st year of Hiao-ho-ti" or Ho-ti, of the Han or Seventh dynasty (Chinese chron. table).

"In this year" (Abyss. chron., and C Mull. geogr. min. p. xcvii), Za-Hakale succeeded by Za-Demahé, now king of Abyssinia. — He reigned "ten" years.

"90 A. D." (Gell., Euseb., and Clint.), the mathematicians and philosophers, including Dion Chrysostomus, expelled from Rome and Italy by Domitian. The exiles assisted by Plinius Secundus iii. 11, in this year praetor.

"91 A. D." (Plin. Secund. iv. 11, Sueton., Euseb., and Clint.), the principal Vestal virgin Cornelia after having once received pardon, found delinquent a second time, and now buried alive.

"92, Nov. 29th, five hours before midnight" (Blair), occultation of the Pleiades by the moon, observed in Bithynia by Agrippa.

Clematis erecta of the Mediterranean countries. The ΛЄΥΚΟΥ: ΧЄΛΙΔΟΝΙΟΙΟ: ΠЄΤΗΛΑ of Pancrates, — and Athenaeus xv. 6. p. 469, may be compared: C. erecta is identified with the "flammula" of Platearius by Matthioli comm. iv. pl. 7, observed in Italy; is termed "c. sive flammula surrecta alba" by Tournefort inst. 294; is known to grow from Spain to Austria (All. 1078, Jacq. austr. pl. 291, Mill., and Pers.); was observed by Sibthorp, and Chaubard, from the Peloponnesus to mount Haemus: and its "powdered leaves" according to Lindley have been "used as an eschaotic" (see C. flammea).

"93 A. D." (Euseb., and Clint.), edict of Domitian prohibiting the planting of *grape-vines* in

cities. A revocation of the edict was procured soon afterwards by Scopelianus of Clazomenae, ambassador from the Greek cities of Asia.

"May" (Martial, and Clint.), the Sarmatian war, and departure of Domitian from Rome.

"94, January" (Martial, and Clint.), after "eight months" absence, return of Domitian to Rome.

Ferula glauca of the West Mediterranean countries. The FERVLAEQVE·TRISTES·SCEP TRA·PAEDAGOGORVM of Martial x. — is referred here by Tournefort voy. vi. p. 292: F. glauca was observed by Tournefort in Italy and Southern France; is termed "f. communis" by Gouan (Steud.); is known to grow also in Sicily (Pers.).

Bartsia alpina of the mountains of middle and Western Europe. An herb called in Britain *poly-mountain*, in medieval Latin "polium montanum" (Prior), and the "Martialis polium"—of Apuleius Barbarus 57, may be compared: B. alpina is known to grow on mountains from Switzerland and mount Baldo to Lapland (Crantz, Engl. bot. pl. 361, fl. Dan. pl. 43, and Pers.).

"95 A. D." (Iren., Euseb., and Clint.), the evangelist John living on the island of Patmos, not far from Ephesus.

Erodium ciconium of the Mediterranean countries. The name *stork's-bill* having extended to allied species in Britain (Prior), the ΠΕΛΑΡΓΙΤΙC herb prescribed by Asclepiades the younger—(Gal. comp. med. ix. 2) may be compared: E. ciconium was observed by Forskal, and Sibthorp, from Constantinople to the Peloponnesus; and by Forskal near Cairo in Egypt. Westward, is described by Boccone mus. ii. pl. 83; is termed "g. cicutæ folio acu longissima" by Tournefort inst. 268; was observed by Desfontaines in Barbary (Steud.); and is known to grow also in Italy, Spain, and Southern France (Cav. iv. pl. 95, and Pers.). "E. gruinum" regarded as perhaps not distinct, is termed "g. latifolium longissima acu" by Tournefort inst. 269, was observed by Sibthorp, and Bory, from Constantinople to the Peloponnesus, by Delile near Alexandria in Egypt, is known to grow also in Crete, Italy, North Africa, and Spain (Cav. iv. pl. 88, and Pers.).

"The same year" (Sueton., Dio, Euseb., and Clint.), by Domitian, T. Flavius Clemens consul for this year compelled to abdicate and put to death; and his niece Flavia Domitilla exiled for being a Christian. T. Flavius Clemens is regarded as the author of the "First epistle of Clemens Romanus," and as the bishop of Rome who succeeded Anegkletus and was succeeded by Euarestus. — In the continuation of the series by Irenaeus (Clint. iv. p. 177), Alexander is named as the fifth bishop of Rome, Xystus as "sixth," and Telesphorus as seventh.

"96 A. D." (Sueton., Dio, and Clint.), Domitian succeeded by Nerva, twelfth Roman emperor. The hieroglyphic ovals of Nerva have been found only on a small temple at Assuan or Syene.

"97 A. D." (Philostrat., and Clint.), the rhetor Nicetes of Smyrna sent into Gaul. At Rome, Frontinus (aquaed. 102) appointed "curator aquarum."

"98, Jan. 11th, five hours after midnight" (Blair), occultation of the star Spica Virginis by the moon, observed at Rome by Menelaus.

"Jan. 25th" (Chron. Pasch., and Clint.), Nerva succeeded by Trajan, absent at Agrippina (Cologne), as thirteenth Roman emperor. The hieroglyphic ovals of Trajan occur on temples at Dendera, Ombos, and Philæ.

"In the reign of Trajan" (Sm. b. d.), the Greek physician Archigenes practising in Rome. He is mentioned by Juvenal vi. 236 to xiv. 252.

Valeriana officinalis of middle Europe. Called in Britain *valerian;* in France "valeriane" (Nugent), in Germany "baldrian" (Grieb): the ΟΠΤΩ: ΚΑΡΠΑCΟΥ prescribed for curling the hair by Archigenes — (Gal. comp. med. i. 3), inducing sleep and strangulation according to the treatise Pharm. delet. 13, or "karpēsiōu" of Quintus, and Galen fac. simpl. vii. 14 and antid. i. p. 71, growing on the mountains of Pamphylia and brought from Pontus and in great quantities from Syria, resembling "phōu" in taste and effects but the odour more powerful, or the "karpēsian" of Paulus Aegineta, may be compared: valerian root is enumerated by Alpinus as employed medicinally in Egypt. Westward, V. officinalis is described by Brunfels append., and Columna (Spreng.); and is known to grow in situations more or less moist throughout middle Europe as far as Denmark (fl. Dan. 570, Pers., and A. Dec.). The "fetid roots" according to Lindley bring on "as is well known a kind of intoxication in cats, and in large doses occasioning in man scintillations, agitation, and even convulsions."

Salicornia Indica of the seashore of Western Hindustan. Called in the environs of Bombay "muchoor" (Graham); and the ΑΛΑ: ΙΝΔΙΚΟΝ of Archigenes — (Barton, and Spreng. comm. Diosc. p. 453) may be compared with the *barilla* or Carbonate of soda effloresced on the soil of Northwestern Hindustan (Royle) as well as procured from the ashes of this and other Salsolaceous plants: S. Indica was received by Willdenow act. berol. ii. pl. 4 from Tranquebar (Pers.); was observed by Graham "common on salt marshes" in the environs of Bombay, pickled by the natives, and furnishing "alkali used in the manufacture of soap and glass."

Salicornia brachiata of the seashore of Eastern Hindustan. Called in Telinga "quoiloo" (Drur.); and its ashes possibly included in the "ala inthikōn" of Archigenes: — S. brachiata was observed by Roxburgh, and Wight pl. 738, abounding in ground overflowed by the spring-tides from Coromandel to the mouths of the Ganges, and according to Drury "yields a barilla for soap and glass."

Salsola Indica of the seashore of Hindustan. A species of *saltwort* called in Telinga "yella-kura" (Drur.); and its ashes possibly included in the "ala inthikōn" of Archigenes: — S. Indica was observed by Graham "in salt marshes" in the environs of Bombay, its leaves eaten by the natives; by Roxburgh, and Wight pl. 1797, along the coast as far as Coromandel and the mouths of the Ganges; and according to Irvine, and Drury, yields the impure soda called "kharsuji," imported from Scinde and employed in the manufacture of soap and glass; the name "k'har" or "k'hari," in Bengalee "khyar," in Hindustanee "khar," is regarded by Royle antiq. 41 as the probable origin of the term "alkali."

Salsola nudiflora of the seashore of Hindustan. Called in Telinga "rawa-kadá" (Drur.); and its ashes possibly included in the "ala inthikōn" of Archigenes: — S. nudiflora was observed by Graham in salt marshes in the environs of Bombay; by Roxburgh, and Drury, from Travancore to Coromandel and the mouths of the Ganges, yielding "a kind of barilla used for making soap and glass."

"99 A. D." (Abyss. chron., and C. Mull. geogr. min. p. xcvii), Za-Demahé succeeded by Za-Awtét, now king of Abyssinia. — He reigned "two" years.

One hundred and thirty-second generation. A. D. 101, Jan. 1st, mostly beyond youth: the philosophers, Valerius Pollio, Epictetus, Favorinus, and Oenomaus; the astronomer Theon of Smyrna (Blair); the historians Philon Byblius, and Cephalion; the grammarians, Hermippus of Berytus, and Nicanor; the rhetors, Dionysius of Miletus, and Lollianus; other Greek writers, Aelianus Tacticus; the editors, Dioscorides the younger, and Artemidorus Capito; the musician Dionysius: the Latin writers, the satirist Juvenalis; the historians Suetonius, and Tacitus; and the grammarian Terentius Scaurus.

"In this year" (Abyss. chron., and C. Mull. p. xcvii); Za-Awtet succeeded by Za-Elawda, now king of Abyssinia. — He reigned "thirty" years.

"The same year" (Dio, and Clint.), expedition of Trajan into Dacia.

"103 A. D." (Dio, Vict., and Clint.), after subduing many nations beyond the Danube, peace granted by Trajan to Decebalus and the Daeians.

"104 A. D." (Clint.), letter of Plinius Secundus x. 97 respecting the Christians of his Province in Asia Minor. The reply of Trajan is also extant, and is much celebrated.

The Andra mentioned by Pliny "in the second century" as a powerful dynasty; — and "the name of Andre Indi, on the Ganges, in the Peutengerian tables" (Elphinst. iii. 3).

"The same year" (Mason iii. p. 42), in Burmah, destruction of the city of Prome.

"105 A. D." (Dio, and Clint.), by Trajan, a stone bridge built over the Danube, under the supervision of the architect Apollodorus of Damascus.

"October" (Dio, Chron. Pasch., and Clint.), the *Era of Petra and Bosra.* The Roman governor of Syria Cornelius Palma extending his conquests over Petra the chief city of Arabia Petræa.

Posidonius the younger about this time writing. He quotes Archigenes, and describes the glandular or true *plague;* a disease mentioned also about this time — or a little later by Rufus Ephesius (Greenhill in Sm. biog. dict.).

Curcuma zerumbet of Tropical Hindustan and Java. The imported product is called in European drug-shops *zedoaria longa*, in Persian "zerumbad" (Lindl.), in Arabic "zarnab;" and the ΑΡΝΑΒΩ of Posidonius the younger, — Aetius, and Paulus Aegineta, is referred here by Haller: the "zarnab" is mentioned by Avicenna, and Ebn Baitar. Farther East, C. zerumbet is called in Sanscrit "pulasha" or "gundha-moolee" or "shudgrunthhika" or "shutee" or "kurvoora" or "kurchoora," in Bengalee "shuthee" or "kuchoora," in Telinga and Hindustanee "kuchoora" (Lindl.), in the environs of Bombay "sotee" or "satee" or "kutchoora" (Graham); is described by Rumphius v. pl. 68; was observed in Hindustan by Rheede xi. pl. 7; by Roxburgh cor. iii. pl. 206, "the powdered root" composing in part "the red stuff called 'abeer,' thrown about during the license of the Hooly;" by Graham, "distinguished by the purple mark down the centre of the leaves," and producing "the real *zedoaria* of the" shops; is known to grow also in Chittagong, and in the nearest portion of Java (Blume, and Lindl.).

"106 A. D. = 'yen-ping,' 1st year of Hiao-chang-ti" or Chang-ti, of the Han or Seventh dynasty (Chinese chron. table).

"107 A. D. = 'young-tsou,' 1st year of Hiao-ngan-ti" or Ngan-ti, of the Han or Seventh dynasty (Chinese chron. table).

"The same year" (Mason ii. 20, and iii. 42), establishment of the Burman empire at Pugan: and the city founded or rebuilt by king Thamugdareet.

"109 A. D." (= 114 — "6th year of reign" in the Mahavamsa xxxv.), in Ceylon, death of queen Seehewallie, and escape from bondage of her successor king Ellowena.

"112 A. D." (= 109 + "3 years" in the Mahavamsa xxxv.), Ellowena, returning "with great forces" from "the coast Malaya," recovered his kingdom of Ceylon.

"113 A. D." (Dio, and Clint.), in Rome, Trajan's column erected. — To the present day, remaining almost entirely uninjured.

"In the reign of Trajan" (Suid.), Rufus Ephesius writing. He quotes Zeuxis, Dioscorides, and Posidonius the physician, divides the nerves into two classes, those of sensibility and those of motion, — and is himself quoted by Galen (Greenhill in Sm. b. d.).

Spergularia rubra of Northern climates. Called in Greece "mēlēgōnōn" (Sibth.): the "mouron rouge" first mentioned by Rufus Ephesius as a remedy in hydrophobia — (Spreng. hist. med. ii. p. 48): S. rubra was observed by Sibthorp, and Chaubard, from the Peloponnesus to Cyprus and Constantinople; is known to grow also around Caucasus and throughout Siberia as far as lake Baikal (Ledeb.). Farther South, was observed by Delile in Lower Egypt as far as Cairo; by myself, in Upper Egypt; is known to occur also in Abyssinia (A. Rich.). Westward, is termed "alsine spergulæ facie minor" by Tournefort inst. 244; was observed by Desfontaines, and Munby, in Barbary; and is known to grow in middle and Northern Europe as far as Archangel (Engl. bot. pl. 852, Wahl., and A. Dec.). Farther West, is known to grow on the Azores (Wats.); in Northeast America, seems most abundant within a few miles of the sea, in roadways and waste ground often by human means transported from place to place, and I have met with it more than forty miles inland; is known to occur also on the Western coast of America at Sitcha (Ledeb.).

Spergularia-media, erect and larger in all its parts, but regarded as probably not distinct. Clearly indigenous in salt marshes along our Atlantic coast as observed by myself from Lat. 43° to 38°; observed by Elliot in "brackish marshes" in South Carolina; and by Chapman, in Florida. Eastward, is termed "alsine spergulæ facie media" by Tournefort inst. 244, "ar. maritima" by Linnæus lap. (Steud.); is known to grow on the European seashore from Sweden to Portugal and Italy (fl. Dan. pl. 740, Wats., Brot., and Savi); was observed by Sibthorp, and Chaubard, on the shore of the Peloponnesus; by Granger, and Olivier, on the Mediterranean shore of Egypt (Del.); and by Bieberstein, in Tauria. In the Southern Hemisphere, is known to occur at Valparaiso in Chili, and on the island of Juan Fernandez (C. Gay, and Hook.).

Ervum monanthos of the Mediterranean countries. An annual weed: the ΦΑΚΟΕΙΔΕC prescribed by Rufus Ephesius — may be compared: E. monanthos was observed by Sibthorp in cultivated ground from the Peloponnesus to Cyprus. Westward, is termed "vicia sylvestris cum lentis siliqua" by Bauhin hist. ii. 316, "lens monanthos" by Tournefort inst. 390; is known to grow in various parts of Southern Europe (Pers.); was observed by Desfontaines ii. 165 in Barbary; but is not known to be employed medicinally.

114 A. D. (= 116 — "3d year of his reign" of the Mahavamsa xxxv.), Ellowena succeeded by his son Sandigamonal, now king of Ceylon.

"In this year" (Dio, and Clint.), departure of Trajan on his Eastern expedition.

The practice of *sheathing ships* well known. Trajan's galley being covered with a sheet of *lead* fastened on with little *copper* nails: — as ascertained after "more than thirteen hundred years" when it was raised from the bottom of the Lake of Riccia (Alberti arch. v. 12, in Churchill coll.).

"115 A. D." (Act. martyr., and Clint.), Ignatius a disciple of the evangelist John, brought before Trajan at Antioch at the time of a severe *earthquake* there; and in accordance with his own request, sent to Rome to perish by wild beasts in the amphitheatre.

"The same year" (Euseb., and Clint.), sedition of the Jews in Egypt and Cyrene. — After continuing two years, suppressed by Trajan.

Fresh *oysters*, "ostrĕa," preserved by Apicius after a method of his own, sent by him to Trajan in Parthia, many days distant from the sea (Athen. i. p. 7, and Suid.).

Peucedanum palustre of Northern and middle Europe. Called in Britain *milky parsley* (Prior), in Germany "olsenich" (Dod.); and the SIL-MONTANVM of Apicius — may be compared: remnants of P. palustre have been found in the lake-villages of Switzerland (Heer): the plant is described by Dodoens, and Bauhin hist.; is termed "selinum palustre" by Linnæus, "s. lactescens" by Lamarck fl. fr.; and is known to grow from Denmark throughout middle Europe (fl. Dan. pl. 257, and Crantz austr. 170), its root used for ginger by the Russians, and "a famous remedy in Courland in epilepsy" (Rust, and Lindl.).

Calamintha nepeta of Europe and the adjoining portion of Asia. The NEPETA-MONTANA used in cookery by Apicius — is referred here by Dierbach, and others: C. nepeta is described by Matthioli (Spreng.); is termed "c. pulegii odore sive nepeta" by Tournefort inst. 194; was observed by Forskal near Marseilles; and is known to grow from Italy throughout middle Europe as far as Britain (Scop., Lam. fl. fr., Pers., Curt. lond. vi. pl. 40, and Wats.). Eastward, was observed by

Sibthorp, and Chaubard, frequent from the Peloponnesus throughout Greece and the Greek islands. By European colonists, was carried to Northeast America, where it has become naturalized, recurring in "waste places and road-sides" (Chapm.) from Virginia to Georgia, and found by Nuttall already in Arkansas.

Cantharellus cibarius of Europe. The FVNGI-FAGINEI of Apicius, — are referred by Dierbach to this *edible mushroom*.

116 A. D. (= 137 — "22d year of reign" in the Mahavamsa xxxv.), Sandigamonal succeeded by his son Gayabahoo, now king of Ceylon.*

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* *Cocculus* (*Tiliacora*) *acuminatus* of Tropical Hindustan and Burmah. Woody and twining to a great extent, called in Bengalee "tiliakora," in Telinga "tiga-mushadee," in Hindustanee "baga-mushada" (Lindl.) or "baga-luta" (Drur.); and from early times rubbed between two stones and mixed with water as an antidote to snake-bites: — observed by Rheede vii pl. 3 in Malabar; by Nimmo, in "the Concans" as far as Bombay (Graham); by Colebrooke, and Roxburgh, among hedges and bushes from Coromandel to Bengal; by Mason, indigenous in Burmah.

Menispermum (*Coscinium*) *fenestratum* of Ceylon and Southern Hindustan. A stout woody climber called in Cingalese "womivol" or "venivel" or "bangwelgetta" (Lindl.), in Tamil "mara munjel," in Telinga "mani-pussupoo" (Drur.); and from early times in Ceylon, the water in which the sliced root has been steeped drank as a stomachic: — observed by Ainslie, and Roxburgh, as far as the Aurungole Pass and Courtallum, its root brought from the mountains and sold in the bazaars, and according to Drury its bitter deep yellow wood has given rise to the name of *tree turmeric*. From transported specimens, described by Gaertner i. pl. 46.

Menispermum (*Clypea*) *Burmanni* of Tropical Hindustan. A climbing herbaceous plant called in the environs of Bombay "pakur" (Graham); and from early times its extremely bitter root employed medicinally in dysentery, intermittent fevers, and liver complaints: — observed by Rheede vii. pl. 49 in Malabar; by Graham, on "the Ghauts" and "hilly parts of the Concan, not very common;" by Roxburgh, and Wight, in Coromandel (Lindl.); and by Burmann pl. 101, on Ceylon. From transported specimens, is described by Lamarck, and Gaertner ii. pl. 180.

Kydia calycina of Tropical Hindustan and Burmah. A Sterculioid tree called in Telinga "pandikee," in Hindustanee "choupultea" (Lindl.), in the environs of Bombay "warung" or "warungud" (Graham); and its mucilaginous bark used from early times as sudorific and in cutaneous diseases: — observed by Graham in the "Kennery forests" and "along the Ghauts, pretty common;" by Roxburgh, and Wight, from Mysore and the slopes of the Neilgherries to the Circar mountains and Nepal (Lindl., and Drur.), the bark in the Northern provinces according to Royle used to clarify sugar. Farther East according to Mason v. 537 growing in Burmah and called "boke-maya," the saplings found by McClelland "used for their great strength and elasticity for making banghy sticks."

Bergera Koenigii of Tropical Hindustan. A small Aurantiaceous tree called in Bengalee "bursunga," in Telinga "kari-vepa," in Tamil "kamwepila" (Lindl.) or "carroova-pillay," in Hindustanee "karay-paak" (Drur.), in the environs of Bombay "koodia neem" (Graham); and from early times, its hard and durable wood used for implements of husbandry, *limbolee* oil procured from its seeds, and its dried aromatic leaves sold in the bazaars to be put in curries: — observed by Rheede iv. pl. 53 in Malabar; by Roxburgh, on the Circar mountains; by Ainslie, and Wight, in other parts of Hindustan; by Graham, in "gardens Bombay," but "B. integerrima" common "on the Ghauts" and also called "koodia neem," perhaps the same species "in its wild state."

Calophyllum calaba of Western Hindustan. A handsome tree with cuneate obovate leaves called in Tamil "cheroo-pinnay," in Malabar "tsirou-panna" (Drur.); and from early times its fruit eaten, and *pootunjee* oil for lamps expressed from it: — observed by Rheede iv. pl. 39 in Malabar; by Nimmo, in "S. Concan" (Graham), nearly as far as Bombay; by Wight, and Drury, as far as Travancore; and by Burmann pl. 60 (Pers.), on Ceylon.

Schmidelia serrata of Tropical Hindustan. A large straggling Sapindaceous shrub called in Telinga "tauakee," in Hindustanee "rakhal-phul" (Drur.), in the environs of Bombay "teepin" or "mendrie" (Graham); and from early times, its ripe berries eaten and its astringent root employed medicinally in diarrhœa: — observed by Rheede v. pl. 25 in Malabar; by Graham, "on the Ghauts" as far as Bombay, and found by Murray "very common at Mahableshwur;" by Roxburgh, and Wight, as far as Coromandel and Bengal (Lindl., and Drur.); and is termed "rhus cobbe" by Linnæus as received from Ceylon (Pers.).

Schleichera trijuga of Tropical Hindustan and Burmah. A pinnate-leaved Sapindaceous tree fifty feet high and called in Telinga "may" or "koatangha," in Tamil "zolim-buriki" (Lindl.) or "poo-marum," in Malabar "poovum" (Drur.), in the environs of Bombay "koosimb" or "koosum"

Cissus setosa of Tropical Hindustan. A climbing herbaceous vine called in Telinga "barubut-sali" (Lindl.); and from early times its leaves toasted and oiled to bring indolent tumours to suppuration: — observed by Roxburgh, and Wight, from Mysore to Rajahmundry and Bengal, in forests

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(Graham); and from early times, its bark used to cure itch, its fruit eaten, and lamp oil expressed from the seeds: — is termed "cussambium spinosum" by Rumphius i. pl. 57; was observed by Graham in the "Kennery forests" near Bombay, and "on the Ghauts pretty common;" by Buchanan, Roxburgh, Wight, and Drury, from Malabar and Travancore to Coromandel. Farther East, by Berdmore, and Mason v. 35, in Burmah, called "kyo" and abounding "in Shwaygyen," used "for pestles of mortars and axles of wheels," and considered by McClelland "a most valuable timber."

Xanthoxylon rhetsa of Southern Hindustan. A large tree armed with prickles and called in the environs of Bombay "teesul" or "cochlee" (Graham), in Malabar "moolleela," in Telinga "rhetsa maun" (Drur.) from the hill people being accustomed to assemble in the shade in "rhetsa" committee to examine and determine public affairs: — X. rhetsa was observed by Rheede v. pl. 34 under cultivation in Malabar and the seeds used as a condiment; by Graham, as far as Bombay, "Parr village" and other localities near dwellings enumerated; by Roxburgh, and Wight, on the Coromandel mountains, its aromatic bark put in food as a condiment, and its seeds used as a substitute for pepper (Drur.).

Gomphia angustifolia of Tropical Hindustan. An Ochnaceous shrub, its bitter root and leaves from early times in Malabar employed as tonic stomachic and anti-emetic: — observed in Malabar by Rheede v. pl. 48 and 52; by Nimmo, in "S. Concan" (Graham), nearly as far as Bombay; by Wight, in other parts of the peninsula.

Elæodendron Roxburghii of Tropical Hindustan. A Celastroid shrub or small tree called in Telinga "neerija" (Lindl.); and from early times its fresh astringent bark applied by the natives to almost every sort of swelling: — observed by Gibson, and Graham, in the Bombay district, on the "Sattara and Kamatkee ghauts" and "about Hurrychunderjee;" by Roxburgh, and Wight, from the mountains of Coromandel to Courtallum (Drur).

Bridelia spinosa of Tropical Hindustan. A Euphorbiaceous tree of thirty to forty feet high, called in Telinga "kora man" (Lindl.), in Tamil "moolloo-vengay," in Malabar "mooloo-vangay" (Drur.), in the environs of Bombay "asanna" (Graham); and known from early times, cattle being fond of the leaves, said to free them from intestinal worms: — was observed by Nimmo, and Graham, "common on Elephanta and the Ghauts," the "trunk and larger branches armed with strong thorns;" by Roxburgh, Wight, and Drury, as far as Travancore, the Circar mountains, Bengal, and Assam, its dark-coloured wood hard and durable, and the bark strongly astringent. "B. montana," growing "on the Ghauts" and also called "asanna," a "tree exactly like the last but without thorns," having "red coloured and very hard wood," is regarded by Graham as probably "a mere variety."

Cluytia (*Lebidieropsis*) *collina* of Tropical Hindustan. A Euphorbiaceous tree called in Telinga "kadishen" (Lindl.) or "wodisha," in Tamil "wodagu marum" (Drur.); and from early times the rind of its capsules reputed to be exceedingly poisonous: — observed by Roxburgh, Wallich, and Drury, from the Concans to the Circar mountains and Orissa, its wood "very hard and durable, much used in Rajahmandry and the Northern Circars.

Croton (*Batiospermum*) *polyandrum* of Tropical Hindustan. A bushy undershrub called in Telinga "konda-amadum," in Hindustanee "hakoon" (Lindl.); and its seeds taken from early times as a good purgative: — observed by Roxburgh, Wight, Stewart, and Drury, from the Punjaub to Malabar, the Circar mountains and Bengal, its seeds probably furnishing "the greater part of the *jumalgota* of the drug-sellers," "East of the Sutlej its leaves are in high repute for wounds, and its sap is believed to corrode iron." Farther East, was observed by Mason v. 492 "exotic" in Burmah and called "tha-dee-wa," cultivated by the natives, its seeds "a strong purgative."

Holigarna longifolia of Tropical Hindustan and Burmah. A large Terebinthoid tree called in Malabar "cattu tsjeru" (Drur.), in the environs of Bombay "biboo" (Graham); and from early times a varnish extracted from the trunk, and small boats made of the timber: — observed by Rheede iv. pl. 9 on the mountains of Malabar; by Graham, on "the hilly wooded parts of the Concan as far as Bombay; by Roxburgh cor., and Wight, from Travancore to Chittagong, the juice of the fruit according to Don used by painters, also for fixing indelible colours figured on linen cloths (Drur.). Farther East, was observed by Mason v. 514 in Burmah, "another black varnish tree in the forests," and "on the other coast, where the tree grows, its exudation is used by the natives to varnish shields, and for other purposes."

Semecarpus cuneifolium of Tropical Hindustan. An allied tree also called "biboo" in the

and hedges, "every part of the plant exceedingly acrid" (Lindl., and Drur.). Westward, fragments of a caustic herbaceous Cissus were observed by myself in a hedge on Zanzibar.

Toddalia aculeata of Tropical Hindustan. A thorny Xanthoxyloid shrub called in Telinga

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environs of Bombay, being indistinguishable from the last except by the fruit, — observed by Graham at "Kandalla" and in "jungles about Parr;" by Roxburgh fl. ii. 86, in other parts of Hindustan.

Ormocarpum sennoides of Tropical Hindustan. A Leguminous plant called in Telinga "nall kashina" (Lindl.); and from early times its tonic and stimulant root employed medicinally: — observed by Roxburgh, and Wight, in peninsular Hindustan, in forests hedges and uncultivated lands.

Acacia leucophloea of Southern Hindustan. A thorny tree called in Telinga "tella-tooma" (Lindl.), in Tamil "vel-vel" or "vel-veylam," in Malabar "vel-veylam," in Bengalee "suphaid-babul," in Hindustanee "sufed-kikar" (Drur.); and from early times, the tough and strong fibres of its bark made into large fishing-nets and coarse cordage: — observed by Law, and Graham, "common in some parts of the Southern Mahratta country, and in the Sholapore districts between the Bheema and Krishna, a spirituous liquor is distilled from the bark, and in some places the trees are farmed on account of government;" by Roxburgh, and Wight, in woods and on hills on the Coromandel coast, its timber "hard and dark-coloured," the natives mixing the bark "with palm-wine and sugar" to obtain the ardent spirit (Drur.).

Ammania vesicatoria of Hindustan and Burmah. An erect annual having a strong muriatic smell and called in Telinga "aghun drapakoo," in Bengalee "daud-maree" (Lindl.), in Hindustanee "dad-mari," in Tamil "miumel-neruppa" or "kallurivi," in Malabar "kallar-vanchi" (Drur.); and from early times, its exceedingly acrid leaves used by the natives for raising blisters: — observed by Graham "common in moist places" around Bombay "towards the close of the rains;" by Ainslie, Roxburgh, Fleming, and Wight, as far as Bengal, common in cultivated ground (Lindl.). Farther East, by Mason in Burmah, enumerated as indigenous. Transported to Europe, is described by Plukenet alm. pl. 136.

Luffa amara of Tropical Hindustan. A climbing Cucurbitaceous vine called in Telinga "sheti beera" (Lindl.) or "sendu-beer-kai," in Hindustanee "kerula," in Bengalee "tito-dhoondhool" (Drur.); and from early times, juice of the roasted young fruit applied to the temples to cure headache, and the seeds taken as emeto-cathartic: — observed by Nimmo, and Graham, "wild about Bombay in the rains, and throughout the Concans;" by Roxburgh, and Wight, as far as Bengal, in dry uncultivated places (Lindl.). Transported to Europe, is termed "cucumis indicus" by Plukenet pl. 172.

Bryonia rostrata of Southern Hindustan. A slender climbing Cucurbitaceous vine called in Tamil "appakovay" (Drur.); and from early times, its leaves eaten as greens, and its sweet mucilaginous root employed medicinally: — observed by Rottler act. berol. iv. 212 in Tranquebar; by Nimmo, in "S. Concan" (Graham suppl.), nearly as far as Bombay; by Ainslie, Roxburgh, and Wight, in other parts of Southern Hindustan.

Trichosanthes palmata of Tropical Hindustan and Burmah. A Cucurbitaceous vine running over the highest trees and called in Bengalee "mukhal," in Telinga "kadi-danda" (Lindl.) or "abuva," in Tamil "ancoruthay" (Drur.), in the environs of Bombay "mukal" (Graham); and from early times, its fruit regarded as poisonous but employed medicinally to cleanse offensive sores inside the ears, and the stem and root much esteemed in diseases of cattle: — observed by Gibson, and Graham, "in jungles in the Concans and on the Ghauts pretty common," and by Murray "at Mahableshwur;" by Ainslie, Roxburgh, and Wight, as far as Bengal; by Mason, in Burmah. By European colonists, was carried to Austral Africa, where its fruit by pickling is rendered edible; and to the West Indies, used there for killing rats (Drur.). From transported specimens, is termed "momordica bracteata" by Lamarck enc. meth.

Bassia longifolia of Southern Hindustan and Burmah. A Sapotaceous tree called in Burmah "kan-zau" (Mason), in Tamil "elloopa," in Malabar "elloopie," in Telinga "ippa," in Hindustanee "mohe" (Drur.); and from early times, its flowers roasted and eaten, oil from its ripe fruit substituted for butter, used also for lamps and for making country soap, and the gummy juice of its bark employed medicinally by the Vytians: — observed by Ainslie, Roxburgh, Hunter, and Drury, from Malabar to the Circars and Coromandel, its timber "nearly as durable as teak;" by Mason, "indigenous" in Southern Burmah, its oil mixed by the natives "with their food," employed besides for various purposes, and its timber valued. From transported specimens, described by Linnæus, and Lamarck pl. 398. *Illupie oil* according to Drury is now imported into England for the manufacture of candles.

Hoya viridiflora of Tropical Hindustan. A woody Asclepioid climber called in Bengalee "tita-

"conda cashinda" (Lindl.), in Tamil "moolacarnay-marum," in Malabar "kaka-toddali" (Drur.), pungent in all its parts and from early times employed as febrifugal: — observed by Rheede v. pl. 41 in Malabar; by Nimmo, in "S. Concan" (Graham), nearly as far as Bombay; by Roxburgh,

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kunga," in Telinga "doodee-palla" (Lindl.), at Mahableshwur "dooree" (Graham); and from early times employed medicinally by the natives, and the brown mealy substance on the follicles given by cow-keepers as medicine to their cattle: — observed by Rheede ix. pl. 15 in Malabar; by Graham, "common" around Bombay and on "the Ghauts, on the table land Mahableshwur" and its flexile stems "used as ropes;" by Rumphius, Ainslie, Roxburgh, Sonnerat, and Wight, from the Neilgherry hills to Coromandel and Sylhet (Lindl., and Drur.).

Secamone emetica of Southern Hindustan. An Asclepioid plant, its acrid and emetic root known from early times: — observed by Retz obs. ii. 14, and Wight, common in thickets at the foot of mountains in the Southern part of the peninsula (Lindl.).

Tylophora asthmatica of Tropical Hindustan and Burmah. A twining Asclepioid plant called in Bengalee "unta-mool," in Telinga "kaka-palla" (Lindl.), in Tamil "codegam" or "coorinja" (Drur.); and from early times its root employed as an emetic: — observed by Roxburgh, J. Anderson, Wight, and Drury, from Mysore to Coromandel and Bengal, "very abundant," to "be met with in nearly all situations and in flower at all seasons;" is known to grow on Ceylon (Pers.); and was observed by Mason indigenous in Burmah. By European colonists, was carried to the Mauritius Islands, and cultivated there (Pers., and Boj.).

Convolvulus (*Argyreia*) *bracteatus* of Southern Hindustan. A branching woody twiner, filled with milky juice; and from early times, its boiled leaves applied to scrofulous enlargements of the joints, using the water as fomentations: — observed by Wallich cat. 1419, and Wight, common "near Madras" (Lindl.), and known to grow as far as Coromandel (Drur.).

Anisomeles Malabarica of Tropical Hindustan. A Labiate shrub, two to five feet high with white woolly branches, and called in Tamil "retti pemeretti" (Lindl.) or "peyameratti," in Telinga "moga-bira," in Malabar "karintoomba" (Drur.); from early times, employed medicinally: — observed by Rheede x. pl. 93 in Malabar; by Graham, on "the Katruj and Kamatkee ghauts," and by Law "at Nalutwar;" by Ainslie, Roxburgh, and Wight, in other parts of the peninsula as far as Travancore (Drur.); by Mason, indigenous in Burmah. By European colonists, was carried to the Mauritius Islands (Drur.).

Aristolochia bracteata of Hindustan. Trailing, and called in Telinga "gardi gavapoo" (Lindl.) or "gadida-guda-pa," in Tamil "addatinapalay" (Drur.), on the Deccan "gundatee" or "keeramar" worm-killer (Graham), its juice from early times squeezed into wounds to kill worms, all parts of the bitter and nauseous plant used also medicinally: — observed by Buchanan on the banks of the Jumna in Northern Hindustan (Wall. rar. ii. 3); by Newton, its dried root used in Scinde "to increase uterine contractions;" by Gibson, and Graham, growing abundantly in "dark red or black soil" on the Deccan; by Retz obs. v. 29, Ainslie, Roxburgh, and Drury, in cultivated ground on the Coromandel coast and as far as Travancore, its fresh bruised leaves applied in "that kind of psora called in Tamil *carpang*."

Ficus dæmonum of Southern Hindustan and Burmah. Its fruit on the trunk and branches, but usually in long radical racemes at the apex penetrating the earth, or often entirely under ground (Lindl.); from early times, the juice known as extremely poisonous: — growing on the seacoast of Tanjore (Vahl., and Roxb.). Farther East, observed by Mason in Burmah, called there "yae-kha-ung."

Arum (*Typhonium*) *trilobatum* of Tropical Eastern Asia and the Malayan archipelago. Stemless, and called in Telinga "surei-kund," in Bengalee "ghekool" (Lindl.); and from early times, its fresh tubers employed medicinally in scirrhous tumours and the bites of venomous snakes: — observed by Nimmo in "the Concans" as far as Bombay (Graham); by Roxburgh fl. iii. 505, in other parts of Hindustan; and is known to grow on Ceylon (Pers.). Farther East, was observed by Loureiro ii. 534 in Anam; by Blume rumph. i. 132, as far as Java; and is termed "arisarum amboinicum" by Rumphius v. pl. 110. "T. Orixense," termed in Bengalee "ghet-kuchoo" (Drur.), and observed by Roxburgh iii. 503, and Wight pl. 801, in the peninsula and Bengal, by Mason in Burmah, may be compared.

Gracilaria lichenoides of the coast of Ceylon and the opposing portion of the Malayan archipelago. A fucus or *seaweed*, in colour between olive and purple (Mason), and from early times highly valued for food on Ceylon and other islands of the East — (Lindl.); by O'Shaughnessy first brought into notice: observed by Mason v. 507 in Burmah, abounding and of superior quality on the Tenasserim coast, and called "Kyouk-pwen." From transported specimens, described by Turner pl. 113.

and Wight, very common on the Coromandel coast, used for various medicinal purposes and its ripe berries making excellent pickles (Drur.); by Burmann pl. 24, on Ceylon. Imported into Europe under the name of *Lopez root*, attained formerly some celebrity; and according to Bidie, is remarkable for a happy combination of three qualities, being stimulant, carminative, and tonic.

"In this year" (Dio, and Clint.), voyage of Trajan from Ctesiphon down the Euphrates to the Persian Gulf.

Before the close of the reign of Trajan (Suid., Ermerins, and Sor. Eph. 38), Soranus Ephesius leaving Alexandria and arriving in Rome, where he practised medicine. He quotes Archigenes, Moschion, and Rufus, and — with his pupil Attalus is mentioned by Galen. Some of the writings of Soranus Ephesius were translated into Latin by Caelius Aurelianus.

Ruta linifolia of the Mediterranean countries. A species of *rue* called in Greece "pĕgani" (Sibth.); and the ΠΗΓΑΝΟΝ: ΛΕΙΟΝ prescribed as an application by Soranus Ephesius mul. aff., 48 — may be compared: R. linifolia was observed by Forskal, and Sibthorp, from Greece to Cyprus and Constantinople. Westward, is described by Barrelier pl. 1186; is termed "r. sylvestris linifolia hispanica" by Tournefort inst. 257; and is known to grow in waste places from Tunis to Spain, the leaves smooth (Pers.).

Erigeron acre of Europe and the adjoining portion of Asia. Called in Britain *blue flea-bane* (Prior); and the ΚΟΝΥΖΑ: ΛΕΠΤΟΦΥΛΛΟΣ prescribed as an application by Soranus Ephesius m. a. 48, — may be compared: E. acre was observed by Sibthorp on mount Athos and the Bithynian Olympus. Westward, is termed "aster arvensis cæruleus acris" by Tournefort inst. 481; was observed by Linnæus in Lapland; and is known to grow throughout middle Europe (Curt. lond. i. pl. 60, and Pers.).

Asparagus verticillatus of the East Mediterranean countries. The ΑΣΠΑΡΑΓΟΝ: ΑΓΡΙΟΝ enumerated among potherbs by Soranus Ephesius mul. aff. 15 — may be compared: A. verticillatus is termed "a. orientalis foliis galii" by Tournefort cor. 21; was also observed in the East by Buxbaum v. pl. 37; by Sibthorp, from the Peloponnesus to Smyrna; and young shoots of all the species were found by Chaubard eaten in the Peloponnesus. (Compare also A. officinalis of the West).

"117, August" (Dio, and Clint.), Trajan succeeded by Hadrian, fourteenth Roman emperor. The hieroglyphic ovals of Hadrian occur at the "Oasis of Khargeh, on a ruin near Esneh, at Ermend" or Hermonthis, "on the little temple of Isis above Medinet-abu, on the Typhonium at Dendera, and on an obelisk" (now in Rome, Glid. analect.).

All pretension to territory beyond the Euphrates and Tigris; at once relinquished by Hadrian. Who in private life was fond of the society of "philosophers, grammarians, rhetors, musicians, painters, geometers, and astronomers" (Spartian. 5 to 16, and Eutrop. viii. 6).

"118 A. D." (Spartian., and Clint.), in consequence of difficulties with the Sarmatas and Roxolani, Hadrian visiting Moesia; where peace was concluded with the king of the Roxolani.

"120 A. D." (Spartian. 10, and Clint.), visit of Hadrian to Gaul, and afterwards to Germany, and Britain. Across this island he built a wall, "separating the Romans from the barbarians:" — the remains traceable to the present day "from Carlisle to Newcastle" (Blair).

"In this year" (Perceval i. 85), bursting of a reservoir at Mareb near San'aa, causing destruction among the descendants of Saba: — an event alluded to in the Surat-Saba chapter of the Koran, and giving rise to an Arab proverb.

"In or about this year" (Percev. ii. 411), birth of Temin, founder of "one of the most considerable tribes of Arabia."

"122 A. D." (Euseb., Spartian. 10, and Clint.), after spending a winter at Tarracon in Spain, Hadrian by the way of Asia visiting Athens. — He next sailed for Sicily, and ascended mount Etna.

"123 A. D." (Yuan kian loui han, and Klapr. mem. ii. 343), Pan young sent Westward established the military post of Lieou tchhin in Lat. 42° 45′ Long. 25° 18′ (W. of Peking), attacked and defeated the Kiu szu or Ouigour, and took possession of their country. — Under the Thang, peace having been concluded with the Ouigour, a city of the third order was built here, called at present Louktchak.

"124 A. D. = 3d year of the 'yen-kouang' of Ngan-ti" (Chinese chron. table), beginning of the Forty-seventh cycle.

"125 A. D." (Euseb., Hieronym., and Clint.), at Athens, Hadrian addressed on behalf of the Christians by the philosopher Aristides, and Quadratus a disciple of the apostles: and a decree obtained, That no one should be put to death without trial in due form.

About this time, "110 to 134 A. D." (Clint. iv. p. 123), the Gnostic Sect founded by Saturninus. Who continued preaching in Antioch and Syria, while his colleague Basilides proceeded to Alexandria.

"126 A. D. = 'young-kien,' 1st year of Hiao-chun-ti" or Chun-ti, of the Han or Seventh dynasty — (Chinese chron. table).

128 A. D. (Ptol. obs. on equinox), end of the third *Great Year* of the Egyptians.

"129, Jupiter being in the sign Leo" (Aristid. i. p. 519, Masson, and Clint.), birth of the rhetor Aelius Aristides.

"In the reign of Hadrianus" (Lubke and Lutrow), the temple to the Olympian Jupiter at Athens completed under the Roman architect Cossutius.

"130, autumn" (coins, inscript. on Vocal Memnon, and Clint.), after passing the winter at Athens, arrival of Hadrian in Egypt: where he found Christians numerous, as appears from one of his letters; and in the course of his voyage on the Nile, founded the new city of Antinoe: — to the present day marked by ruins in the Roman style of art.

The *Second era of Gaza* begins from this visit of Hadrian.

"131 A. D." (Dio, Clint., and Kitt. cycl. bibl.), on reaching Jerusalem, Hadrian changed the name of the city to Aelia Capitolina; and on the site of Solomon's temple, founded a temple to Jupiter. The building operations were shortly afterwards interrupted by the Jews; who, led by Cochebas, commenced war against the Romans, and were at first successful.

"In this year" (Abyss. chron., and C. Mull. geogr. min. p. xcvii), Za-Elawda succeeded by Za-Zigen and Rema as kings of Abyssinia. — They ruled "forty" years.

"In this year" (Jap. centen. comm. 88), in Japan, end of the reign of . . . the son of Keiko.

Cloth made of *hemp* "is very old" in Japan, and "was the only textile fabric" in the country "prior — to the introduction of silk weaving" (Jap. centen. comm. 77).

Among dye stuffs used in Japan, "*gall-nuts, turmeric*" (Curcuma longa), "*madder*" (Rubia cordifolia), "*safflower*" (Carthamus tinctorius), and "*brazil wood*" (Caesalpinia sappan),* — are enumerated in Jap. centen. comm. 75.

"132 A. D." (Hieron., Eutrop., Blair, and Clint.), the "Perpetual Edict," a body of laws for praetors, compiled by Salvius Julianus.

"133, May 6th, 11 hours 15 minutes P. M." (Blair), *eclipse of the moon.* Observed at Alexandria by Claudius Ptolemy.

Coronilla emerus of the Mediterranean countries and as far as middle Europe. A small shrub called in France "faux baguenaudier" (A. Dec.), in Greece "agriopēganos" (Sibth.), in which we recognize the ΑΓΡΙΟΝ ΠΗΓΑΝΟΝ placed under the wing protecting birds from cats according to Sotion, — and Florentinus (geopon. xii. 25 and xiii): C. emerus was observed by Sibthorp, and Chaubard, frequent on the mountains of the Peloponnesus and Crete; is known to grow also in Asia Minor and the Crimea (Tchih., and Bieb.). Westward, is termed "emerus" by Tournefort inst. pl. 418; and is known to grow in Italy, and as far as "Lat. 47° 45′" from Vienna to the Jura (Pers., and A. Dec.). The leaves called *scorpion senna* are according to Lindley "cathartic like those of senna, but less active."

One hundred and thirty-third generation. May 1st, 134, mostly beyond youth: Iamblichus of Babylon: the Greek poet Mesomedes of Crete; the philosophers, Sextus the stoic, Crescens, Valerius Diodorus, Taurus of Berytus, Maximus of Tyre, and Apollonius of Chalcis; the historians, Appianus, and Phlegon of Tralles; the grammarians, Telephus, Alexander of Cotiaeum, and Hephaestion; the rhetors, Antonius Polemo, Marcus of Byzantium, Aristocles of Pergamus, Nicostratus, Varus of Perga, and Philager; other Greek writers, Polyaenus of Macedonia: the Christian Greek writers, Papias, Justinus Martyr, and Hegesippus.

"The same year" (Just. Mart., Euseb., and Clint.), by Cochebas leader of the Jewish revolt, many Christians persecuted for not taking part in the war against the Romans. Basilides, the Gnostic at this time in Alexandria, and his doctrines opposed in writing by Agrippa Castor.

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* *Gardenia florida* of Subtropical China and Japan. An ornamental shrub called in Anam "cay deanh tau," in China "chy tsu" (Lour.), in Japan "si" or "kutsjinas" (Thunb.); and from early times planted for hedges in Japan, and its flowers used for dyeing yellow — (Jap. c. c. 75): observed in Japan by Cleyer ii. 7. f. 21, and Kaempfer, by Thunberg, everywhere. Southward and Westward, was observed by Loureiro in China and Anam; by Rumphius vii. pl. 14, on Amboyna; by Mason v. 414 to 785, "exotic" in Burmah and called "thung-hsen-pan," cultivated by the natives for ornament and its fragrant flowers; by Roxburgh, and Graham, in gardens in Hindustan, called "gundha raja," and "probably introduced from China." By European colonists, was carried to Austral Africa (Pers.); to the Hawaiian Islands, verified by myself; and to North America, where it has become a favourite in greenhouses.

Evodia glauca of Japan. Called there "kiwada," and from early times its bast used in the process of dyeing — (see Jap. c. c. 31 and 80): E. glauca is described by Miq.

Lithospermum erythrorhizon of Japan as far as Yeso. Called in Japan "murasaki" (Sieb.), and from early times used for dyeing purple — (see Jap. c. c. 80): known to grow as far as Yeso (Sieb.).

"135 A. D." (Euseb., Clint., and Kitt. cycl. bibl.), the Jewish war brought to a close; and all obstacles to the original design of Hadrian removed. Jerusalem was now made the site of an exclusive Roman colony, the Jews being prohibited from residing there or in the vicinity. From this edict, the "final dispersion of the Jews" is often dated; it having exerted a powerful influence on their destiny.

Until the siege of Jerusalem by Hadrian, its bishops had all been circumcised; Judas being the "fifteenth."

"The same year" (Dio, and Clint.), the historian Arrianus governor of Cappadocia.

Cape Comori in Hindustan named according to Arrianus from a temple dedicated to a goddess —("Kumari, a name of Parvati or Uma, the virgin bride of Siva," H. H. Wils. note to the Mrich. vi.).

136 A. D. ("in the twentieth year of Hadrian and two thousand one hundred and fifty third ann. Abr.," Euseb.), the first Gentile bishop at Jerusalem, Marcus.

"The same year" (Franz 126), a Greek inscription relating to Sabina wife of Hadrian, presenting the following form of the letter A.

"In the reign of Hadrianus" (Sm. b. d.), Claudius Aelianus, Italian by birth, teaching rhetoric at Rome. He wrote in the Greek language, especially admired Herodes Atticus, and mentions visiting Alexandria in Egypt (anim. xi. 11 and 40).

The . . . . of Aelianus — is referred by Cuvier to the *yak* or mountain bullock of Thibet, Bos grunniens: the Indian "agriavōus" furnishing the "tōupha" ornament on the banner of military prefects, is mentioned by Cosmas Indicopleustes xi. p. 335; the yak is also mentioned by Rubruquis (Voyag. Belg.), and Marco Polo 72; and Nicolo Conti in Ava heard of "long-haired cattle" in the country beyond "towards Cathay."

Conferva? rupestris of the European and Mediterranean coasts. The TPIXEC seaweed of Aelianus xiii — (Dod. pempt. iii. 5. 19), may be compared: C. rupestris is termed "c. marina trichodes ramosior" by Dillenius muse. xxviii. pl. 5. f. 29; was observed by Sibthorp in the Propontis and among the Greek islands; and is known to grow in the Atlantic as far as Britain (Dillwyn pl. 23, and Engl. bot. pl. 1699).

137 A. D. (= 143 — "6 years reign" in the Mahavamsa xxxv.), Gayabahoo succeeded by Mahalomana, now king of Ceylon.

"138, before July 20th" (Ptol. can., and Clint.), Hadrian succeeded by Antoninus Pius, fifteenth Roman emperor. The hieroglyphic ovals of Antoninus Pius occur in the Oasis El-Kargeh, and at Medamot, Dakleh, Philæ, Esneh, Medinet-Abu, and Dendera (Glid. analect.). His name occurs also in Greek inscriptions in Egypt.

"139, Sept. 26th" = "ninth of Athyr" (Ptol. meg. synt., and Clint.), the *Autumnal equinox* observed at Alexandria by Claudius Ptolemy.

"140 A. D." (Euseb., Hieronym., and Clint.), Hyginus being bishop in Rome, arrival there of Cerdo preceptor of Marcion, and of Valentinus the Gnostic. Valentinus had known and conversed with one of Paul's disciples.

"March 22d" = "seventh of Pachon" (Ptol. meg. synt., and Clint.), the *Vernal equinox* observed at Alexandria by Claudius Ptolemy.

Deflection or *refraction* of the rays of light, giving a false position to the stars, mentioned by Claudius Ptolemy opt. v. (The treatise is extant in an Arabic version by Sahl et Thaberi; see also Roger Bacon spec. math. p. 37, and Steinschneid. ii. 21). — The phenomenon of refraction, is also mentioned by Alhazen.

The "kruptōn limēna" on the Arabian shore of the Persian Gulf, mentioned by Claudius Ptolemy, — is referred by C. Muller (geogr. min. p. lxxii) to the port of Muscat. To the appropriateness of the name "concealed harbour," in approaching from the sea, I can myself bear witness.

The ZIΓΓIC promontory of East Africa, described by Claudius Ptolemy i. 17 and iv. 7 as conspicuous from its forked head and its elevation above a level shore of nearly four hundred miles, — may be compared with mount Kilmungaro, situated some four degrees South of the Equator, and visible from the sea, as witnessed by myself. Cosmas Indicopleustes i. p. 132 on his voyage to the Persian Gulf went nearly as far as "Varvarian" (Berbera), "beyond which Ziggiōn is situated, this name being given to the mouth of the ocean."

The country South of the Equator, known to Claudius Ptolemy i. 7 to 12, iv. 8 and vii. 5, as AΓACYMBA, — may be compared with Kissimbany on the island of Zanzibar.

"Baithana" on the Godaveri (Ptol. geogr., and Wilford as. res. ix. p. 199), or Paitan, the metropolis of king "Siri-Polemaios" or Sri-Pulimana.

143 A. D. (= 127 — "24 years reign" of the Mahavamsa xxxvi), Mahalo-mana succeeded by his son Bhatia-tissa, now king of Ceylon.

"In this year" (Clint.), after governing for some years the cities of Asia, the rhetor Herodes Atticus consul at Rome; Fronto being "consul suffectus" during two months.

"144 A. D." (Wathen soc. calcutt. iv. 480, Tod, and Elph. iv. 1), accession of Kanak Sena as king at Ballabi in Guzerat. He came from Oud, and founded a new dynasty.

Phyllanthus niruri of Tropical Asia. An erect branching small-leaved annual having a Sanscrit name (Pidd.), and called in Malabar "kirganelli" (Rheede) or "kirjaneilie," in Tamil "kilanelly," in Telinga "neela-ooshireker" (Drur.) or "nella userekee," in Bengalee and Hindustanee "sada-hazur munee" (Lindl.); and from early times used as diuretic, and for other medicinal purposes:* — observed by Rheede x. pl. 15. in Malabar; by Graham, "a common weed in gardens and cultivated lands" around Bombay; by Burmann pl. 93, on Ceylon; by Ainslie, and Roxburgh, as far as Bengal; by Loureiro, in Anam (Steud.); and is described by Rumphius vi. pl. 17. Westward, was observed by Grant "by dwellings 2° N." on the Upper Nile; and is known to occur in Equatorial Africa as far as the Atlantic (Benth. fl. nigr.). By European colonists, was carried to the Mauritius Islands (Boj. i. 280); to Brazil, regarded there as a specific against diabetes (Mart.); to the West Indies, not mentioned by the older writers (A. Dec.), but at present occurring as far as the Pacific (Maycock, Schlecht., and Benth. bot. Sulph.); to the environs of Marseilles, where it has been found growing spontaneously (Castagne).

"145 A. D. = 'young-kia,' 1st year of Hiao-tchoung-ti" or Tchoung-ti, of the Han or Seventh dynasty — (Chinese chron.-table).

"146 A. D. = 'pen-tsou,' 1st year of Hiao-tchi-ti" or Tchi-ti, of the Han or Seventh dynasty — (Chinese chron. table).

"The same year" (inscript., Blair, and Clint.), introduction by Antoninus Pius of the worship of Serapis into Rome; and on "May 6th," the mysteries celebrated. The great sun-temple at Balbeck in Syria was also built by Antoninus Pius (Lubke and Lutrow).

In the "sandstone" quarry at Gertassee in Nubia, where stone was cut for the temple on Philæ, "about fifty-one" *Greek inscriptions*, "exvotos" in honour of Isis; belonging to the reigns of Antoninus Pius, — Marcus Aurelius, Severus, and Philippus. (Wilk. theb. and eg. 478).

About this time, "136 to 150 A. D." (Clint.), the Christian treatise termed "Pastor" written in Rome, by Hermas brother of Pius the bishop.

"147 A. D. = 'kien-ho,' 1st year of Hiao-hiouan-ti," or Hiouan-ti, of the Han or Seventh dynasty (Chinese chron. table). "In his reign" (Pauth. 267), beginning of *commercial intercourse* with foreigners, through the port of Canton.

"The same year" (Vict., and Clint.), celebration of the Nine hundredth anniversary of the building of Rome.

"150 A. D." (Iren., and Clint.), Pius succeeded by Anicetus, tenth bishop of Rome.

"The same year" (Tertull., and Clint.), the teaching of Marcion, founder of the Marcionite sect.

"152 A. D." (Blair), persecution of Christians stopped by Antoninus Pius.

"The same year" (Alst. p. 381, and Nicol.), the earliest ecclesiastical Council on record. Held at Pergamus in Asia Minor, and the opinions of Colarbas condemned.

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* *Phyllanthus urinaria* of Tropical Hindustan. Distinguished from the last by its sessile flowers and rough capsules, and called in Bengalee and Hindustanee "hazar munee," in Telinga "yerra usere-kee" (Lindl.); from early times, known as a powerful diuretic: — observed by Rheede x. pl. 16 in Malabar; by Graham, "common in Bombay during the rains;" by Ainslie, and Roxburgh, in other parts of Hindustan; and is termed "herba meroris rubra" by Rumphius vi. pl. 17. Transported to Europe, is described by Plukenet alm. pl. 183.

Phyllanthus simplex of Southern Hindustan. Called in Telinga "uchi userekee" (Lindl.), and from early times its fresh leaves bruised with buttermilk as a wash to the itch in children: — observed by Retz v. 29 in Tranquebar; described also by Roxburgh; and according to Lindley, growing in "dry cultivated ground in the East Indies."

Oxystelma esculenta of Tropical Hindustan. The most beautiful of the Asclepias tribe, twining, and called in Sanscrit "dooghdka," in Bengalee "doodhee" or "doodh-luta" or "kirui," in Telinga "doodee-palla" (Lindl.); and from early times, used in decoction as a gargle in aphthous affections: — known to grow in Malabar and on Ceylon (Pers.); by Graham, as far as Bombay, generally on certain "almost leafless shrubs, where it shows" its "elegant blossoms to the best advantage," its own "leaves deciduous in the cold season;" by W. Jones, and Roxburgh, as far as Bengal; by Wight, in other parts of Hindustan, but he could not find that the natives eat it. Transported to Europe, is described by Plukenet alm. pl. 359.

"156 A. D." (Blair), Attilius Titianus for aspiring to the empire, put to death by the Senate; the only instance of proscription in the reign of Antoninus Pius.

"About this time" (Lucian, and Clint.), in Paphlagonia, an oracle of Aesculapius and Apollo founded by Alexander, a native of the country.

Arbutus uva-ursi of Subarctic climates. Called in Britain *bearberry* or *bear's bilberry* (Prior): the Pontic medicine ΑΡΚΟΥ: CTΑΦΥΛΗC employed by Arrhabianus, — growing according to Galen comp. med. vii. 4 in Pontus, a depressed shrub with leaves like those of "mĕmaikulŏ" and round red fruit, is referred here by writers: A. uva-ursi has not been observed in Greece, but is known to grow throughout Siberia to Kamtchatka. Westward, is known to grow on the Appenines, Alps, and Pyrenees (Savi, and Dec.), and from Britain and Ireland throughout Northern Europe as far as Lapland and Iceland (fl. Dan. pl. 33, fl. Lapp. pl. 6, Pers., and Hook.). Farther West, is known to grow from Arctic America throughout New England to Lat. 40° along the Atlantic (Pursh, and Conrad), on the Saskatchewan in Lat. 54° (Drumm.), the Rocky mountains (James), and Unalascha in the Pacific (Cham.). The leaves "in the form of decoction and powder," according to Pereira, and Lindley, are "used in nephritic" complaints.

"161, March 7th" (Dio, and Clint.); Antoninus Pius succeeded by Marcus Aurelius Antoninus, sixteenth Roman emperor. Who at once associated Lucius Verus in the government. Separate hieroglyphic ovals of the associate emperors, occur at Philæ — (Glid. analect.).

"The same year" (coins, and Clint.), in Rome, dedication of the column of Antoninus Pius. — This column continues almost uninjured to the present day.

"162 A. D." (Capitolin., and Clint.), the Roman territories in Asia invaded by the Parthians under Vologesus, and Verus sent against him. — The war continued four years.

"The same year" (Iren., and Clint. iv. p. 177), Anicetus succeeded by Soter, eleventh bishop of Rome.

"165 A. D." (Amm. Marc., Hieronym., and Clint.) at the Olympic Games, self-immolation by burning of the philosopher Peregrinus. The satirist Lucian being among the spectators.

"166 A. D." (Euseb., and Clint.), persecution of Christians; and Polycarp, who had seen John and others of the apostles, put to death.

Celtis Tournefortii of Asia Minor. A tree, said to have been raised from the staff of Polycarp, — and planted before his tomb at Smyrna, appeared to Tournefort trav. iii. 292 to 380 the same seen by himself farther East on the route to Tocat, little larger than a plum, and having yellow styptic drupes. C. Tournefortii, transferred to the gardens of Europe, is described by Miller (Pers.).

"167 A. D." (Galen xix. p. 15, Euseb., and Clint.), *pestilence* at Rome; said to have originated in Babylonia, and to have accompanied Verus and his companions throughout their return home.

Trees in Hyrcania whose leaves are sprinkled with honey, which unless collected at sunrise disappears, are mentioned by Quintus Curtius, — obviously *honey-dew*: Galen also speaks of a substance like dew, foreign to but occasionally found on the leaves of plants (Ruel iii. 21).

One hundred and thirty-fourth generation. Sept. 1st, 167, onward mostly beyond youth: Phrynichus of Arabia (compare Hippocratic sentences): the Greek poet Oppianus of Cilicia; the philosophers, Alexander of Damascus, and Atticus; the geographer Dionysius Periegetes; the historians, Amyntianus, Chryseros, and Pausanias; the rhetors, Proclus of Naucratis, Demostratus, Theodotus, Alexander of Cilicia, Hermogenes, Chrestus, Athenodorus, Heracleides, Ptolemaeus of Naucratis, Apollonius of Athens, and Onomarchus; the Christian Greek writers, Athenagoras, Apollinaris of Hierapolis, Melito of Sardis, Musanus, Modestus, Miltiades, Heraclitus, Candidus, Dionysius of Corinth, and Pinytus of Crete.

In this year (= 185 — "18 years reign" in the Mahavamsa xxxvi.), Bhatia-tissa succeeded by his brother Mula-tissa, now king of Ceylon.

"168 A. D. = 'kan-ning,' 1st year of Hiao-ling-ti" or Ling-ti, of the Han or Seventh dynasty. (Chinese chron. table). He caused the five "king" or canonical books to be engraved on marble. Which transcript remained at the entrance to the Academy building "seven hundred years" (Fauth. p. 267).

"169, December" (Capitolin., Clint., and Sm. biog. dict.), death of the associate emperor Verus. Galen, who had just joined the two emperors at Aquileia, accompanied M. Aurelius to Rome, and was appointed physician to Commodus now "nine" years old.

Drosera rotundifolia of Northern climates. With other species called in Britain *sundew*, by Lyte "sonnedewe," in Germany "sindau" (Prior), and the "epatica" growing according to Galen "in moist stony places and dew or a drop of water falling upon it" — (Serapion, and Ort. san. 159), mentioned also by Platearius, may be compared: D. rotundifolia is known to grow from the Alps and Pyrenees throughout middle and Northern Europe as far as Lapland and Iceland (fl. Dan. pl. 1028, Pers., Brot., Hook., and Wats.). Eastward, species of Drosera have not been observed in

Greece nor on Caucasus (Bieb., C. A. Mey., Ledeb., and A. Dec.), but D. rotundifolia is known to grow on Lebanon (Schlecht.), on the Altaian mountains and throughout Siberia (Gmel., and Ledeb.). Farther East, is known to grow on Unalascha and at Norfolk Sound on the Pacific coast of America (Cham., and Mert.), also on the Rocky mountains in Lat. 54° (Drumm.) and from the Arctic Circle to Newfoundland (Hook.), Kentucky (Short), and throughout our Atlantic States to Lat. 31° in Florida (Baldw., and Chapm.).

Thlaspi saxatile of the East Mediterranean countries. The ΘΛΑCΠΙ: ΚΡΗΤΙΚΟΝ of Galen — is identified by Caesalpinus viii. 77 with a species growing in scraggy places on mount St Julian, and having "subrubentes" flowers: T. saxatile is termed "t. parvum saxatile flore rubente" by Tournefort inst. 212; was observed by Sibthorp, and Chaubard, in the Peloponnesus and on mount Hymettus; and is known to grow as far as middle Europe (Jacq. austr. pl. 236, and Pers.).

Ligusticum levisticum of the Appenines. Called in Britain *lovage*, by Galfridus pr. pm. "love-ache," in Germany "liebstöckel," in France "levesche" (Prior), in Italy "ligustico" or "levistico" (Lenz), in which we recognize the ΛΙΒΥCΤΙΚΟΝ of Galen top. vii. 6, — "levisticum" of the capitularia of Charlemagne, and "lybisticum" hurtful to the eyes according to Walafridus Strabus: L. levisticum is described by Brunfels, Tragus, and Morison ix. pl. 3; is known to grow on the Appenines (Pers., and Lenz), and is well known in gardens throughout Europe. Eastward, seems known in Greece, being translated "ligustikon" in Koromelas lex.: farther South, the "kaschm rumi" of Tiaduk, Ebn Masawia, Eljuz, I. E. Amran, Ebn Masah, and Rhazes, identified by Ebn Baitar with the "ligustikon," is referred here by Sontheimer; and L. levisticum was observed by Pococke in Palestine. By European colonists, was carried to Northeast America, where it continues under cultivation in gardens. (See L. nodiflorum).

Centaurea (Rhaponticum) rhapontica of Switzerland. The PHOY of Galen fac. simpl. viii. 106, — is referred here by Dodoens p. 389: C. rhapontica is described by Manardus v. 5, Lobel pl. 288, Pona p. 65, and Bellardi; and is known to grow on the Alps (Pers., and Spreng.).

Centaurea armoracifolia of the Mediterranean countries. The ΚΡΟΚΟΔΕΙΛΙΑΔΟC: ΤΗC: ΜΕΓΙCΤΗC growing near water, and its root prescribed by Galen comp. med. ii. 2 against headache, — may be compared: C. armoracifolia was observed by Sibthorp, and Chaubard, on the mountains of the Peloponnesus. Westward, is described by Clusius hist. ii. pl. 11; is termed "centaurium majus folio non dissecto" by Tournefort inst. 449; and "C. Tagana" found by Brotero pl. 3 in Portugal (Pers.) is regarded by Bory as not distinct.

Stachys palustris of Northern climates. Termed by Gerarde p. 852 *clown's allheal* or *clown's woundwort* from being successfully employed by a rustic to heal a wound (Prior); the CΤΑΧΥΟC: CΚΥΘΙΚΟΥ of Galen ther. 19 — may be compared: S. palustris was observed by Sibthorp in moist shady places around Smyrna and Constantinople; is known to grow also around Caucasus and in Northern China (Bieb., and Benth.). Westward, is termed "galeopsis palustris betonicæ folio flore variegato" by Tournefort inst. 185; and is known to grow throughout middle and Northern Europe as far as Petersburg and Sweden (Fries, and Benth.), occurring sometimes in cultivated ground (Pers.). Farther West, was observed by Drummond throughout Canada, and by Douglas along the Columbia river. "S. aspera" regarded by A. Gray as identical, was observed by Reeves at Tokeen in China (Benth.), by Pitcher in Arkansas, and is known to grow from Canada to the Yadkin river and South Carolina (Frazer, Schweinitz, Muhl., Benth., and myself).

Solanum coagulans of Nubia and Tropical Arabia. Called in Yemen "beikaman" (Forsk.), at Syene "kaderanbes" (Del.); and the ΛΥΚΟΠΕΡCΙΟΝ fruit received from Egypt by Galen fac. simpl. iv. — may be compared: S. coagulans was observed by Delile on the border of cultivated ground at Elephantine and Syene, its fruit nearly an inch and a half in diameter; by Forskal, p. 47, frequent in Yemen, and its seeds with the adhering pulp used to coagulate milk.

"171 A. D." (Iren., and Clint. iv. p. 177), Soter succeeded by Eleutherus, "twelfth" bishop of Rome.

"In this year" (Abyss. chron., and C. Mull. geogr. min. p. xcvii), Za-Zigen and Rema succeeded by Za-Gafale, now king of Abyssinia. — He reigned "one" year.

"In this year (or 173" of Euseb., and Syncell., and in the reign of "Marcus Antoninus," Suid.), Oppianus of Cilicia writing. He mentions Antoninus and his son (Commodus).

Solanum dulcamara of Europe and the adjoining portion of Asia. Called in Britain *bitter-sweet*, in medieval Latin "amara-dulcis," in Germany "je lenger je lieber" (Prior) or "bittersuss" (Grieb): the ΔΕΛΦΙΝΙΟΥ plant used according to Oppianus for stupifying fish — (geopon. xx. 2), "agriō-mĕltzana" of Scarlatus, may be compared: S. dulcamara was observed by Sibthorp, Chaubard, and Fraas, from the Peloponnesus throughout the Greek islands and along roadsides near Smyrna; by Forskal, in gardens at Constantinople; and by Gmelin, throughout Siberia. Westward, is figured in manuscript v of the Anglo-Saxon herb. Apul. 76 (Harl., and Cockayne), and under the name of "cardamomum" in Ortus Sanitatis pl. 92; is described by Tragus pl. . . , Turner iii. 2, Matthioli, and

Lobel adv. p. 102; is termed "s. scandens seu dulcamara" by Tournefort inst. 149; and is known to grow in moist situations in Barbary and throughout middle Europe as far as Sweden (fl. Dan. pl. 365, Pers., and Wats.). By European colonists, was carried to Northeast America (later perhaps than 1670, for it is not mentioned by Josselyn), has become completely naturalized, occurring not only along roadsides but in wild marshy situations, and as far inland as Kentucky where it was observed by Short. The root and young branches according to Smith, and Lindley, "have been recommended in scrophulous or glandular obstructions."

"172 A. D." (Abyss. chron., and C. Mull. geogr. min. p. xcvii), Za-Gafale succeeded by Za-Bæsiserk, now king of Abyssinia. — He reigned "four" years.

"173 A. D." (Euseb., and Clint.), the "pseudo-prophecy termed Cataphrygas" originated by Montanus, Priscilla, and Maximilla, the beginning of the Montanist sect. Also about this time, the Encratite sect founded by Tatianus; another heretical sect, by Bardesanes the Syrian; and splendid buildings erected in Greece by Herodes Atticus.

174 A. D. = "14th year of Aurelius Antoninus," in an inscription at Shekh Abadeh in Egypt (Glid. analect.).

"The same year" (Clint.), in Germany, during the battle of the Romans with the Quadi, remarkable rain, regarded as miraculous (mentioned by Dio, Capitolinus, Claudian, Themistius, and by the Christian writers Apollinaris of Hierapolis, Tertullian, Eusebius, Orosius, Gregorius of Nyssa, and Xiphilinus).

This defeat of the Quadi seems the latest historical event mentioned by Pausanias (Sm. biogr. dict.).

The Celtic name for *horse* is given by Pausanias as MAPKAN: — hence the Welsh or British "march," Danish "mär," Low German "märe," Anglo-Saxon "myre" or "mere" or "mære," and current English *mare* (Prior).

Ranunculus aquatilis of Northern climates. Called in Britain *water crowfoot* (Prior), and the BATPAXIA: TA: EN: TAIC: ΛIMNAIC of Pausanias ix. 21. 1, — may be compared: R. aquatilis was observed in Greece by Sibthorp, Chaubard, and Fraas: and farther South, is known to grow in Abyssinia (Rich.). Westward, occurs in relics in the debris of lake-villages in Switzerland (Heer); is termed "r. aquaticus folio rotundo et capillaceo" by Tournefort inst. 291; and is known to grow in Sicily, Sardinia, Algeria, the Canary Islands (Guss., Moris, Desf., Munby, and Webb), and throughout middle and Northern Europe as far as Lapland and Iceland (Hook., and A. Dec.), Eastward from Greece, is known to grow about Caucasus and throughout Siberia (Bieb., and Gmel.), also on Unalaschka (Chem.), in Oregon and California (Torr. and Gr., and Beechey voy.), from near the Arctic Sea throughout Canada to Lat. 38° on the Mississippi and along the Atlantic (Hook., Beck, and Conr.), and farther South among the Alleghanies (Chapm.).

"175 A. D." (Dio, and Clint.), in Syria, revolt of Avidius Cassius; who, after "three months and six days," was put to death. Aurelius Antoninus and his son Commodus now proceeded to Egypt, as far at least as Alexandria; — and in the following spring, to Antioch and Smyrna.

The Peschito *Syriac translation* of the New Testament in the "second century," does not contain the "Second Epistle of Peter, the Second and Third of John, that of Jude," nor "the Apocalypse. Nor are these books received to this day by either Jacobite or Nestorian Christians." — John the Elder (according to Eusebius Pamphilus eccles. hist.) had a separate monument at Ephesus from John the Evangelist. — The Vatican and Medicean manuscripts of the above translation were "written in the years 548 and 586;" the beautiful one in the Estrangelo character, now in the British museum, was finished in 768 at the monastery of Bethkoki (W. Wright in Kitt. bibl. cycl.).

"176 A. D." (Clint.), the "Onomastikon" Greek lexicon of Julius Pollux published and dedicated to the youthful Commodus.

"In this year" (Abyss. chron., and C. Mull. geogr. min. p. xcvii), Za-Bæsiserk succeeded by Za-Elasguaga, now king of Abyssinia. — He reigned "seventy-six" years.

"177 A. D." (Sulpic. Sev., and Clint.), "beyond the Alps," Christians for the first time persecuted, and Pothinus bishop of Lugdunum (Lyons) and a disciple of Polycarp, put to death. He was succeeded by Irenaeus, a disciple of Papias. At this time, there was also a church not far from Lugdunum at "Vienne" (epist. eccl. Lugd. et Vienn., in Euseb.).

"178 A. D." (Beda, and Clint.), Eleutherus in Rome having received the application of Lucius king of South Britain to be made a Christian, missionaries sent there. The fact has been ascertained, that the missionaries taught in Britain the Oriental or original mode of observing Easter.

"In this year (= 1st of the kouang-ho," hist. Sian-pi, and San-kokf transl. Klapr.), Thsieou-thsiuan (in the Chinese province of Kan-sou) invaded by the Ainos under their first king Than-chy-houal, following in winter the river Thsin-choui.

"180, March" (Dio, and Clint.), Marcus Aurelius Antoninus succeeded by his son Commodus, seventeenth Roman emperor. The hieroglyphic ovals of Commodus occur at Philæ, Esneh, and on a small temple at Contra-Latopolis.

"181 A. D." (Euseb., and Clint.), at Alexandria, the temple of Serapis injured by fire.

"183 A. D. About this time" (Niceph., and Clint. iv. p. 181), Theophilus succeeded by Maximus or Maximinus, "seventh" bishop of Antioch.

"184 A. D. = 1st year of the 'tchoung-ping' of Ling-ti" (Chinese chron. table), beginning of the Forty-eighth cycle.

"The same year" (Dio, and Clint.), in Britain, an outbreak of the tribes beyond the Wall suppressed by the Romans under Ulpius Marcellus.

"185 A. D." (Clint. iv. p. 177), death of Eleutherus, unlike all his predeeessors, not through violence (Alst.). He was succeeded by Victor of North Africa, "thirteenth" bishop of Rome.

"In this year." (append. agni-purana, and Wilf. as. res. ix. 183, = 326 B. C. — "140 — 130 — 120 — 120" = 56 B. C. — "120 — 120 yrs" of Masudi), accession at Ujayin of Aditya or Sudraka of the Pomara tribe.* — After a long reign, Sudraka immolated himself by burning, leaving his kingdom to his son (prol. Mrichchh. transl. Wils.). Sudraka is mentioned also by Kalidasa sakont.

In this year (= 187 — "2 years reign" of the Mahavamsa xxxvi.), Mula-tissa succeeded by his son Rohunna, now king of Ceylon.

"186 A. D." (Lamprid., and Clint.), by Commodus, a fleet prepared to bring corn from Mauritania, should the supply from Egypt fail.

"187 A. D." (Lamprid., Chron. Pasch., and Clint. iv. p. 182), at Rome, the "baths of Commodus" built by Cleander.

In this year (= 188 — "1 year reign" of the Mahavamsa xxxvi.), Rohunna succeeded by his brother Cudananga, now king of Ceylon.

"188 A. D." (Hieronym., and Clint.), at Rome, the *Library* contained in the capitol burned by lightning.

In this year (= 210 — "21 years reign" of the Mahavamsa xxxvi.), Cudananga succeeded by Sirinaga, now king of Ceylon.

"189 A. D." (Euseb., and Clint.), at Rome, the head of the colossus removed by Commodus, and one in his own likeness substituted. Victor at this time bishop.

"190 A. D. = 'tsou-ping,' 1st year of Hiao-hien-ti" or Hien-ti, of the Han or Seventh dynasty (Chinese chron. table). During the ensuing civil wars, he was sustained by the Chinese general Thsao-thsao.

"The same year" (Euseb., and Clint.), Maximus succeeded by Serapion, "eighth" bishop of Antioch. Julianus succeeded by Demetrius, "eleventh" bishop of Alexandria. On application through legates to Demetrius, the stoic philosopher Pantaenus sent as a missionary into India. Pantaenus had conversed with persons who had seen the apostles.

"191 A. D." (Galen, Dio, Euseb., and Clint.), at Rome, the temple of the Vestals, regarded as the finest building in the city, destroyed by fire; together with the *Libraries* in the palace, the storehouses of the Egyptians and Arabians, and many private dwellings.

About this time (Steinschneid. i. 4), death of Rabbi Jehuda, the redactor or compiler of the Mishna; a body of collective Hebrew literature. — The work was retouched by his pupils, one of whom, Abba Aricha distinguished by the name of Rab, at the end of thirty-five years transplanted to Babylon the "last amended recension." The "External Mishna," a separate collection, was compiled "about a generation later" by R. Oschaja.

Indigofera argentea of Tropical Arabia and Abyssinia. Called in Yemen and Egypt "nile" or "nyleh" (Forsk., and Del.); and clearly the species of *indigo* cultivated "under the Roman dominion" by the Jews, as appears from the Mishna, — and in instances on record as far North as Malta (Niederstedt, Reynier 439, and A. Dec.); its cultivation in Egypt not antedating the middle ages (Reyn. 354), but mentioned by Abd-allatif, and Abulfeda: I. argentea was observed by Forskal, and Delile, in gardens at Cairo; by Forskal, under cultivation in Yemen, and everywhere wild; is known to grow wild also in Abyssinia (Rich.).

Mexico inhabited as early as this date; and the art of making *indigo* carried there, possibly by newly-arrived colonists.† — This art is among those attributed to the Toltecs (Humb. atl. pict.).

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* *Agaricus sp.* of Hindustan. Called in Hindustan "bhauma" or "ch'hatraca," in Sanscrit "caraca;" and W. Jones further states, That mushrooms were held in detestation by the ancient Hindus, the legislator Yama declaring the eating them, "whether springing from the ground or growing on a tree, fully equal in guilt to the slayers of Brahmens." — The above Agaricus and a species of *Phallus*, the only fungi seen by W. Jones as. res. iv. p. 311 in Hindustan.

† *Indigofera*, three species of Tropical America. In the absence of the accustomed Asiatic species, plants equally suitable for making indigo were discovered in the new country. It is true the Asiatic process differs from the Mexican — described by Hernandez 108, and the plant figured by

"192 A. D." (. . . . Clint.), exhibition in Rome of the marvels of different countries, including animals previously unknown from India, Ethiopia, the South, and the extreme North, witnessed by the historian Herodian. The rhetor Adrianus of Tyre appointed in this year secretary to Commodus.

Cucumis utilissimus of Tropical Hindustan and Burmah. The *winter melon* is called in the Taleef Shereef "kukrie," in Hindustanee "kukree" or "kakrie" (J. F. Wats.), in Telinga "doskai," in Bengalee "kankoor kurktee." (Drur.), in the environs of Bombay "kunkarai" or "kakri" (Graham), by Muslims "kissa" and regarded by Royle as possibly the "kshaym" of Num. xi. 5 (Kitt. bibl. cycl.): the ΤΕΤΡΑΓΚΟΥΡΑ of Herodian epim. 124, — or "tĕtraggōurōn" of Suidas, Constantinus Porphyrogenitus, Moscopulus, and the Greek translation of Rhazes, may be compared: the "tĕtraggōura" or "laggōura" is described by Symeon Sethus as a large edible kind (Turn.); the "cucumis turcicus" is described by Fuchsius pl. 698; the "himōnikō" was seen by Forskal "in gardens at Constantinople;" and fruit of the winter melon, by myself on Malta, regarded there as a variety only of C. melo. Eastward, the "ervaru" of Susrutas sutr. 46 to chik. 18 is referred by Hessler to C. utilissimus, observed by Graham extensively cultivated in the environs of Bombay; by Roxburgh, and Wight, under cultivation as far as Bengal and by far the most useful species, its fruit having "much the flavour of the melon, and will keep for several months," the seeds are ground into a meal eaten by the natives, yield besides a bland oil used in food and in lamps, and in the Guntoor Circar form a considerable branch of commerce (Drur.); was observed by Mason indigenous in Burmah, and one of the cucumbers "consumed in immense quantities" by the natives.

"Dec. 31st" (Dio, and Clint.), Commodus succeeded by Pertinax, eighteenth Roman emperor. The name of Pertinax occurs on coins issued in Egypt during his three months' reign.

"193, March 28th" (Dio, and Clint.), Didius Julianus by purchase, now nineteenth Roman emperor. His name has not been found in Egypt.

The historian Dion Cassius one of the Roman senators who voted the death of Didius Julianus.

"June 1st" (Dio, Herodian, and Clint.), accession of Septimius Severus, twentieth Roman emperor. His hieroglyphic ovals occur at Esneh (Gld. analect.).

"194 A. D." (Dio, and Clint.), civil war; Byzantium besieged by Severus; Aemilianus defeated and slain; and shortly afterwards, Pescennius Niger himself defeated at Issus, and put to death at Antioch. The hieroglyphic ovals, once supposed to be those of Pescennius Niger, are referred by Lepsius k. pl. 67 to an "undetermined Caesar."

The archæologist Athenaeus at this time writing. Also Clemens of Alexandria, a Christian presbyter (Clint.).

Clemens of Alexandria mentions a pyramid in India erected over relics of a god (Budha), and worshipped by "sĕmnōi" venerable persons — (arhats according to Burnouf introd. 295. Compare "samanaiōi").

"195, summer" (Dio, Eutrop., and Clint.), crossing the Euphrates, Severus carried on war and partially subdued the Parthians and Arabs.

"196, A. D." (Dio, and Clint.), after three years siege, Byzantium captured: and Severus, at the time in Mesopotamia, returned to Rome.

"197, Feb. 19th" (Spartian., and Clint.), another aspirant Clodius Albinus defeated and slain near Lugdunum (Lyons), and the civil war brought to a close. Soon afterwards, Severus again proceeded into Asia.

"The same year" (Euseb., Hieronym., and Clint.), the question in regard to Easter. And the churches of Asia, persisting in celebrating the day after the Jewish Passover, "as taught by the apostles and their immediate successors," put out of communion by Victor bishop of Rome. To this measure, the other churches refused their assent; as appears by letters from Narcissus "thirtieth" bishop of Jerusalem, Polycrates bishop of Ephesus, Irenaeus bishop of Lugdunum, Bacchylus bishop of Corinth, Palmas bishop of Pontus, Theophilus bishop of Cæsarea, Cassius bishop of Tyre, and Clarus bishop of Ptolemais: — the original mode of observing Easter continued among the so-called "Quartadecimans" until the meeting of the Council of Nice.

This interference by Victor is regarded as the beginning of Catholicism, of deciding theological

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him is not an Indigofera (A. Dec.). *Indigo* is one of the pigments employed in ancient Mexican paintings (Humb. nouv. Esp. iv. 10); is enumerated by F. Columbus among the productions of Aiti or Hayti (Humb.); was found by J. Acosta 175 largely exported from Mexico; and farther South, among specimens of ancient Peruvian cloth exhumed at Pachacamac, I remarked some that appeared to be dyed with indigo. *Indigofera sp.*, found by Sloane ii. pl. 176 growing spontaneously in the West Indies, is regarded as an ancient plant by Hughes 203; and Maycock. 304; and two or even three apparently indigenous species are according to A. Decandolle cultivated in America.

questions by authority. A further innovation by Victor, was the first issuing of Christian writings in the *Latin* language (according to Hieronymus).

"198 A. D." (Spartian., and Clint.), arrival at Ctesiphon of Severus, warring against the Parthians.

One hundred and thirty-fifth generation. Jan. 1st, 201, onward mostly beyond youth: the Greek poets, Oppianus of Apamea, and Peisander of Laranda; the philosopher Ammonius Saccas; the biographer Diogenes Laertius (Blair); the rhetors, Hippodromus, Antipater of Hierapolis, Hermocrates, Philiscus, Heliodorus, Antiochus of Aegae, Aspasius of Ravenna, Apsines of Gadara, and Damianus of Ephesus; the commentator Alexander of Aphrodisias; the Christian Greek writers, Apion, Sextus, Arabianus, Rhodon, Judas, Musianus, Caius, and Carpocrates the Gnostic (Alst. p. 379).

"The same year" (Euseb., and Clint.), Victor succeeded by Zephyrinus, "fourteenth" bishop of Rome; and (according to Alsted) a Montanist.

"The same year" (Cassiodor., and Clint.), at Rome, building of the "baths of Severus and the Septizonium."

"202 A. D." (Spartian., and Clint.), from Syria by the way of Palestine, Severus and his son Caracalla arriving in Egypt. Proceeding up the Nile, they "carefully inspected the Pyramids, Memphis, the Labyrinth, and Memnon," maintaining throughout the worship of Serapis and prohibiting conversions to Judaism and Christianity; and before the close of the year, returned to Rome.

The *Vocal Memnon*, as already stated (see Strabo's visit), was repaired by order of Severus; and ceased uttering sounds.

From about this reign also (according to Letronne, Leps. eg. and sin. p. 443), the *porphyry* quarries at Gebel Dōchan . . . . . appear to have been neglected. — This porphyry is further described by Lepsius p. 370 as "bluish-red."

"Not before the Third century" (according to Zoega), Greek letters employed in writing the *Egyptian language*: additional ones being invented for the additional sounds. — The *inscriptions* and manuscripts in this so-called "Coptic alphabet," have with a single exception proved to be Christian; and few are older than the "Seventh" century (Champ.-Fig. p. 228): the series continuing thence downward to the extinction of the Literature and Language in the "Sixteenth."

Hyoscyamus muticus of the Egyptian and Arabian Desert. Called in Egypt "datora" or "tatourah" or "sem el-far" or "sekaran" inebriating, and possibly the seed ΝΑΦΡΙ of the Coptic translation of Matthew xiii. 31: — H. muticus was observed by Forskal p. 45, and Delile, growing in the Desert from Cairo to Upper Egypt, the powder maliciously thrown rendering persons insane for several days: is known to grow also in the Arabian Desert (Linn. mant. 45, Lam., and Persoon. See Datura metel).

"203 A. D." (Clint.), Serapion succeeded by Asclepiades, "ninth" bishop of Antioch.

"The same year" (inscript., and Clint.), the "arch of Severus," commemorating his victories, erected in Rome. The latest *Phoenician inscription* known, is on this arch (Gesen.).

"204 A. D." (Censorin., and Clint.), at Rome, the games of Severus. Witnessed by the historian Herodian.

"207 A. D." (Clint.), the Treatise "adv. Marcion" by Tertullianus of Carthage, "the first after Victor of Latin" Christian writers (Hieronym. catal. 53). Apollonius, however, hardly more recent than Tertullian.

Greek inscriptions in the reign of Severus (Franz 107 to 138), presenting the following forms of the letters, ε, θ, υ. Also in this reign (Franz 137 to 152), the earliest Greek inscriptions with the words spaced; intervening dots being omitted.

"208 A. D." (Dio, and Clint.), war in Britain, and arrival there of Severus.

"209 A. D." (Dio, and Clint.), invasion of Caledonia (Scotland) by Severus.

"210 A. D." (coins, Spartian., Vict., Oros., and Clint.), North of Hadrian's Wall, another wall across Britain built by Severus. — Traces are extant, extending from "the Frith of Forth" Westward (Blair).

In this year (= B. C. 543 — "752 y. 4 m. 10 d. of the Mahavamsa xxxvi.), Sirinaga succeeded by his son Tissa, called Vyewahara-tissa and now king of Ceylon. — He burned the heretical books of Vyitullya, a Leathin brahmin.

"211, Feb. 4th" (Dio, and Clint.), death of Severus in Britain, at Eboracum (York). He was succeeded by his son Caracalla, twenty-first Roman emperor. The separate hieroglyphic ovals of Caracalla and his brother Geta, occur at Esneh. The name also of Caracalla, occurs in a Greek inscription in the quarries at Philæ.

"In or about this year" (vit. Opp. and Sm. b. d., see also Sozom.), the Cynegetica brought by Oppianus to Rome and dedicated to Caracalla. In this poem, Oppianus i. 490 speaks of the inhabi-

tants of Britain as painting their bodies, and possessing a peculiar breed of dogs "agasseos." He had also seen a living *giraffe*, as appears from the details of his description.

"212, February" (Dio, and Clint.), Geta put to death by his brother Caracalla. Also many others, including the jurist Papinianus who had been prefect of Britain, and Serenus Sammonicus (Sm. biog. dict.).

"The same year" = "40th after the rise of the Montanists" (Euseb., and Clint.), Apollonius writing against Montanus and his Sect.

"214 A. D." (Spartian., and Clint.), from Gaul, invasion of the Alamanni by Caracalla; who next proceeded to Dacia, and Thrace, and wintered in Nicomedia.

"The same year" (Euseb., and Clint.) Narcissus succeeded by the bishop of Cappadocia Alexander, now thirty-first bishop of Jerusalem.

Jasminum officinale of the mountains of Yemen. Called in Britain *jasmine* (Cowper) or *jessamine* or *jessamy* or *jesse*, in Spain and France "jasmin," in Italy "gesmino," in Armenia "jasamun," in Persia "jasemin" (Prior), in Yemen "sæs" or "kæjan," in Egypt "kajan" or "jasmin" (Forsk.), in which we recognize the Egyptian or Coptic ΑCMI — (referred here by Kircher p. 179), and the "jasmē" of the Persians, according to Aetius i. a fragrant ointment made of flowers: the "yasmin" is mentioned by Ishak ben Amran, I. ben Masah, Rhazes, Mosih ben Elhakam, S. E. Hasan, and Ebn Baitar: J. officinale was observed by Forskal, and Delile, in the gardens of Egypt; and by Forskal, wild among the mountains of Yemen. Farther North, was observed by Forskal much cultivated at Constantinople for its flowers and the ointment prepared from them; is described by Blackwell pl. 13; is well known in the gardens of Western Europe as far as Britain, and escaping from cultivation has been sometimes found growing spontaneously (Pers., and A. Dec.). Eastward from Arabia, is called in Hindustanee "yasmin," in Bengalee "mallika" or "beli pushpa" (D'roz); and was observed by Graham "in gardens" at Bombay.

Jasminum grandiflorum, regarded by Graham as perhaps not distinct, and in the environs of Bombay called "chumbelly" and "jatee jai:" the fragrant "djatika" or "djatya" is mentioned in the Saddharma pundarika (Burn. ii. 218 to 415), and the "jati" or "sumana" or "sukumara" of Susrutas i. 25 to iv. 20, is referred here by Hessler: J. grandiflorum was observed in Hindustan by Rheede vi. pl. 52, and Roxburgh; by Graham, "in gardens everywhere," its flowers "peculiarly sweet-scented," and distinguished by residents as the *Catalonian* or *Spanish jasmine*. Farther East; is enumerated by Mason as "exotic" in Burmah and called "myat-læ." Westward, was observed by Delile in the gardens of Egypt; is described by Miller dict. 4, and Aiton kew. i. p. 10. By European colonists, was carried to Tropical America, where it was observed in Surinam by Merian pl. 46 (Pers.).

"215 A. D." (coins, Dio, and Clint.), leaving Nicomedia, Caracalla proceeded to Antioch, and for the second time to Alexandria in Egypt. At Rome, building of the "baths of Caracalla."

As early possibly as this date, cutting through the air-tube of the throat, *tracheotomy*, in extreme cases of difficult respiration practised by Asclepiades: — directions for even a timid operator, are given by Antyllus (Paul. Aegin. vi. 33, and Cockayne).

"217, April 8th" (Dio, and Clint.), Caracalla slain near Edessa. And "on the fourth day" afterwards, accession of Macrinus, twenty-second Roman emperor. The name of Macrinus occurs on coins issued in Egypt.

"The same year" (Dio, and Clint.), invasion of Mesopotamia by the Parthians under Artabanus, and peace purchased by Macrinus. Who concealed some of the facts from the Senate.

"In the third century and under the Han" (Humb. cosm. ii), the Chinese writer Hiu-chin composing his dictionary.

"218, June 8th" (Dio, and Clint.), Macrinus succeeded by Elagabalus, twenty-third Roman emperor. The name of Elagabalus occurs on coins issued in Egypt.

Ranunculus muricatus of the Mediterranean countries. Called in Greece "sphōurthōkōkula" (Sibth.) or "sphōurthakla" (Fraas); and the ΛIMNHCTHN or ΛIMNHCION enumerated by Anthyllus among acrid plants mixed in acrid liniments — (Oribas. vi. 6 and x. 13) may be compared: R. muricatus is described by Alpinus exot. pl. 262; was observed by Sibthorp, Chaubard, and Fraas, frequent about gardens and in moist and watery places from the Peloponnesus throughout Greece. Westward, is termed "r. palustris echinatus" by Tournefort inst. 286; was observed by Desfontaines in Barbary; and is known to grow in various parts of Southern Europe (Pers.). By European colonists, was carried to Madeira (herb. A. N. S.); to Northeast America, where it continues in cultivated ground from Virginia to Charleston (Mx., Pursh, and Ell.) and New Orleans (H. Little, and Drumm.); also to Buenos Ayres, Tucuman, and Valparaiso (Dec., and Hook.).

"219 A. D." (Lamprid., and Clint.), arrival of Elagabalus from Nicomedia; and a temple with an image erected by him in Rome, where he wished to be worshipped as the principal deity.

"220 A. D. = epoch of the San-kouĕ," or of the Three kingdoms, Han of Chou, Weï, and Ou, having its seat of government at Khian-khang: — the city afterwards called Nan-king (Pauth).

"221 A. D. = 'tchang-wou,' 1st year of Tchao-lie-ti, of the Heou han" or Eighth dynasty—(Chinese chron. table).

"The same year" (Clint.), end of the chronicle of Julius Africanus. Through whose care and intercession—(Euseb.) Emmaus in the following year was rebuilt under the new name of Nicopolis.

"222, March 11th" (Dio, and Clint.), Elagabalus succeeded by Alexander Severus, twenty-fourth Roman emperor. The name of Alexander Severus occurs in a Greek inscription at Antinoe in Egypt.

"The same year" (Euseb., and Clint.), end of the chronicle of Hippolytus: and beginning of "his Paschal Cycle of sixteen years."

At this time (Blair), annual tribute received by the Goths, not to invade the Roman Empire.

"223 A. D. = 'kian-king,' 1st year of Heou-tchou" or Heou-ti, of the Heou han or Eighth dynasty—(Chinese chron. table).

"The same year" (Lamprid, and Clint.), the jurists Ulpianus and Florentinus among the counsellors of Alexander Severus.

"226 A. D." (Hieronym., and Clint.), at Rome, building of the "baths of Alexander Severus."

"The same year" (Clint., and Plate in Sm. b. d.), the Parthian king Artabanus defeated in the plain of Hormuz by Artaxerxes or Ardishir; who thus became the head of a new dynasty, the Sasanidæ. Greek inscriptions now disappear from the Persian *coins*, and are replaced by a different alphabet.

The capture of Jericho by Artaxerxes or Ardishir is the latest historical event mentioned by Solinus 35:—supposed to be the senator Julius Solinus or Solonis, who was put to death by Alexander Severus (J. Masson, H. Valesius, and J. A. Fabric. edit. Ernest).

According to Solinus 22, "Finis erat orbis ora Gallici litoris, nisi Britannia insula non qualibet amplitudine nomen paene orbis alterius mereretur." the seashore of France would be the end of the world but for the isle of Britain, expanding so widely in all directions as almost to deserve the name of another world; among other islands around, "Siluram" (Scilly Islands, or Isle of Man) inhabited by people who "custodiunt morem vetustum, nummum refutant, dant res et accipiunt, mutationibus necessaria potius quam pretiis parant" retain their ancient customs, disapprove of money, give articles and receive, procure what is needful by exchanges rather than by a fixed price. The strait between Britain and another large island Hibernia navigated in boats of wicker-work covered with ox-hide, and during the voyage no food is eaten.

In Hibernia "nullus anguis, avis rara, gens inhospita et bellicosa" there are no snakes, birds are rare, and the people inhospitable and warlike: "sanguine interemtorum hausto prius victores vultus suos obliunt" smearing their faces with and drinking the blood of slain enemies: "fas et nefas eodem loco ducunt" they make no distinction between right and wrong: when a male child is born, the mother offers vows, hoping that it may be killed in battle: "qui student cultui dentibus mari nantium belluarum insigniunt ensium capulos, candicant enim ad eburnam claritatem, nam præcipua viris gloria est in armorum nitela" those who affect gentility ornament the hilt of their swords with the teeth of great sea-beasts (Physeter or sperm-whale), shining like ivory, for the principal glory of the man is in the brightness of his armour.

Among the productions of Britain, Solinus enumerates great abundance of various metals, "gagates" *agates* abundant and of the best quality, and "nigro gemmeus" *jet*.

"About this time" (Clint.), return of Origen from Antioch to Alexandria, where he commenced his "hexapla" of the Scriptures.

"227 A. D." (Chinese chron. table), Wen-ti king of Wei succeeded by Ming-ti; who named the years of his reign "tai-hao."

"The same year" (Hieronym., and Clint.), Beryllus bishop of Bostra in Arabia, and Geminianus a presbyter of Antioch, prominent as Christian writers.

"228 A. D." (Euseb., and Clint.), Urbanus after "eight years" service succeeded by Pontianus, sixteenth bishop of Rome. In this year also, Philetus succeeded by Zebinus, "eleventh" bishop of Antioch.

"230 A. D." (Alst. p. 367), the growing pretensions and arrogance of the bishops of Rome, denounced by Tertullianus de pudicit.

"231 A. D." (Clint.), removal of Origen from Alexandria to Caesarea in Palestine; on invitation of Firmilianus bishop of Cappadocia.

232 A. D. (= 210 + "22 years reign" in the Mahavamsa xxxvi), Tissa succeeded by his brother Abha-tissa, now king of Ceylon.

"233 A. D." (Euseb., and Clint.), Demetrius succeeded by Heraclas, "twelfth" bishop of Alexandria.

"In or about this year" (Percev. i. 230), commencement of the Coraysh tribe of Arabs, Fihr-Coraysh, eleventh progenitor of Mohammed, having numerous children.—One of his sons, Ghalib, married a daughter of Cab, son of Amr the Khozaite.

Hardly later than this date (Graha Munjari tables, Puranas, and Bentl.), Devaban reigning in Hindustan.

The Saddharma pundarika, lotos of the law of good men, written as early perhaps as this date. Siva is mentioned, and king Virudhaka — (Burn. ii. 240 and 258). It was first translated into Chinese "in 280 A. D.:" a second translation was made between "397 and 402," and a third between "601 and 605" (Stan-Jul., and Burn. i. 9).

Jasminum (Mogorium) sambac of Tropical Hindustan. The *Arabian jasmine* is called in Egypt "fell" (Del.), in Yemen "full" or "fyll" (Forsk.), in Sanscrit "malli" or "mallica" (W. Jones), in Bengalee "but-moogra" or the double variety "bela," in Tamil "kody-mulli," in Telinga "boondoo-mallie," (Drur.), in the environs of Bombay "bhutt mogra" (Graham), in Burmah "ma-lee" or "sa-bay" (Mason), in Malay "kambang malatti" malatti flower (Thunb.), in Bisaya "manul" or "capopot bisaya," in Pampango "campopot" or "culatai" or "sampagang pongso," in Tagalo "sampaga" (Blanco); in which we recognize the "mallika" of the Saddharma pundarika* — (Burn. ii. 218 to 415), forming bowers according to Valmiki ram. i. 25, cultivated in gardens according to the Mrichchhakati iv., having fragrant flowers and growing in the woods according to Kalidasa rhag. xvi. 47, and prescribed medicinally by Susrutas (Hessl.): M. sambac is described by Rumphius v. pl. 30; was observed by Rheede vi. pl. 50 to 55 in Malabar, its flowers sacred to Vishnu; by Graham, "common in every garden" around Bombay; by Drury, "common in every forest in the peninsula" and "generally cultivated in gardens," its leaves root and flowers employed medicinally; by Burmann pl. 58, on Ceylon; by W. Jones as. res. iv. 245. "wild in the forests" of Bengal; by Mason, "exotic" in Burmah; by Loureiro, in Anam; by Blanco, known to all the natives of the Philippines; by Thunberg, in the Malayan archipelago, and from the warmer portion of India introduced into the gardens of Southern Japan. Westward, the "full" is mentioned by Ishak ben Amran, Rhazes, Avicenna, Serapion, and as an Indian medicine by Ebn Baitar: M. sambac was observed by Forskal under cultivation in Yemen; by him, and Delile, in the gardens of Egypt; is described by Parkinson pl. . ., and from having been brought from Goa to Pisa is sometimes called *Tuscan jasmine* (Graham). By European colonists, was carried to Northeast America, where it continues in greenhouses.

One hundred and thirty-sixth generation. May 1st, 234, onward mostly beyond youth: Scythianus: the Greek historians, Asinius Quadratus, and Callinicus; the grammarian Lupercus of Berytus; the rhetors, Nicagoras, Minucianus, Paulus, ... Andromachus of Syria, Diophanes, and Philostratus the younger; the Christian Greek writers, Tryphon, and Gregorius Thaumaturgus: the Latin writer Censorinus; the Christian Latin writer Pontius.

"235, Feb. 10th" (Clint.), Alexander Severus succeeded by Maximinus, twenty-fifth Roman emperor. The name of Maximinus occurs on coins issued in Egypt.

"236 A. D." (lib. pontif. Damas., and Clint.), after serving "one month and ten days," Anteros succeeded by Fabianus, eighteenth bishop of Rome.

"237 A. D., probably in or about" (Sm. b. d.), Philostratus writing his Lives of the sophists. — The work however is continued until the reign of Philippus A. D. 244-9.

Sedum eriocarpum of the Mediterranean countries. Called in Greece "amarantō" (Sibth.), and the AMAPANTOC of Philostratus — may be compared: S. eriocarpum was observed by Sibthorp pl. 449, and Bory, in arid situations in the Peloponnesus. "S. pallidum" received from the Tauro-Caspian countries by Pallas, and Bieberstein (Steud.), is regarded by Bory as not distinct; "Crassula rubens," observed by Sibthorp in the Peloponnesus, by Magnol pl. 237 at Montpellier, and known to grow as far as Germany (Hoffm. fl. Germ. and Pers.), is also considered identical by Bory.

Sedum confertum of middle Asia? — Called in Egypt "hay a'lem" (Del.); and possibly the "amarantōn" recommended in Geopon. iii. 6 to be placed in gardens: S. confertum was observed by Forskal, and Delile, in the gardens of Egypt, and is not known to occur elsewhere.

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* *Jasminum revolutum* of Subtropical Hindustan. From early times, an essential oil distilled from it and used as a perfume, and its root employed medicinally in ringworm: the fragrant oil of the "navamalika" or "vanamalika" mentioned in the Saddharma pundarika — (Burn. ii. 250 to 424) may be compared: J. revolutum was observed by Powell in the Punjaub (Drur.). Transported to Europe, is described by Sims (Steud.).

Phrynium capitatum of Tropical Eastern Asia. A Scitamineous plant called in the environs of Bombay "kudali" (Graham); and the "kadali" having an unsubstantial stem according to the Saddharma pundarika — (Burn. ii. 241 and 420), may be compared: P. capitatum was observed by Rheede xi. pl. 34 in Malabar; by Graham, in the environs of Bombay. Farther East, by Loureiro in moist shady places in Anam and Tropical China, its leaves wrapped around articles of food previous to boiling to impart colour and grateful flavour (Pers., and Graham).

"238 A. D. = 1st year of the 'yen-hi' of Heou-tcheou" — (Chinese chron. table).

"In the spring" (Clint.), Maximinus succeeded by Pupienus Maximus, twenty-sixth Roman emperor. He reigned only about three months; but his name occurs on coins issued in Egypt.

"June" (Clint.), Pupienus Maximus and his colleague Balbinus put to death; and succeeded by Gordianus Pius, at the age of "thirteen" the twenty-seventh Roman emperor. The name of Gordianus Pius occurs on coins issued in Egypt: and (according to Champollion-Figeac), in inscriptions addressed to the ancient deities, acts of adoration by Egyptian families.

His preceptor, Serenus Sammonicus, presented the extensive library of his own father bearing the same name.

"239 A. D." (Chinese chron. table), Ming-ti king of Wei succeeded by Tsao-fang; and the years of his reign named "tcheng-chi."

"In this year" (= 1209 — "970 years" of Tchao yuan phing, Klapr. mem. ii. 335), Bouka-khan made chief of the Ouigours, a Turkish tribe on the Selenga.

"240 A. D." (J. R. Hind. and Humb. cosm. i. 1), the Chinese from beyond "B. C. 500" having recorded the apparent paths of comets through the constellations, the first *comet* whose *orbit* is known; calculated from these observations.

In this year (= 232 + "8 years reign" in the Mahâvamsa xxxvi), Abha-tissa succeeded by his brother Sirinaga II. now king of Ceylon.

"241 A. D." (Eutrop., Zosim., and Clint.), marriage of Gordianus Pius; the temple of Janus opened by him, and his departure for the seat of war in Persia.

"The same year" (Agath., and Clint.), Artaxerxes succeeded by Sapor (Shahpoor), second Sasanid king of Persia.

242 A. D. (= 240 + "2 years reign" in the Mahavamsa xxxvi.), Sirinaga II. succeeded by his son Wijaya, now king of Ceylon.

243 A. D. (= 242 + "1 year reign" in the Mahavamsa xxxvi.), Wijaya succeeded by Saughatissa, now king of Ceylon.

"After the Corean invasion in the earlier part of the third century, certain Coreans were brought" by the empress Jingo-Kogu "to introduce the cultivation of *mulberry* and of the *silk-worm*" into Japan — (Jap. centen. comm. 77).

"244 A. D. = 7th year of the 'yen-hi' of Heou-tcheou" (Chinese chron. table), beginning of the Forty-ninth cycle.

"In the spring" (Clint.), Gordianus Pius succeeded by Philippus, twenty-eighth Roman emperor; an Arab by birth, and nominally a Christian. The name of Philippus occurs on coins issued in Egypt: and (according to Champollion-Figeac), in the above mentioned series of inscriptions dedicated to ancient deities of Egypt.

In the quarry at Gertassee in Nubia, some of the *Greek inscriptions*, "exvotos" in honour of Isis, are in the reign of Philippus. A "considerable number of Greek exvotos inscribed to Hermes Trismegistos," occur at Pselcis (Wilk. theb. and eg. p. 478). But in ascending the Nile, the "last harvest of Greek inscriptions" occurs at Hierasykaminos (Leps. eg. and sin. p. 125).

"245 A. D." (Nicol.), a synod at Ephesus. Against Noetus, who denied distinction of persons in the Trinity.

247 A. D. (= 243 + "4 years reign" in the Mahavamsa xxxvi.), Saughatissa succeeded by Sirisanghabo, now king of Ceylon. — He reigned "two years."

"247 or 248 A. D." (Nicol., see Alst.), a synod in Arabia, Origen presiding. Against those who asserted the death and resurrection of the soul with the body.

"248 A. D." = "third consulship of Philippus" (coins, Eutrop., Capitolin., Vict., Clint., and Ramsay in Sm. b. d.), celebration of the Thousandth anniversary of the founding of Rome. (The exact month not ascertained, but the computation of Varro is evidently the one followed).

"The same year" (Clint.), the rhetor Cyprianus, who after conversion had given up his property to the poor, appointed bishop of Carthage. His writings are in Latin.

"249, after Aug. 29th" (coins, and Clint.), Philippus succeeded by Decius, twenty-ninth Roman emperor. The hieroglyphic ovals of Decius conclude the series on the Egyptian monuments.

"The same year" (Vict., Syncell., and Clint.), the Goths, a "Scythian" tribe, crossing the Danube ravage Thrace, and capture the city of Philippopolis.

"The same year" (Euseb., and Clint.), Heraclas succeeded by Dionysius, "thirteenth" bishop of Alexandria.

About this time, Democritus the Platonic philosopher writing. He was seen by Longinus, — and is mentioned by Porphyrius vit. Plot. 20, and Syrianus (Ruhnken, and Sm. b. d.).

Cnicus benedictus of the Mediterranean countries. Called in Germany "cardo benedict" (Trag.), in Greece "kalaggathō" (Sibth.); in which we recognize the ΚΑΛΑΚΑΝΘΟΥ of Democritus, — Anatolius Berytius, and Paxamus: C. benedictus was observed by Forskal, Sibthorp, and Fraas,

from the Peloponnesus and Crete to Cyprus and the Dardanelles; by Hasselquist, at Damietta in Egypt; and is known to grow in Persia (Lindl.). Westward, said to have been sent from "India" to the German emperor Frederick (Trag.): is described by Fuchsius p. 121, Gesner hort. f. 249, and Dalechamp 1450 (Spreng.); is termed "cnicus sylvestris hirsutior sive carduus benedictus" by Tournefort inst. 450; was observed by Forskal near Marseilles; and is known to grow in other parts of Southern Europe (Lam. fl. fr., and Pers.). By European colonists, was carried to Northeast America, where it has been found along "roadsides, scarcely naturalized" (A. Gray); and to Chili (Lindl.). The plant according to Lindley was "once much used as a febrifuge."

"250 A. D." (Dionys. Alex., Greg. Tur., and Clint.), severe persecution against Christians. Fabianus bishop of Rome put to death, and succeeded by Cornelius; Babylas twelfth bishop of Antioch put to death, and succeeded by Fabius (Euseb., and Clint. iv. p. 269 to 287); and Alexander bishop of Jerusalem also put to death. Seven "ordained bishops" sent as missionaries into Gaul: Gatianus to "Turonicis" (Tours), Trophimus to "Aretalensibus" (. . . .), Paulus bishop of "Narbonæ," Saturninus bishop of "Tolosæ," Dionysius to "Parisiacis," Stremonius to "Arvernis," and Martialis to "Lemovicinis" (Limoux?).

"The same year" (Alst. p. 399), retirement into the Egyptian Desert of Paulus of Thebes; regarded as the first hermit. — His example was followed some forty years later by Antonius, afterwards by others, and eventually led to *monachism*.

"251 A. D." (Pont., and Clint.), the schism of Novatian; his ordination at Rome outside of the church, by Novatus a presbyter of Cyprianus.

"Before the close of the year" (Clint.), Decius succeeded by Trebonianus Gallus, thirtieth Roman emperor. The name of Trebonianus Gallus occurs on coins issued in Egypt.

"252, Sept. 14th" (Hieronym., and Clint.), Cornelius nineteenth bishop of Rome put to death. Lucius is next in order (on the Lists of Alsted and Nicolas).

"The same year" (Hieronym., and Clint.), a great *pestilence* throughout the Roman empire; especially severe in Egypt and Alexandria. — The pestilence continued "fifteen years."

"In this year" (Abyss. chron., and C. Mull. geogr. min. p. xcvii), Za-Elasguaga succeeded by El-Herka, now king of Abyssinia. — He reigned "twenty-one" years.

"253 A. D." (Porphyr., and Clint.), Plotinus founder of the Neo-Platonist school of philosophy, beginning to write. Amelius of Tuscany, and Origen the younger, among his disciples.

"The same year" (Nicol.), a synod at Carthage, under Cyprianus. On the baptism of heretics, and declaring that infants may be baptized.

In this year (= 543 B. C. — "795 yrs" of the Mahavamsa xxxvi), the revived Vytullya-wada books burned by king Ghota-abaya, and the brahminical priests, sixty in number banished from Ceylon.

"254, about February" (Clint.); Trebonianus Gallus and his son and colleague Volusianus, put to death; and the accession of Aemilianus, thirty-first Roman emperor. Who reigned "three months" only; but his name occurs on coins issued in Egypt.

"The same year = 1st year of Koung-tcheng, a descendant of Tsao-tsao" or Thao-thsao — (Chinese chron. table).

"May" (Clint.), Aemilianus succeeded by Valerianus, thirty-second Roman emperor. The name of Valerianus occurs on coins issued in Egypt.

About this time (Vopisc. 7), the Franci from Germany wandering over Gaul; and a body of them defeated at Moguntiacum (Mayence on the Rhine) by Aurelianus, "tribune of the sixth Gallic legion."

Hardly later than this date (Graha Munjari tables, Puranas, and Bentl.), Upadeva reigning in Hindustan.

"256 A. D." (Eutrop., Oros., and Clint.), irruption of the "Franci" or "Germani ulteriores" through Gaul into Spain. Dacia beyond the Danube, lost to the Romans. And Pannonia ravaged by the Sarmati and Quadi.

"257 A. D." (Vopisc., Eutrop., and Clint.), the Goths after ravaging Pontus in Asia, Macedonia, and Greece, repelled by the Roman general Aurelianus.

"The same year" (Euseb., Hieronym., and Clint.), letter from Dionysius to Xystus "successor to Stephanus" and now twenty-second bishop of Rome.

"258 A. D." (Clint.), Xystus bishop of Rome, and Cyprianus, put to death.

"The same year" (Vict., Eutrop., and Clint.), Postumus, of obscure origin, having established himself over the Gauls as king, claiming the Empire and issuing coins. — He governed Gaul with great firmness and moderation "ten" years.

"The same year" (Zosim., and Clint.), after the arrival of Valerianus at Antioch, the populous city of Trapezus (Trebizond) captured by the Scythian Borani, a Gothic tribe. — In the following year, Bithynia ravaged by them.

"259, July 22d" (Pont., and Clint.), Dionysius ordained twenty-third bishop of Rome.

"260 A. D." (coins, Zosim., and Clint.), in the East, Valerianus defeated by the Persian king Sapor, and taken prisoner. His son and colleague Gallienus remaining at home, thus became sole Roman emperor. The name of Gallienus occurs on coins issued in Egypt.

The physician Philumenus possibly at this time writing: — he is mentioned by Oribasius, Aetius, and Alexander Trallianus (Sm. b. d.).

Lepidium spinosum of the East Mediterranean countries. The ΜΙΛΗCΙΑC herb of Philumenus, whose chopped or bruised leaves applied fresh redden tumours, to be restored by emollient cataplasms — (Orib. xlv. 29), is referred to some species of *pepper-wort* by Cornarius (Daremb.): L. spinosum, its stem and branches somewhat rigid, was received from the East by Arduini ii. pl. 16 (Pers.); was observed by Sibthorp in Greece, by Chaubard in the Peloponnesus.

"The same year" (Hieronym., Vict., Oros., and Clint.), irruption across the Alps and Rhaetia of Alamanni and Germani into Italy, "as far as Ravenna."

"261 A. D." (Hieronym., Vict., and Clint.), in Spain, the city of Tarraco captured by invading Franci. — Who after a while obtaining ships, sailed along the coast, and even passed into Africa.

"262 A. D." (Clint. iv. p. 285), Demetrianus succeeded by Paulus of Samosata, "fifteenth" bishop of Antioch. Hymenaeus at this time "thirty-seventh" bishop of Jerusalem.

"The same year" (Ammian., and Clint.), Antioch captured unexpectedly and plundered by the Persians. At Ephesus, the temple of Diana plundered and burned by the Scythians or Goths. And on account of the *pestilence, earthquake*, the claiming of the empire by Odenatus at Palmyra, occupying of Illyricum by Aureolus, and of Egypt by Aemilianus, the Sibylline books at Rome consulted, and a sacrifice offered to Jupiter (Trebell.).

Formosa,* forming part of what was anciently called Houang fou, was included under the Han dynasty among the Man ty countries of Southern barbarians, — and under the Youan the inhabitants were called Toung fan Eastern foreigners. Under the Ming the island received the name of Ky loung, from a mountain at its Northern extreme, the neighbouring harbour being anciently called Pe kiang North Bay (Ming szu 323 p. 16, and Klapr. mem. i. 323).

"263 A. D. = 1st year of the 'yen-hing' and 41st of Heou-tchou," the entire extinction of the Han dynasty — (Chinese chron. table).

"264 A. D. = 'hien-hi,' 1st year of Youan-ti II., of the Wei" and a descendant of Thsao-thsao — (Chinese chron. table).

"265 A. D. = 'tai-chi,' 1st year of Wou-ti II.," head of the new dynasty of the Tcin — (Chinese chron. table).

Thea bohea of China. The use of *tea* traced in Chinese writings as far back as this year — (geogr. plant. lond. tract soc. p. 123); is mentioned also in Chinese history in the "Fourth" century, again in the "Sixth" (Schouw 21); was first taxed "in 763;" and from China, the living shrub was introduced into Japan "prior to the Tenth century," as appears from Japanese accounts. "Sah" or tea is mentioned by the early Arab travellers in China, Wahab and Abuzeid; also by Mehemet Arabs (as quoted by Ramusio). The beverage has never been much used among the Arab tribes; which may in part account for its having so long remained unknown to Europeans. T. bohea was observed by Kaempfer, and Thunberg, everywhere in Japan, both cultivated and springing up spontaneously.

"The same year" (Euseb., and Clint.), Dionysius succeeded by Maximus, fourteenth bishop of Alexandria.

"The same year" (Clint.), letter of Longinus naming several living philosophers; and among them, Eubulus of Athens, and his own pupil Porphyrius.

Porphyrius at this time thirty-two years old by his own account (= 2 + "30 in tenth Gallien.," vit. Plot. iv. p. 99), and for the last two years a pupil of Plotinus. — In the same treatise, Porphyrius mentions the "sixty-eighth year" of his own age.

Britain is mentioned by Porphyrius, and termed "fertilis provincia tyrannorum" having many kings, — as translated by Gildas hist. 4.

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* *Olea fragrans* of Tropical and Subtropical Eastern Asia. Called in Japan "mokusei" (Jap. c. c. 35); and the "san-yeou houa" flowers of "jasmin sauvage", exported from Formosa to China for scenting tea — (Klapr. mem. i. 327) may be compared: O. fragrans was observed by Loureiro in Anam and Tropical China: by Thunberg pl. 2, in Japan, where it is cultivated in gardens (Jap. c. c.).

Colocasia? maxima of Formosa and the Philippines. Called in Tagalo, Pampango, and Bisaya "biga" (Blanco); and the "arum majus" growing in the Southern portion of Formosa and having leaves as large as a house, — much used by the natives (Klapr. mem. i. 331), may be compared: C. maxima was observed by Blanco in shallow water on the Philippines, the leaves five feet long, and the decaying petioles triturated and applied externally in toothache.

The Hindus are described by Porphyrius abst. iv. 17 as divided into two factions: the Brahmans, hereditary throughout; and the ΣΑΜΑΝΑΙΟΙ (Budhists), indiscriminately selected and who practise celibacy, have no possessions, and pray at the sound of bells.

266 A. D. (= 276 — "10 years reign" in the Mahavamsa xxxvi.), Ghota-abaya succeeded by his son Dette-tissa, now king of Ceylon.

"267 A. D." (Trebell., Zosim., and Clint.), at Palmyra, Odenatus put to death, and succeeded by Zenobia. In Greece, the Heruli (a Gothic tribe) after pillaging Athens, repulsed by a band of "two thousand" men under the historian Dexippus.

"The same year" in Gaul (Vict., Hieronym., and Clint.), Postumus succeeded by Victorinus as king; next by Marius; and at the close of the year, by Tetricus. Coins of all these princes are extant.

One hundred and thirty-seventh generation. Sept. 1st, 267, onward mostly beyond youth: Rabbi Jochanan: the Greek poet Aurelius Apollinaris; the historian Callicrates of Tyre; the Christian Greek writers, Malchion of Antioch, Pierius of Alexandria, and Theognostus: the Latin writer, the poet Nemesianus; the Latin Christian writer Arnobius.

About this time (Gesen., and others), the modern *Hebrew letters* make their appearance for the first time, in inscriptions at Palmyra. — The "vowel-points," were introduced more than two centuries later, and after the time of Hieronymus.

Ceasing of the *Great pestilence*, after continuing its ravages "fifteen years" (Hieronym., and Clint.). The pestilence (according to Sharp) is described by the physician Aretaeus: — who is mentioned by Aetius xi. i.

Menispermum (*Anamirta*) *cocculus* of Tropical Hindustan and the neighbouring portion of the Malayan archipelago. The imported seeds are called in commerce *cocculus indicus* (Lindl.): the ΚΟΚΚΑΛΟΥ seeds prescribed by Aretaeus, — may be compared; and the "mahizehran" of Hobaisch, Elmansuri, and the Persians, identified by Ebn Baitar with the "samm elsamak," is referred here by Sontheimer. Farther East, A. cocculus was observed in Hindustan by Rheede vii. pl. 1 and xi. pl. 62, Colebrooke, and Wight; by Graham, "a twining shrub" growing "throughout the Concans" and called "kakmari-ka-beenje;" by Helfer, "indigenous" in Tenasserim (Mason v. p. 490); and by Rumphius v. pl. 22, on Java. The seeds according to Lindley "are a well-known poisonous drug, used occasionally in the form of powder or ointment for destroying pediculi, and in some skin diseases," but chiefly "to render malt liquor intoxicating;" a practice "said to be persevered in, although prohibited by severe enactments."

Menispermum (*Cocculus*) *leæba* of middle and upper Egypt. — Called in Egypt "lebakh elgebel;" and the account of the drug "lehibach" by Rhazes, and Avicenna, may be compared with this and the preceding plant: C. leæba was observed by Forskal not far from Cairo growing in the Desert, and by Delile in upper Egypt.

Listera ovata of Europe and the adjoining portion of Asia. A small orchid called in Britain *tway-blade* or *bifoil*, in medieval Latin "bifolium" (Prior); and the ΔΙΦΥΛΙΟΝ of Aretaeus, — and Aetius (Ruel ii. 147), may be compared: L. ovata is termed "o. bifolia" by Tournefort inst. 437; and is known to grow from Denmark throughout middle Europe (fl. Dan. pl. 137, Lam. fl. fr., and Pers.); was observed by Sibthorp in woods in the Peloponnesus.

"268, March" (coins, Vict., and Clint.), Gallienus succeeded by Aurelius Claudius, thirty-fourth Roman emperor. The name of Aurelius Claudius occurs on coins issued in Egypt.

"In autumn, in the seventh lunation" (Pauth. 270), display of *meteorites* witnessed in China: a multitude of shooting stars, like a shower, falling or following each other Westward.

The sun-temple and principal structures at Tadmor or Palmyra, erected under the government of queen Zenobia (Lubke and Lutrow).

"269 A. D." (Clint.), invasion of Egypt by queen Zenobia of Palmyra; and with partial success. Her name, with that of her colleague Vabalathus, occurs on coins issued at Alexandria.

"Dec. 26th" (Clint.), death of Dionysius; and after a few days, Felix ordained twenty-fourth bishop of Rome.

"270 A. D." (Trebell., and Clint.), the Goths overwhelmingly defeated, and quieted by Aurelius Claudius. For which service, his "statue in gold" was placed in the capitol at Rome.

Genista candicans of the Mediterranean countries. The HIRSVTA-GENISTA under which cows are reposing in Titus Calphurnius ecl. ii. — (Dod. pempt. vi. 2, 2), may be compared: G. candicans was observed by Dodoens in Spain; is termed "cytisus monspessulanus medicæ folio siliquis dense congestis et villosis" by Tournefort inst. 648, "c. pubescens" by Moench; is known to grow in Italy and Southern France (Pers.); was observed by Sibthorp, and Chaubard, in the Peloponnesus and on the mountains of Euboea. "G. Canariensis," known to grow in Spain and on the Canary Islands, the flowers fragrant (Pers.), is regarded by Chaubard as not distinct.

"Before summer" (coins, and Clint.), Aurelius Claudius succeeded by Aurelianus, now thirty-

fifth Roman emperor. The name of Aurelianus occurs on coins issued in Egypt, as also the name of an unsuccessful aspirant Domitianus: — From this time (Zoëga, Tochon, and Sharpe), the *precious metals* disappear from the Egyptian coinage: except that in one or more instances, the Roman Legion in Egypt coined silver into money for their own pay.

"The same year" (Euseb., and Clint., see also Nicolas), Paulus of Samosata deposed by a synod, for denying the divinity of Christ; and after an order for his removal procured from Aurelianus, the ordination of Domnus as "sixteenth" bishop of Antioch.

"The same year" (Alst.), compilation of the "Codex Gregorianus." Containing laws enacted from "117 to 261," under the reign of Hadrian to that of Gallienus.

"271, January" (Vopisc., and Clint.), the Marcomanni entering Italy and laying waste the country around Mediolanum (Milan), letter from Aurelianus directing the consultation of the Sibylline books. Soon afterwards, the Marcomanni defeated in three battles, and expelled by Aurelianus. Peace was also granted by him to the Vandals (Dexipp. p. 17); and returning to Rome, he commenced rebuilding the city wall.

"272 A. D." (Japanese chron. transl. Nicholai, and Bickmore), the Ainos bringing presents for the first time acknowledge the Japanese authorities as their rulers.

"The same year" (Vopisc., and Clint.), Aurelianus leading an army, by the way of the Danube and Byzantium, against Palmyra and queen Zenobia. A letter from Zenobia "in the Syrian language, translated into Greek" by the historian Nicomachus (Vopisc., and Clint.).

"The same year" (Agath., and Clint.), Sapor succeeded by Hormisdas (Hoormuz), third Sasanid king of Persia.

"In the reign of Aurelianus" (Sharpe), the church of St. Mary built at Alexandria; and the first *public service of Christianity* in Egypt probably held within its walls.

"273 A. D." (Agath., and Clint.), Hormisdas succeeded by Vararam, fourth Sasanid king of Persia.

"The same year" (Hieronym., and Clint.), Domnus succeeded by Timaeus, "seventeenth" bishop of Antioch.

"The same year" (Vopisc., and Clint.), Zenobia defeated, and while fleeing from Palmyra on "dromadas" (*camels*) taken prisoner by Aurelianus.

"In or about this year" (Percev. i. 107), Abdhaa succeeded by Abd-Kelal, now tobba of Yemen. — He was converted to Christianity by a Syrian stranger, but kept his change of religion secret; until at length his subjects discovering the fact put both him and the Syrian to death "about 297." He was the first Christian convert known in Yemen, according to the concurrent testimony of Oriental writers.

"In this year" (Abyss. chron., and C. Mull. geogr. min. p. xcvii), El-Herka succeeded by Za-Bæsi Tsawesa, now king of Abyssinia. — He reigned "one" year.

"274 A. D." (Vopisc., and Clint.), Tetricus of Gaul vanquished by Aurelianus; and afterwards led at Rome in a *triumphal procession* in company with Zenobia and "Axomitae" (Sm. geogr. dict.), captive "Gothi, Alani, Roxolani, Sarmati, Franci, Suevi, Vandali," and "Germani." Dacia however was abandoned as part of the Roman Empire by Aurelianus: who next commenced a temple to the sun.

About this time, "273 to 275 A. D." (Sharistan, and Clint. iv. p. 307), Manes, a Persian teacher of religious dogmas and the founder of the Manichaean sect, put to death by king Vararam. Manes denied the death on the cross: — an opinion afterwards adopted by Mohammed, and maintained by his followers to the present day.

"275, Jan. 5th" (Pont., and Clint.), next after Felix, Eutychianus ordained twenty-fifth bishop of Rome.

"Before March 25th" (Clint.), Aurelianus succeeded by Tacitus, thirty-sixth Roman emperor. The name of Tacitus occurs on coins issued in Egypt.

"276, April 11th" (Clint.), Tacitus succeeded by Florianus, thirty-seventh Roman emperor. In the East, Florianus was not acknowledged; and his name has not been found in Egypt.

"Beginning of July" (Euseb., Zosim., and Clint.), Florianus succeeded by Probus, thirty-eighth Roman emperor. The name of Probus occurs on coins issued in Egypt.

"The same year" (Agath., and Clint.), Vararam succeeded by Vararam II., fifth Sasanid king of Persia.

In this year (= 543 B. C. — "818 y. 9 m. 20 days" in the Mahavamsa xxxvii.), Dette-tissa succeeded by Mahasana, now king of Ceylon.

"277 A. D." (Vopisc., Zosim., and Clint.), in Gaul, campaign of Probus against the "Logiones, Franci, Burgundi, Vandili," and other tribes to the number of "nine:" as many vanquished kings being enumerated by Probus in his letter to the Senate.

Campanula hybrida of Europe and the adjoining portion of Asia. Called in Britain *Venus'*

looking-glass (Prior); and the "specularis" cooked and finely powdered in the "emplastri" attributed to king Ptolemy — by Marcellus of Bordeaux 36, may be compared: C. hybrida is described by Morison v. pl. 2; is termed "c. arvensis minor siliqua amplori" by Tournefort inst. 112; and is known to occur in fallow ground in limestone districts in France and Britain (Pers., and Engl. bot. pl. 375). Eastward, was observed by Sibthorp in cultivated ground in the Peloponnesus.

"278 A. D." (Hieronym., and Clint., see also Nicolas), in Mesopotamia, Archelaus bishop of "Caschar" writing in Syriac against the Manichaeans. A translation in Greek, is mentioned by Hieronymus.

"279 A. D." (Hieronym., and Clint.), Anatolius, successor to Eusebius bishop of Laodicea, at this time writing.

"The same year" (Vopisc., and Clint.), campaign of Probus in the East, and against the "Blemyas" in Upper Egypt: where he added the cities of Ptolemais and Coptos to the Roman dominions.

"280 A. D." (Hieronym., and Clint.), Timaeus succeeded by Cyrillus, "eighteenth" bishop of Antioch.

Hardly later than this date (Graha Munjari tables, Puranas, and Bentl.), Devasrèshtha reigning in Hindustan.

"281 A. D. About this time" (Eutrop., and Clint.), by Probus, permission granted to the Gauls and Pannonians to plant *vineyards*.

"282, October" (coins, Euseb., and Clint.), Probus succeeded by Carus, thirty-ninth Roman emperor. The name of Carus occurs on coins issued in Egypt.

"283 A. D." (Euseb., and Clint.), Maximus succeeded by Theonas, "fifteenth" bishop of Alexandria.

"End of November." (Cod. Justin., Vopisc., and Clint.), death of Carus near Ctesiphon, warring against the Persians. He was succeeded by Carinus, fortieth Roman emperor. The name of Carinus occurs on coins issued in Egypt; as also the name of his brother and colleague, the poet Numerianus.

"Dec. 7th" (Clint.), death of Eutychianus; and "before the close of the year," Caius ordained twenty-sixth bishop of Rome.

"284, Sept. 17th" (Clint.), notwithstanding that Carinus outlived his brother, the accession of Diocletian always computed from this date (see p. xvi).

"6th day of eighth lunat." (ann. Jap., and Klaproth), by O-zin, an embassy sent to Corea to procure men capable of teaching Chinese literature and civilization.

"285 A. D." (ann. Jap., and Klapr.), returning from Corea, Wo-nin (Wang-jin) brought the Lun yu of Confucius and other books, and introduced the art of reading and *writing* into Japan.

The art of spinning and weaving was at the same time introduced (ann. Jap., and Klapr.): or (according to the Nihon-gi, the most ancient book on Japanese history, centen. comm. 77), four girls were brought back to teach the art of weaving plain and figured silk-goods. In other words, the *Silk manufacture*.

"In this year" (Idat., and Clint.), Carinus defeated and slain, and his name erased from the Fasti by Diocletian; who substituted his own.

The great syenite column so conspicuous at Alexandria, erected (according to a Greek inscription on its base) in the reign of Diocletian.

"286 A. D." (Vict., and Clint.), campaign of Maximian colleague of Diocletian, against the Bagaudic faction in Gaul. In successive skirmishes, the insurgents were subdued and quieted.

Hardly earlier than this date, a colony from Kling (Southeastern Hindustan) led by Tritresta or Aji Saka to Java; where he found the inhabitants rude and subsisting principally on "the grain called "jawa-wut" (*Setaria Italica*). After several combats, he formed a settlement at Giling Wesi and introduced the religion and arts of Hindustan. — On his return to Guj rat, he delivered to his sovereign Prabu Jaya Baya "a written account of all he had seen and done" (Nata Kasuma, Adi Mang'gala, and Raffles x.).

The Javan alphabet formed perhaps shortly after the arrival of Aji Saka, — to whom it is attributed.*

"287 A. D." (Vict., Eutrop., and Clint.), death-sentence against Carausius, a Menapian from the mouths of the Rhine employed by the Romans to keep order on the sea, infested at the time by Franci and Saxones. Hearing of the sentence, Carausius escaped with the fleet to Britain, and established himself there as king.

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* *Pandanus sp.* of Burmah and the neighbouring countries. An upland *screw-pine;* and the "godong'i pandan" Pandanus leaf or mystical meaning of the letter "rang kang," — may be compared: observed by Mason v. 521 in Burmah, growing "above tide-waters," the leaves furnishing the "smaller and finer mats in common use." Farther East, the Pandanus found by Loureiro ii. p. 603 employed in Anam for hedges and for feeding tame elephants, may also be compared.

"289, April 21st" (Clint.), oration of Mamertinus, to Maximian on the point of sailing with a new fleet against Carausius. By whom he was defeated in *naval warfare*.

"290 A. D. = 'tai-hi and young-hi,' death of Wou-ti II. and accession of Hiao-hoei-ti" (Chinese chron. table). The year however is referred to the reign of Wou-ti II.*

"The same year" (coins, Eutrop., and Clint.), peace granted to Carausius. Coins issued by him in this, — and the following year, are extant.

"The same year" (Alst., and Blair), compilation of the "Codex Hermogenianus." Containing laws enacted under the reign of Aurelius Claudius to that of Diocletian.

Manuscripts of the "Third" century (Sylvestre), presenting the following forms of the letters, u, m, q, ò, b.

"291 A. D. Not later than this date" (see Clint. iv. p. 437), retirement of Antonius at the age of "thirty-five" into the Egyptian Desert; the earliest example of the life of a hermit. In his writings, pilgrimages and the superstitious veneration of relics are denounced (Alst. p. 368).

"293 A. D. (Vict., Eumen., and Clint.), the "archipirata" Garausius, succeeded by Allectus, as king in Britain.

"The same year" (Agath., Abulpharag., and Clint.), Vararam II. succeeded by Vararam III.; and after "four months," by Narses, seventh Sasanid king of Persia.

"At this time" (Vopisc., and Clint.), Claudius Eustheniùs writing the lives of Diocletian and his three colleagues, Maximian, Galerius, and Constantius; all of whom were living.

"296, April 22d" (Pont., and Clint.), death of Caius, twenty-sixth bishop of Rome. Marcellinus is next in order (on the Lists of Alsted, and Nicolas): — and after him, Marcellus, and Eusebius.

"The same year" (Eumen., Vict., and Clint.), near London, Allectus defeated by Constantius, and Britain recovered by the Romans. Maximian at the time, stationed on the Rhine.

"297 A. D." (Eutrop., Hieronym., and Clint.), in Egypt, Achilleus defeated and Alexandria captured by Diocletian. The event is noticed in the oration of Eumenius, addressed in this year to Constantius.

As early probably as this date, *Hermetic writings* translated from Egyptian into Greek — (Iambl. myst. viii. 1 to 7). One of them is quoted by Lactantius div. inst. vii. 18.

Daphne sericea of Crete. The ΚΟΚΚΟC ΝΗCΙΩΤΙΚΟC of the Hermetic iatromathem. — may be compared: D. sericea is termed "thymelæa cretica oleæ folio subtus villosa" by Tournefort cor. 41; and was observed by Sibthorp, and Fraas, on the subalpine portion of the mountains of Crete and Southern Greece. "D. buxifolia" observed by Sibthorp on the mountains of Crete, is regarded by Fraas as identical, and notwithstanding the pubescent leaves hardly distinct from D. jasminea. (See D. alpina and D. tartonraira).

"298 A. D." (Ammian., and Clint.), in Armenia, the Persians under Narses defeated by Galerius: and after the cession of five provinces beyond the Tigris to the Romans, peace concluded.

"The same year" (Euseb., and Clint.), Hymenaeus succeeded by Zabdas, "thirty-eighth" bishop of Jerusalem.

"299 A. D." (Clint.), end of the independent Egyptian *coinage*: — the coins issued at Alexandria, instead of Greek, bearing Latin inscriptions, and are similar in every respect to those of the rest of the Empire.

"300 A. D." (Euseb., and Clint.), Zabdas succeeded by Hermon, "thirty-ninth" bishop of Jerusalem.

One hundred and thirty-eighth generation. Jan. 1st, 301, onward mostly beyond youth: Metrodorus of Persia: the Greek philosophers, the Neo-Platonists Iamblichus of Chalcis in Syria, and Sopater of Apamea; the grammarian Helladius Besantinus; the rhetors, Julianus, and Onasimus; the Christian Greek writers, Eustathius of Antioch, Meletius of Lycopolis, and Pamphilus: the Latin writers, the poet Optatianus Porphyrius; the historians Vopiscus, and Trebellius Pollio; the rhetor Nazarius; the Christian Latin writers Lactantius, Rheticius, and the poet Juvencus of Spain.

"In the beginning of the year" (Hieronym., and Clint.), Theonas succeeded by Petrus, "sixteenth" bishop of Alexandria.

"The same year" (Agath., and Clint.), Narses succeeded by Hormisdas II., eighth Sasanid king of Persia.

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* *Paeonia moutan* of China. The *arborescent piony* or "mou-tan," according to Chinese authorities, has been known and cultivated only about "fourteen hundred years" — (mem. Chin. iii. 461), is further described by Cibot as woody-stemmed, eight to ten and it is said even twenty-five feet high: the "meu-tan" or "queen of flowers" was also seen in China by Navarrete i. 16; P. moutan, by Thunberg in Japan; and by Loureiro in Anam. Transported to Europe, is described by Sims, is termed "p. arborea" by Donn (Steud.); was also carried to Northeast America, where it continues in greenhouses.

"302 A. D." (Hieronym., and Clint.), at Rome, *triumphal procession* of Diocletian and Maximian; their car preceded by statues of the wife and sisters of Narses.

"The same year" (Hieronym., and Clint.), Cyrillus succeeded by Tyrannus, "nineteenth" bishop of Antioch.

"In this year" (Max Mull. p. xi), death of Mahasena king of Ceylon. The last reign mentioned in the Dipavansa, a historical work manuscripts of which are said to be extant.

Azadirachta Indica of Tropical Hindustan. A large tree called in Tamil "vaypum," in Telinga "vepa," in Malabar "aria-bepou," in Bengalee and Hindustanee "nim" (Drur.), in the environs of Bombay "neem" (Graham); and the "nimba" fruit of a Hindu proverb—quoted in the Ramayana ii. 29, and of Harivansa 96, is referred here by Carey and Marshman: the "malaka" or "pichumanda" of Susrutas . . . , is referred here by Hessler: A. Indica was observed by Rheede iv. pl. 52 in Malabar; by Burmann pl. 15, on Ceylon; by Graham, "common about villages" in the environs of Bombay; by myself, around villages on the Deccan; by Roxburgh, Wight, and Drury, as far as Bengal, its bitter bark used as a febrifuge, and with the leaves seeds and oil for various medicinal purposes, and its beautifully mottled mahogany-like wood used for ship-building and made into chests that will exclude insects; was observed by Mason v. 493 "exotic" in Burmah, cultivated by the natives "for its medicinal properties for which it is famous all over India." Westward, the "azadiracht" of E. Masah, Maserjawia, Rhazes, Ebn Samhun, Avicenna, A. B. A. Chaled, Madschul, Ebn Baitar, mentioned as an Indian tree by Caboudi, and Ebn Joljol, is referred here by writers. According to A. Richard, this and the olive are the only known instances of the pericarp around the nut yielding oil.

"303, February" (Clint.), the celebrated edict of Diocletian against Christians. Supposed to have been in part extorted from him through the intrigues of Galerius. Even in Britain, Alban, Aaron, Julius, and many persons of both sexes, were put to death (Gildas hist. 10).

In this year (= 276 + "27 yrs. reign" in the Mahavamsa xxxvii), Mahasana succeeded by his son Kiertissry-magawarna, now king of Ceylon.

Hardly later than this date (Graha Munjari tables, Puranas, and Bentl.), Tapaswi reigning in Hindustan.

"304 A. D. = 1st year of the 'young-hing' of Hiao-hoei-ti" (Chinese chron. table), beginning of the Fiftieth cycle.

"In the reign of Hiao-hoei-ti" (Pauth.), the new religious Sect of the Wou-wei-kiao, a stoical offshoot from the doctrines of Lao-tseu.

"305 A. D." (inscript., and Clint.), at Rome, dedication of the "thermae" or "baths" of Diocletian.

"The same year" (Lactant., Vict., and Clint.), abdication of Diocletian: who retired to Salone or Spalatro in Dalmatia, where ruins of his palace or castle are extant. He was succeeded by Constantius, forty-second Roman emperor.

"The same year" (Nicol.), by a synod at Cirtes in Numidia, "the bishops who during the persecution had read the Scriptures to the Pagans" absolved.

Cocculus bakis of Senegambia. Twining; and from early times, its root used in decoction by the Negroes in intermittents, and to stop urethral discharges:—observed by Perrotet fl. i. pl. 4 in hedges and on the sides of woods in Senegal. The root according to Lindley diuretic and very bitter.

Swietenia (*Khaya*) *Senegalensis* of Senegambia. A mahogany-like tree eighty to a hundred feet high, called "karson khayi" and its bark "cail-cedra" (Lindl.); the latter very bitter, and from early times used in infusion and decoction against fevers by the Blacks:—observed by Leprieur common in the forests along the borders of the Gambia (Forsten p. 12, and Lindl.).

Heudelotia Africana of Senegambia. A spiny Amyroid bush eight to ten feet high, called "niouttout" (Lindl.), and known from early times:—observed by Adanson, and Perrotet, in the sandy wastes of Interior Senegal, and tears of *bdellium* collected. These proving hardly bigger than peas, the "African bdellium" of commerce is regarded by Guibourt ii. 498 as possibly the product of a different species (see Balsamodendron Africanum).

Ocymum viride of Western Equatorial Africa. A Labiate plant from early times employed as a febrifuge,—as to the present day in Sierra Leone (Lindl.): received and described by Willdenow.

"306, July 24th" (Eumen., and Clint.), after his victory in Caledonia over the Picts, death of Constantius at York in Britain. He was succeeded by Constantine, forty-third Roman emperor.

"307 A. D. = 'young-kia,' 1st year of Hiao-hoai-ti, of the Tcin" or ninth dynasty (Chinese chron. table).

"309 A. D." (Agath., and Clint.), birth and accession of Sapor II., ninth Sasanid king of Persia.

"About this time" (T. Wright mediæv. engl. vii), by a few missionaries Christianity introduced among the Teutonic tribes on the Rhine.

"311, April 30th" (Lactant., and Clint.), in Nicomedia, an edict issued by Galerius to stay the persecution against Christians. Dying soon afterwards, Asia was seized by Maximinus, who withdrew the protection granted to Christians.

"312, Sept. 1st" (Clint.), beginning of the *Indictions*. A cycle of "fifteen years," substituted by Constantine for the Olympiads.

"The same year, at the close of the persecution against Christians" (Clint.), Methodius bishop of Tyre put to death. Also "in this year" (Hieronym., and Clint.), Petrus succeeded by Achillas, "seventeenth" bishop of Alexandria.

"313 A. D. = 'kien-hing,' 1st year of Ming-ti II., of the 'Tcin" or. Ninth dynasty — (Chinese chron. table).

"The same year" (Lactant., and Clint.), edict by Constantine and Licinius in favour of the Christians. Death of Diocletian. Maximinus defeated by Licinius near Byzantium, and, fleeing Southward, died near Tarsus. From this time, persecutions against Christians ceased.

"The same year" (Augustin., and Clint.), Caecilianus bishop of Carthage accused before Constantine by Donatus; tried and acquitted by an ecclesiastical court, Melciades thirtieth bishop of Rome presiding.

"315 A. D." (cod. Justin. i. 9. 3, and Clint.), edict of Constantine against the Jews. Prohibiting the persecution of persons leaving the Sect; and prohibiting joining the Sect.

In this year (= "240 an. jav." of Nata Kasuma, Raffles x.), death of Watu Gunung from Kling (Southeastern Hindustan), successor of Agi Saka as chief of the Hindu colony at Giling Wesi on Java. Gutaka was sent from Kling to be the third governor.*

"317 A. D. = 'kien-wou,' 1st year of Youan-ti III., of the Tcin" or Ninth dynasty (Chinese chron. table). The seat of government now removed from Ho-nan-fou to Nan-king; and hence the name "Eastern Tcin" for the remainder of the dynasty.

"318 A. D. = 1st year of the 'tai-hing' of Youan-ti III." — (Chinese chron. table).

"319 A. D." (= 56 B. C. — "375th" year of Tod, Prinsep i. p. 86), era of Valabhi Samvat, or of the Balhara dynasty of Hindu kings of Guzerat. — Ruling in the time of the early Arabian travellers whose narrative is translated by Renaudot p. 15.

"320 A. D." (Nazar., and Clint.), in Gaul, the Franci defeated by Crispus son of Constantine.

"321 A. D." (Hieronym., Prosp., and Clint.), Alexander ordained "eighteenth" bishop of Alexandria: and the expulsion by him of Arius a presbyter, from communion with the church. Silvester at this time thirty-first bishop of Rome; Philogonus, bishop of Antioch; Macarius, bishop of Jerusalem; and Alexander, bishop of Byzantium.

"322 A. D." (Zosim., and Clint.), the Sarmatae defeated and pursued beyond the Danube by Constantine.

Apsyrtus, the veterinary physician, rendering important services in this war — (Spreng. comm. D. iv. 8).

"323 A. D. = 'tai-ning,' 1st year of Ming-ti III., of the Tcin" or Ninth dynasty — (Chinese chron. table).

"September" (Vict., and Clint.), surrender of Licinius, defeated near Byzantium by sea and land.

"In this year" (palm-leaf ann. Jagan., and W. W. Hunter), invasion and conquest of Orissa by Yavanas under Rakta Bahu (Red-arm); king Sobhan Deva taking with him in his flight a wooden image of Vishnu entitled "jagannath" (Lord of the World). — Chandra-deva was placed on the throne by the Yavanas; who in 328 put him to death, and held the country "one hundred and forty-six years."

"324 A. D." (cod. Theodos., and Clint.), Licinius put to death, and on "May 16th" his laws abrogated: Constantine being now sole emperor.

Christianity appears to have made more rapid progress in Egypt than in any other country: and after the general conversion, temples were no longer reared by princes. Architectural taste however continued, as shown by *remains of churches* in the Thebaid: where also is abundant evidence, that the early Christians did not destroy antiquities; while their deserted villages present more refinement, — than prevails in that district at the present day.

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* *Spinifex squarrosus* of the Tropical seashore from Hindustan throughout the Malayan archipelago. A singular sand-binding gramineous plant called in Malabar "illy mulu" (Rheede); and the superstitious belief that its light globular heads driven along the sands by the wind "are propelled by the devil" (Rumph.), as early probably as this date: — S. squarrosus was observed by Rheede xii. pl. 75 in Malabar; by Graham, "common in the beach near Bandora," in the vicinity of Bombay; by Tennent, and Drury, on sandy shores of the peninsula and Ceylon; by Mason 478, "on all the sandy beaches" of Burmah; by Blanco, on the Philippines, but having no native name; by myself, on the beaches of islands around the Sulu Sea, its globular heads floating away from the land.

"325, June 19th" (Clint.), the first general Council among Christians, convened at Nice in Asia Minor. Attended by an Indian bishop, Ioannes (Coqueb.-Montbret in rec. voy. et mem. iv. p. 27), and by "nearly one hundred" Egyptian and Lybian bishops, the total number being "three hundred and eighteen." Hosius of Spain taking the lead: the Western mode of celebrating Easter was established. The celibacy of the clergy was strenuously and successfully opposed by Paphnutius. Metropolitan bishoprics were constituted (Alst. p. 368 and 392). The Arian question was discussed, the Greek word "ōmōousiōn" adopted; and the "Nicene creed" formed. Towards the close of the session, Constantine entered and pronounced an address in Latin; which was replied to by Eusebius; and on the "25th of August," the session terminated. — The authority of this Council continues to be recognized by the Greek Church (E. A. Soph.).

"The same year" (Clint.), end of the chronicle of Eusebius. Who on other subjects continued writing.

"The same year" (cod. Theodos., and Clint.), law of Constantine prohibiting *gladiators*. — Exhibitions continued notwithstanding at Rome, and at Antioch.

The Roman lexicographer Sext. Pompeius Festus may have been at this time writing, his remarks on the word "supparus" implying familiarity on the part of readers generally with the ceremonies of the Christian religion. — He is mentioned by Macrobius (Sm. b. d.).

Polygonum (*Helxine*) *convolvulus* of Eastern Europe and Siberia. Called in Britain *black bindweed* (Prior): the SCANDULACA herb of Pompeius Festus, killing growing grain — by twining around (Migne edit. Paul. Diac.), may be compared: P. convolvulus is described by Bauhin hist. ii. p. 158; is termed "fagopyrum vulgare scandens" by Tournefort inst. 511; and is known to occur as a weed in cultivated ground in Italy and Sicily (Bertol., and Guss.) and throughout middle Europe as far as Denmark (Ray, fl. Dan. pl. 744, and Pers.); was observed by Sibthorp, and Fraas, in cultivated ground in Greece; by Bieberstein, and Ledebour, in the Tauro-Caspian countries. In its wild state, was observed by Pallas trav. i. 58 in wooded tracts on the Upper Volga; by Gmelin, frequent throughout Siberia (A. Dec.). By European colonists, was carried to Northeast America, where it continues a weed in cultivated ground, and was observed in Carolina as early as 1793 by Michaux.

"326, January" (Clint.), Alexander succeeded by Athanasius, "nineteenth" bishop of Alexandria.

"The same year = 'hien-ho,' 1st year of Tching-ti II. of the Tcin" or Ninth dynasty — (Chinese chron. table).

"The same year" (cod. Theodos., and Clint.), law of Constantine respecting heretical and schismatic Christians.

"The same year" (Kitt. cycl. bibl.), arrival in Palestine of Helena mother of Constantine, now in her "80th" year. She "built churches on the alleged site of the Nativity at Bethlehem, and of the Resurrection on the Mount of Olives." — Of extant churches and monasteries in Egypt, the earliest are by the Coptic inmates attributed to donations from Helena.

"327 A. D." (Hieronym., and Clint.), in Bithynia, the city of Drepanum rebuilt by Constantine, and the name changed to Helenopolis; in honour of his mother Helena.

Hardly later than this date (Graha Munjari tables, Puranas, and Bentl.), Sutapa reigning in Hindustan.

"330, May 11th" (Idat., Clint., and Plate in Sm. b. d.), dedication of a new city on the site of Byzantium, and the removal there by Constantine of the Roman seat of government. He also transported an obelisk from Egypt to the new city; which received the name of "Constantinopolis," city of Constantine.

"As early as this date" (M. Russel p. 110 and 250, and Sm. geogr. dict.), Christianity preached in Abyssinia by the Abba Salama or Frumentius.

331 A. D. (= 303 + "38 years reign" in Mahavamsa xxxvii), Kiertissry-magawarna succeeded by his brother Dattatissa, now king of Ceylon.

333 A. D. = "Dalmatio et Dalmaticei Zenophilo cons." (T. Wright early trav. in Palest.), arrival in Jerusalem of the author of the "Itinerarium a Burdigala" (Bordeaux): after journeying by land, across France to Turin, Pavia, Milan, Brescia, Verona, Aquileia; and thence across Noricum, Pannonia, Illyria, Dacia, Thrace to Constantinople, and across Asia Minor.

Greek inscriptions of about this time (Franz), presenting the following forms of the letters, Η, Ω.

One hundred and thirty-ninth generation. May 1st, 334, onward mostly beyond youth: Ephraem of Edessa: the Greek philosophers, Maximus of Ephesus, and the Neo-Platonist Aedesius; the medical writer Philagrius; the historian Eustochius; the rhetors, Proaeresius, Epiphanius of Petra, Tuscianus, and Diophantus; the Christian Greek writers, the elder Gregorius of Nazianzus, Asterius, Audaeus of Syria, Theodorus of Heraclea, Triphyllius of Cyprus, Eusebius of Emisa, Serapion of Thmuis, Didymus of Alexandria, and Hilarion: the Latin writers, the orator Gennadius; the historians Eutropius, and Festus Rufus; the grammarian Evanthius; the rhetors Exsuperius, Patera,

Minervius Burdigalensis, Victorinus, Donatus, Alcimus, Delphidius, and Mamertinus the younger; the Christian Latin writer Gregorius Boeticus.

"The same year" (Clint.), date of an inscription on the "thermae" or "baths" of Constantine at Rome: where also the temple of Concordia was rebuilt with increased costliness and endowments. The Sarmatae, expelled by servile insurrection, received by Constantine, and "more than three hundred thousand" distributed throughout "Thrace, Scythia, Macedonia, and Italy."

"335 A. D." (Clint.), of the provinces, Gaul governed by Constantine the younger; the East, by Constantius; Pontus, by Hannibalianus; Illyria, Italy, and Africa, by Constans; while the Gothic frontier was guarded by Dalmatius. Coins of Dalmatius, and of Hannibalianus, are extant.

"The same year" (Euseb., Clint., and T. Wright), by Constantine, a church dedicated at Jerusalem; in the Chronicon Paschale called "tōu agiōu staurōu" of the holy Cross. A synod of Arians also held in this year at Jerusalem (Theodoret., and Clint.). By Constantine also, the edict against the Jews modified; so as to permit them to enter the city "once a-year, to wail over the desolation of the 'holy and beautiful house' in which their fathers worshipped God" (Kitt. cycl. bibl.).

"May 8th" (cod. Theodos., and Clint.), at Carthage, a law issued to protect Jews from maltreatment.

"336 A. D." (Socrat., and Clint.), Marcellus deposed, and succeeded as bishop of Ancyra by Basilius.

The "eight months" of Marcus, thirty-second bishop of Rome — referred to this year by Alsted, and Nicolas.

"The same year" (Alst. pp. 341 and 368), by a synod at Carthage, the clergy prohibited from holding office or taking part in the administration of government.

Embalmed bodies or *mummies* of "the time of Constantine," — and some perhaps "a century later," are mentioned by Birch. So late even as the visit of Baumgarten i. 16 (Churchill coll.), the Egyptians are described as not burying their dead; "but having anointed and embalmed them with a great deal of art, they lay them either in houses or in the open air;" usually "in vaults built on purpose on the tops of their houses; and value themselves mightily, if they can shew that they have accommodated their dead friends within their houses."

"337 A. D." (Hieronym., and Clint.), at Nicomedia, Constantine, in daily expectation of death, declaring his intention of becoming a Christian and receiving baptism from the Arian bishop Eusebius. Christianity thus becoming the religion of the State.

"May 22d" (chron. Pasch., and Clint.), Constantine succeeded by his three sons: Constantine the Younger, Constantius II., and Constans.

"338 A. D." (Hieronym., and Clint.), in Mesopotamia, Nisibis besieged by the Persians under Sapor II., and saved through the intercession of Jacobus, bishop of the city.

"340 A. D." (Socrat., and Clint.), Eusebius the chronologer succeeded as bishop of Caesarea in Palestine by Acacius.

"The same year" (cod. Theodos., and Clint.), death of Constantine the younger at Aquileia; warring against his brother Constans.

In this year (= 331 + "9 years reign" in Mahavams. xxxvii.), Dattatissa succeeded by his son Buddaduwsa, now king of Ceylon. — In his reign, the "Scripture in Palee was translated into Cingalese."

"341, Feb. 12th" (cod. Theodos., Athanas., and Clint.), Constantius II. attending an Arian synod at Antioch. By this synod, Athanasius was deposed and Gregorius appointed bishop of Alexandria. Withdrawing to Rome, Athanasius was received by Julius, thirty-third bishop: — who in the following year issued a letter, claiming that the diocese of Alexandria was by itself insufficient, and that the bishop of Rome ought to have been consulted.

Letter of Constantius II. to Aeizanas and Sazanas, kings of Axum, requiring them to send Frumentius to Alexandria for re-consecration (Athanas. apol.). In a Greek *inscription at Axum* (M. Russel p. 248), Aeizanas enumerates as under his dominion the Axomites, Homerites, Raeidan, Ethiopians, Sabeans, Zeyla, Tiamo, Boja, and Taquie; and mentions his brother Saiazana.

"The same year" (cod. Theodos., and Clint.), a law promulgated, abolishing the ancient religious rite of *sacrifices*.

"342 A. D." (Idat., and Clint.), at Constantinople, sedition on account of the bishop, Paulus; whose expulsion had been ordered by the Arians and Constantius II. In Gaul, the Franci defeated by Constans, and reduced to sueing for peace.

"343, Jan. 25th" (cod. Theodos., and Clint.), Constans at Boulogne, on his way to Britain; a journey as yet untried in the winter season. He returned in June.

"In or about this year" (Philostorg. iii., and Percev. i. 111), the Indian bishop Theophilus sent by Constans to Marthad, tobba of Yemen, with the request that churches might be erected for the Christian traders. Leave being granted, a church was built at Zhafar, the seat of government; another at Aden, and a third in the principal seaport city on the Persian Gulf. Circumcision at this time generally practised among the Arabs — according to Philostorgius.

"The same year = 'kien-youan,' 1st year of Kang-ti, of the Tcin" or Ninth dynasty — (Chinese chron. table).

"344 A. D." (in the opinion of Ideler, see Leps.), the Jewish reckoning in years of the World established by rabbi Hillel Hanassi. Whose computation (according to Alsted) was reduced from a more ancient one of R. Adæ. — The reckoning continues to be followed by the Jews to the present day (see Menes).

"345 A. D. = 'young-ho,' 1st year of Mou-ti, of the Tcin" or Ninth dynasty — (Chinese chron. table).

"April" (chron. Pasch., and Clint.), at Constantinople, building of the "thermae" or "baths" of Constantius II.

About this time, "343 to 347 A. D." (Clint.), the treatise by Firmicus Maternus, addressed to Constans and Constantius II. against the temples.

"346, June 6th" (Clint.), eclipse of the sun. Immediately following the Second siege of Nisibis, by the Persians under Sapor II.

"The same year" (Alst.), by a synod at Agrippina (Cologne), the bishop there, Euphratas, condemned for denying the divinity of Christ.

"348 A. D." (Clint.), remark of the historian Victor, suggested by the name "Philippus" of one of the consuls, that this was the Eleven hundredth anniversary of the founding of Rome, and that there was no celebration. At Singara, Constantius II. foiled by his troops attacking the Persians in the night.

"The same year" (Socrat., and Clint.), Maximus deposed by the Arians, and Cyrillus appointed bishop of Jerusalem.

Damogeron may have been at this time writing. — He is mentioned by Palladius, and Apuleius Barbarus.

Balsamita vulgaris of the West Mediterranean countries. Called in Egypt "balsamæ" or "melsane," at Constantinople "kōsta" (Forsk.), in which we recognize the garden KOCTOU of Damogeron — (geopon. vii. 13, and xi. 27) and the "ahlal kostha" of Gafeki, and Ebn Baitar; B. vulgaris was observed by Forskal in gardens at Constantinople, its leaves strewn on lettuce for ornament; by him, and Delile, in the gardens of Egypt. Westward, the cultivation of "costum" is enjoined in the capitularia of Charlemagne: B. vulgaris is termed "tanacetum balsamita" by Linnæus; and is known to grow in Italy, Switzerland, and Southern France to the base of the Pyrenees (Pers.).

"349, about January?" (Athanas., and Clint.), by the Alexandrians, Gregorius the Arian bishop slain. And after some months, Athanasius sent back to Alexandria by Constantius II.

"350 A. D." (Idat., and Clint.), at Helena in the Pyrenees, death of Constans. Constantius II. now sole emperor.

"351 A. D." (Jul. ep. 51, and Clint.), secret determination of Julian at the age of "twenty," to abandon the Christian faith in which he had been brought up.

"In this year" (Socrat., Clint., and Nicol.), a synod assembled at Sirmich by Constantius II., and Photinus bishop of the city condemned for denying the Trinity. He was answered by Basilius of Ancyra.

"352 A. D." (Vict., and Clint.), the Jews revolting; several cities in Judea burned, and the revolt suppressed by Gallus Caesar.

"353 A. D." (Jul., and Clint.), in Gaul, death of Magnentius, defeated for the third time by Constantius II. Coins of Magnentius are extant.

Ajuga chamæpithys of Caucasus and the Talysch mountains. Called in Britain *yellow bugle* or *ground pine* or *field cypress* or till the beginning of the present century *forget-me-not* (Prior); in which we recognize the "chamae cypri" of the Cosmian Antidote — mentioned by Marcellus 29: A. chamæpthys is described by Tragus f. 30 (Spreng.), Lobel, Dalechamp, and was already in Britain in the days of Lyte, and Gerarde (Prior); is termed "c. lutea vulgaris sive folio trifido" by Tournefort inst. 208; was observed by Scopoli in Carniolia (Steud.); and is known to occur in stony cultivated and fallow ground in Italy, Spain, France, and as far as Denmark (fl. Dan. pl. 738, Pers., and A. Dec.). Eastward, is known to grow on Caucasus and the Talysch mountains both in cultivated ground and wild situations (Bieb., and C. A. Mey.); but notwithstanding Sibthorp's statement seems unknown in Greece, as well as in European Turkey, Sicily, and Algeria (Griseb., Reut. and Marg., Guss., Munby, and A. Dec.). By European colonists, was carried to Virginia, observed there by Clayton, but has since disappeared (A. Gray. See A. Chia, and Veronica chamædrys).

"355 A. D." (Sulpic. Sev., and Clint.), by a synod at Milan, Constantius II. being present, Liberius thirty-fourth bishop of Rome exiled and Felix appointed in his place: at the same time, Eusebius bishop of Vercelli in Italy also exiled, together with Lucifer bishop of Sardinia, and Hilarius Pictavensis. — At the end of two years, by advice of Fortunatianus, Liberius returned and subscribed to the Arian faith (Hieronym. cat. 97).

"In this year" (Bartol., Borghesi, and Sm. b. d.), Pasiphilus praefect of the city: probably the person to whom Palladius dedicates his fourteenth book on agriculture. — Palladius is mentioned by Isidorus Hispalensis, and Cassiodorus.

Cratægus monogyna of the Mediterranean countries. Called in Greece "trikōkkia" or "tzapōurnia" (Sibth.); and the SPINUS of Palladius iii. 25 on which pears and apples can be grafted, — may be compared: C. monogyna is termed "m. apii folio sylvestris spinosa sive oxyacantha" by Tournefort inst. 642; is known to grow in middle Europe (Jacq. austr., fl. Dan. pl. 1161, and Sibth. oxon. 156) but chiefly in the South (Pers.). Eastward, was observed by Sibthorp in the Peloponnesus and on Zacynthus, often with pears or plums grafted on the stem; is known to grow also towards Caucasus (Pall. fl. ross. i. pl. 12); but is regarded by Bory as not distinct from C. oxyacantha.

"356 A. D." (Athan., and Clint.), by Constantius II., Athanasius exiled and Georgius of Cappadocia appointed bishop of Alexandria. Athanasius now retired into the Desert.

"357, April 30th" (Ammian., and Clint.), arrival in Rome of Constantius II. And by his direction, an obelisk (now called "the Lateran obelisk") brought there in the same year from Egypt.

"358, August" (Ammian., Idat., and Clint.), by a severe *earthquake*, Nicomedia overthrown, and "one hundred and fifty" other cities, in Macedonia, Asia Minor, and Pontus, more or less injured.

"359 A. D." (Ammian., and Clint.), the historian Ammianus Marcellinus at Samosata in Mesopotamia; and his mission to the satrap of Corduene.

Rheum palmatum of Eastern Thibet and its mountainous prolongation into China. The *rhubarb* of commerce is called in Bengalee "reuchini," in Hindustanee "rewand" or "rewand chini" (D'roz.), and is mentioned by Ammianus Marcellinus — (according to voyag. Belg.): the "rheum barbarum" of Isidorus Hispalensis viii. 3 and xvii. 9, and Nicolaus Myrepsus i. 21. 155, is referred here by Sprengel; the "rheum indicum" or "chinense" is mentioned by Matthaeus Sylvaticus pand. 589, and other medieval writers (Spreng.); the "rawand," by Rhazes, Mesue simpl., Averrhoes, and Ebn Baitar: rhubarb was seen by Rubruquis in Central Asia, brought by caravans (Pouchet); by Marco Polo, procured from Succur in Tanguth (Royle); by Vertoman or Barthema, sold in Korasan; and according to Rehman, the trade is in the hands of one Bucharian family, who farm the monopoly from the Chinese government and reside at Si-ning. The living plant is known to grow in clefts of rocks on the high and arid mountains around lake Kokonor, and the Sue-chan or snowy mountains in the Chinese provinces of Kansu and Letchuen (Royle ill. Him.). Of all the kinds seen by Guibourt under cultivation, R. palmatum alone resembled exactly in odour and smell the rhubarb of China; is even according to Stevenson and Churchill "extensively cultivated near Banbury for the supply of the London market" (Lindl.).

"360 A. D." (Ammian., and Clint.), Julian passing the winter in Paris; and Lupicinus sent into Britain to repel an invasion of the Scots and Picts. Death of Helena wife of Julian.

Calendula officinalis of Eastern Asia. Called in Britain *marigold*, by Treveris "mary gowles," by old English poets "golde" (Prior); in Anglo-Saxon glossaries "solsequa" (Cockayne); in France "souci" (Nugent), in Germany "ringelblume" (Grieb), at Constantinople "hamōuvuōrēta," in Yemen "zobejde" (Forsk.), in Hindustanee "gul-i-mariyam" or "phirki" or "genda," in Bengalee "genda phul" (D'roz.), in Burmah "htat-ta-ya" (Mason), at Lahore "adsrioon" (Honigb. 379, and J. F. Wats.), by the Ainos "urajenekina," by the Japanese "kin-sen-kwa" (Sieb.); and the CHRUSANTHUS of the Culex 404 — (attributed to Virgil), may be compared: "winking marybuds" with "golden eyes" and the "marigold" are mentioned by Shakespeare cymb. ii. 3 and w. t. iv. 3, and the garden flower according to Persoon, and Lindley, springs up spontaneously in cultivated ground in Southern Europe. Eastward, the "adsrīun" is mentioned by Ebn Baitar: C. officinalis was observed by Forskal under cultivation at Constantinople and on the mountains of Yemen; by Delile, in the gardens of Egypt; by Graham, "in gardens" at Bombay; by Mason, "exotic" in Burmah; and by Siebold, on Yeso. By European colonists, was carried to Northeast America before 1670 (Joss.), where it continues in gardens. Formerly according to Lindley "much employed as a carminative, it is chiefly used now to adulterate saffron."

"At this time" (Hieronym., and Clint.), "in the name of peace and the king," the Arians in communion with all Christian churches.

"361, November" (Hieronym., and Clint.), Constantius II. succeeded by Julian, now forty-fifth Roman emperor. Ancient Heathenism once more and for the last time becoming the religion of the State. Julian however tolerated all religions.

"362 A. D. = 'loung-ho,' 1st year of Ngai-ti, of the Tein" or Ninth dynasty — (Chinese chron. table).

The four great festivals of Greece, the Olympic, Pythian, Isthmian, and Nemean games, continued to be celebrated. "About midsummer," arrival of Julian at Antioch: where a temple of Apollo was soon afterwards destroyed by fire.

Aetius recalled, under a general remission of exile to all Sects of Christians. Titus bishop of Bostra, however banished; and at Alexandria, Georgius was slain by the populace, and Athanasius returning was driven back by order of Julian.

Hardly later than this date (Graha Munjari tables, Puranas, and Bentl.), Tapovati reigning in Hindustan.

"363 A. D." (Ammian., and Clint.), edict of Julian on his way to the Euphrates, providing for rebuilding the temple at Jerusalem. Building operations were soon arrested by the emperor's death; in battle "June 26th," his physician Oribasius being present (Sm. b. d.).

Myosurus minimus of Northern climates. A diminutive herb called in Britain *mouse-tail* (Prior): the ΜΥΟΥΡΟΝ prescribed against dropsy by Oribasius excerpt. 52 — (Daremb.), may be compared: M. minimus was observed by Sibthorp in cultivated ground around Constantinople. Westward, is described by Lonicer (Spreng.); is termed "ranunculus gramineo folio flore caudato seminibus in capitulum spicatum congestis" by Tournefort inst. 293; and is known to grow throughout middle Europe as far as Denmark (fl. Dan. pl. 406). Farther West, was observed by Elliott at Augusta in Georgia (Chapm.); by Short in Kentucky (there and in Illinois in "alluvial ground" according to A. Gray); by Nuttall, "around towns" in Arkansas; and by myself, frequent and to all appearance indigenous along the shores of Puget Sound. "M. aristatus" has been observed on the high hills of California and Chili, and in New Zealand (J. D. Hook. and A. Dec.).

Lobelia tenella of the East Mediterranean countries. The ΘΠΟΙΟΝ by some called ΧΑΜΑΙΡΕΦΑΝΟΝ prescribed against dropsy by Oribasius excerpt. 52 — (Daremb.), may be compared: L. tenella is termed "rapuntium creticum minimum bellidis folio flore maculato" by Tournefort inst. 9; and was observed by Sibthorp in "uliginosis" on Crete and Cyprus. Westward, was observed by Bivona as far perhaps as Sicily (Steud. . Compare also Campanula rapunculus).

Styrax benzoin of the Siamese countries and neighbouring Malayan archipelago. A tree whose imported product is called in commerce *benzoin*, in Egypt "djaui" (Forsk.); and the ΙΝΔΗ adhesive plaster of Oribasius exc. 143, — may be compared: benzoin is mentioned by Susrutas sutr. 36 to chik. 15 (according to Hessler); and "in former years" constituted "a considerable article of export" from "the province of Mergui" in Burmah, "produced by a tree" not seen by Mason v. 486: S. benzoin is described by Houttuyn act. harl. xxi. 257; is known to grow in Siam, Sumatra, Java, and Borneo (Dryand. phil. trans. lxxvii. pl. 12, and Hayne). Westward, "benzoæ" was found by Forskal mat. med. imported from India into Egypt; was an ingredient in the "bachur" ointment of the Muslim population of Portugal and Spain (Jao de Sousa); and is mentioned by Amatus Lusitanus: is according to Lindley resinous and acrid, "a local irritant," employed in Europe in certain popular medicines and "in coating over the adhesive plaster called *court plaster*." According however to Bontius, benzoin of the best quality is procured from an arborescent vine growing on Java. (See Terminalia angustifolia).

Iris tuberosa of the East Mediterranean countries. The root called in Egypt "chamire" or "surendjan;" in which we recognize the "surandschan" identified by Serapion, and Mesue, with the ΕΡΜΟΔΑΚΤΥΛΟΣ of Oribasius, — Alexander Trallianus, Paulus Aegineta, and Nicolaus Myrepsus: the "surandschan." is also mentioned by Avicenna, and Ebn Baitar; the root, according to Alpinus, and Rouyer drog., is esteemed indispensable and eaten by the women of Egypt; and according to Forskal mat. med., is besides made into pills, is brought from "Alexandria and Barbary and exported to Constantinople," but according to Rouyer is imported "from Syria." Farther North, I. tuberosa was observed by Sibthorp, and Chaubard, in Southern Greece. Westward, is described by Matthioli p. 778, Dodoens p. 249, and Cæsalpinus x. 45; is termed "hermodactylus folio quadrangulo" by Tournefort cor. 50; was once cultivated as a medicinal plant throughout Europe as far North as Britain, and in various localities remains growing spontaneously to the present day (Rob., Wats., and A. Dec.).

Scolopendrium hemionitis of Western Europe? The ΗΜΙΟΝΙΤΙΝ called ΠΤΡΙΟΝΙΤΙΝ prescribed in nephritic complaints by Oribasius excerpt. 63 — (Daremb.), may be compared with this fern: S. hemionitis is described by Dodoens p. 467, and Clusius hist. ii. p. 214 (Spreng.); is known to grow in various parts of Europe, but has not been observed in Greece. (Compare also Ceterach officinarum).

Aspidium fontanum of Europe and the adjoining portion of Asia. A diminutive fern: the ΒΡΥΟΠΤΕΡΙC prescribed by Oribasius xi — (Dod. pempt. iii. 5. 4), may be compared: A. fontanum is termed "filicula saxatilis omnium minima elegantissima" by Tournefort inst. 542; was

observed by Sibthorp in Greece, in shaded springy places; and is known to grow throughout middle Europe as far as Britain (Engl. bot. pl. 2024).

"June" (Eutrop., and Clint.), Julian succeeded by Jovian, forty-sixth Roman emperor. Who, ceding five provinces, concluded peace with the Persians and retreated from the Euphrates. Jovian, while protecting the followers of the ancient religion, declared himself a Christian, and issued an edict placing Christianity upon a legal basis.

"364, Feb. 17th" (Idat., and Clint.), Jovian succeeded by Valentinian, forty-seventh Roman emperor. Who, taking up his residence in Italy, gave the Eastern portion of the Empire to his brother Valens. Valentinian appointed Vettius Praetextatus, proconsul of Achaia under Julian and a heathen priest, "praefectus urbi;" whose house is the scene of the imaginary conversation between Aurelius Symmachus, Flavianus, Servius the grammarian, and Caesina Albinus, in the work of Macrobius.

"The same year = 2d year of the 'hing-hing' of Ngai-ti" (Chinese chron. table), beginning of the Fifty-first cycle.

365 A. D. (= "290 an. jav. = 240 + 50 years" of Nata Kasuma, Raffles x.), death of Gutaka. After governing for "fifty" years the Hindu colony at Giling Wesi on Java, he succeeded in transferring his authority to his son Raden Sawela.

"In this year" (Ammian., and Clint.), inroads of Alamanni across the frontier of "Germaniae" into "Gallias Raetiasque;" of "Picti Saxonesque et Scotti et Atacotti" into Britain; and of predatory bands of Goths into Thrace.

"About this time" (Clint. iv. p. 455), a party of "Scotos gentem Britannicam humanis vesci carnibus" Scots a people of Britain who eat human flesh, seen by Hieronymus during his visit to Gaul.

"366 A. D. = 'tai-ho,' 1st year of Ti-y II., of the Tcin," or Ninth dynasty (Chinese chron. table).

"The same year" (Japanese chron. transl. Nicholai, and Bickmore), the Japanese after several years fighting defeated and their general killed by the Ainos.

"The same year" (Hieronym., Prosp., and Clint.), death of Liberius, and Damasus ordained "thirty-fifth" bishop of Rome (the Arian appointment of Felix not counted). Shortly afterwards, Ursinus ordained in opposition.

One hundred and fortieth generation. Sept. 1st, 367, mostly beyond youth: Nicolaus of Laodicea: the Greek philosophers, Pappus, and Theon the younger; the rhetors, Himerius, Themistius, and Libanius: the Christian Greek writers, Aquilius Severus of Spain, Eunomius bishop of Cyzicus, Agelius, Ambrosius of Alexandria, Theotimus, Severianus, Sophronius, and Apollinarius of Laodicea: the Latin writers, the rhetor Drepanius Pacatus; the Christian Latin writers, Phoebadius, Optatus of Carthage, Pacianus, and Tichonius.

"The same year" (Ammian., and Clint.), Theodosius sent into Britain, where "Dicalidonas et Vecturiones" the two tribes of the Picti, together with Attacotti and Scotti, were laying waste the country. In Gaul also, inroads made by Franci and their neighbours the Saxones.

Euzoius, successor of Acacius as bishop of Caesarea in Palestine, at this time writing; engaged besides in restoring the injured portions of the *Library* of Origen and Pamphilus.

"368 A. D." (Ammian. xxvii. 8. 6, and Clint.), arrival of Theodosius at "Lundinium vetus oppidum, quod Augustam posteritas adpellavit" London an ancient town to be called by posterity Augusta. On reaching the seat of war, he soon routed the predatory bands. In this year also, Moguntiacum (Mayence on the Rhine) during a Christian solemnity, surprised and plundered by a German prince named Rando.

"In this year" (Max Mull. p. xviii), death of Budhadasa, in whose reign the Sutras were translated by a priest into the Singhalese language (Mahanam. mahav. p. 247).

"369 A. D." (Ammian., and Clint.), the Rhine fortified by Valentinian, by building castles in elevated and suitable situations all the way from the Raetian Alps to the Ocean.

In this year (= 340 + "29 years reign of Mahavamsa xxxvii.), Budhadasa succeeded by his son Upatissa, now king of Ceylon.

"370 A. D." (Ammian., and Clint.), Saxones invading Roman territory by sea, the Burgundii induced by Valentinian to advance an army to the Rhine; when Theodosius from Rhaetia attacked and defeated the Alamanni.

"371 A. D. = 'hien-gan,' 1st year of Kian-wen-ti, of the Tcin" or Ninth dynasty — (Chinese chron. table).

"The same year" (Amphiloc., and Clint. iv. p. 475), Basilius ordained bishop of Caesarea in Cappadocia.

"373 A. D. = 'ning-kang,' 1st year of Hiao-wou-ti, of the Tcin" or Ninth dynasty — (Chinese chron. table).

"The same year" (Proter., and Clint.), death of Athanasius, and Petrus ordained twentieth bishop

of Alexandria (not counting the Arian appointments). Petrus was however immediately expelled by the Arian bishop Lucius. Faustinus succeeded as bishop of Iconium by Amphilochius.

About this time, "369 to 381 A. D." (Alst. pp. 191 and 324), the scriptures translated into the *Gothic language* by Ulfilas, an Arian bishop. A portion of this version is extant.

"374 A. D." (Klapr. note to San kokf), independent of the Chinese characters long known, an *alphabet* invented by the Coreans, — which continues in use to the present day.*

"In this year" (Ammian., and Clint.), Illyricum ravaged by the Quadi. Who complained, that Valentinian had built fortresses beyond the Danube upon their territory; and that their king Gabinius, while modestly expostulating, had been murdered.

"375 A. D." (Hieronym, and Clint.), at Milan on the death of Auxentius, sedition among the people; Ambrosius ordained bishop, and return of all Italy from Arianism.

"November" (Idat., and Clint.), death of Valentinian; his colleague Gratian now becoming forty-eighth Roman emperor. Religious liberty now no longer permitted; the Christians having gained the ascendancy, beginning to extend persecutions towards the followers of the ancient religion, and certain Sects among themselves.

About this time, "370 to 380 A. D." (Steinschneid. i. 4), "at Tiberias" in Palestine, the Talmud Yerushlami compiled; a body of collective Hebrew literature.

Luffa Arabum of Equatorial Africa. A Cucurbitaceous vine bearing quadrangular fruit and called in Egypt "luff" (Forsk.): the לוּפָה lwph of the Talmud 5. 2 — is referred here by Sprengel: — the "luffah" is mentioned by Ebn Baitar: L. Arabum was observed in Egypt by Vesling pl., Forskal, Delile, and Clot-Bey, cultivated for ornament, and the sponge-like interior of its fruit employed in bathing: the *towel gourd* was observed by Grant growing "wild over the garden fences, Unyanyembé 5° S. to Nile banks 9° North." Eastward, L. Arabum was observed by Rumphius v. pl. 148 on Ceylon (Pers.). Transported to Europe, is termed "momordica luffa" by Linnæus, "luffa Arabum" by Miller (Steud.).

"376 A. D." (Ammian., and Clint.), Goths expelled by the Huns, "gens monumentis veteribus leviter nota ultra paludes Maeoticas glacialem Oceanum accolens, a people little known in the records of antiquity, dwelling beyond the Sea of Azof along the Icy Ocean." The expelled Goths were allowed by the Romans to cross the Danube and settle in Thrace.

"378, August" (Ammian., and Clint.), rebellion among the harboured Goths, caused by famine, and Valens defeated by them and slain. Afterwards, with associated Hunni and Alani, the Goths advanced laying waste the country to the very gates of Constantinople.

"The same year" (Clint.), end of the chronicle of Hieronymus. On other subjects, he continued writing.

"Between 378 and 383" (Gildas hist. 12, and Usher), Arianism introduced into Britain by Agricola, a disciple of Arius.

"379 A. D." (Clint.), the poet Ausonius, prefect of Gaul and now in old age, one of the consuls for this year: which he calls the "eleven hundred and nineteenth" of the city, placing therefore "the foundation at B. C. 740."

"January" (Idat., and Clint.), by Gratian, Theodosius appointed over the Eastern portion of the Empire. Who in successive battles defeated the Goths and their allies, and expelled them from Thrace.

"The same year" (Prosp., and Clint.), "Longobardi ab extremis Germaniae finibus Oceanique protinus litore Scandiaque insula," Lombards from the farther frontier of Germany, from the shore of the Ocean and Scandinavia, make their first appearance, seeking new homes: and under "Ibórea" (Ivor) and "Aione," conquer the Vandals.

"The same year" (Agath., and Clint.), death of Sapor II., and accession of his brother Artaxerxes V., now ninth Sasanid king of Persia.

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* *Hibiscus mutabilis* of Corea. The name of the mountain Fou-young-chan in Corea sometimes written with characters signifying mountain of this shrub — (geogr. chin. transl. Klapr. in San-kokf p. 100): H. mutabilis is called "fujoo" in Japan (Kaempf., and Thunb.); and is figured in Chinese paintings. Farther South, is common in gardens at Manila, and regarded by Blanco as indigenous in the Philippines, though devoid of a native name; is also described by Rumphius iv. pl. 9. Westward, enumerated by Mason as "exotic" in Burmah; observed in Hindustan by Rheede vi. pl. 38, Roxburgh, Royle, Wight, and according to Graham called *changeable rose*, or by the Portuguese "inconstante amante" inconstant lover, "a common shrub in gardens," the flowers "large, white in the morning, changing to red in the course of the day." Eastward from the Philippines, H. mutabilis was observed in the West Indies by Descourtitz, who further states, that it was carried by Bentinck in 1690 to England; the shrub however is described by Morison ii. 5. pl. 18.

The Avadana Asoka written hardly later than this date. The end of the Maurya dynasty is mentioned, and it contains legends * — quoted by Fa-hian (Burn. i. 358 to 423).

"380 A. D." (Marcellin., and Clint.), by Theodosius, the Arians expelled from the Churches, held by them nearly "forty" years. "Nov. 26th," he appointed the younger Gregorius of Nazianzus bishop of Constantinople: and in "December," he restored Cyrillus as bishop of Jerusalem, after having been four times expelled.

"381 A. D." (Idat., and Clint.), death of Athanaric king of the Goths.

"May" (Socrat. and Clint.), Second general Council of ecclesiastics. Convened by Theodosius at Constantinople: and consisting of "one hundred and fifty" bishops, including Timotheus of Alexandria, Gregorius of Nyssa (a. "married bishop," Alst. p. 368), Amphilochius, Pelagius of Laodicea, Diodorus of Tarsus, and Gelasius of Caesarea in Palestine. The doctrine of the Council of Nice was confirmed: and a Creed formed (the so-called "Nicene Creed" of the English Articles, except that "a single expression is omitted, which in the English Liturgy is added"). Maximus the cynic was adjudged not to be a bishop. Patriarchal bishops were instituted, each confined to his own diocese: and after declaring Constantinople next in dignity to the diocese of Rome, "as being New Rome," the younger Gregorius of Nazianzus resigned, and in his place Nectarius of Tarsus was elected "bishop of Constantinople." — The authority of this Council continues to be recognized by the Greek church (E. A. Soph.).

Meletius dying while attending the Council was succeeded under the approval of the Asiatic churches by Flavianus, now bishop of Antioch. Flavianus changed the words of the doxology from "thōxa patri thi' uiōu ĕn agiō pnĕumati" glory to the father by means of the son in holy spirit, and "thōxa patri ĕn uiō kai agiō pnĕumati" glory to the father in the son and holy spirit, to "thōxa patri kai uiō kai agiō pnĕumati" glory to the father and son and holy spirit (Philostorg., and E. A. Soph. lex.). Acting in conjunction with Diodorus, he also "first introduced the practice of the alternate singing or chanting of the psalms, and the division of the choir into parts" — "which afterwards became universal in the church" (Sm. b. d.).

"382 A. D." (Idat., and Clint.), dissatisfied with their treaty of peace with the Romans, the Goths elect Alaric as their king.

"383, August" (Marcellin., and Clint.), death of Gratian; and through the support of Theodosius, Valentinian II. acknowledged forty-ninth Roman emperor. Maximus however maintaining himself in Britain and Gaul.

"The same year" (Agath., and Clint.), Artaxerxes V. succeeded by Sapor III.; tenth Sasanid king of Persia.

"384 A. D." (Prosp., and Clint.), Damasus succeeded by Siricius, "thirty-sixth" bishop of Rome.

In this year (as appears from Libanius), the *Destruction of temples* not yet commenced. — Soon however, orders from Theodosius were directed against particular temples; and these were demolished by soldiers, aided by bands of fanatics.

385 A.D. (= "310 an. jav. = 290 + 20 years" of Nata Kasuma, Raffles ix. and x.), at Giling Wesi in Java, Raden Sawela succeeded by Gutama. Who removed the seat of government to Astina, his successor Dasa Bahu of Hindu descent being "ten years of age." — A temple or mosque at Kediri is called "Astana Gedong," and "great expense and labour has been bestowed to demolish" and mutilate the surrounding antiquities.

"In this year" (cod. Justin., and Clint.), edict against *augury*, and the practice of examining the liver of victims to learn futurity.

"August" (Hieronym., Clint., and T. Wright), sailing of Hieronymus from Italy. Landing on Cyprus, he with his companions was received by Epiphanius. Proceeding next to Antioch, he enjoyed the society of "pontificis confessorisque Paulini;" — and reached Jerusalem in mid winter,

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* *Nauclea cadamba* of the Siamese countries. A large tree called in Sanscrit "kadamba," in Telinga "kadapa-chettu" (J. F. Wats.) or "rudrashakamba," in Tamil "vella cadamba," in Hindustanee "cuddum," in Bengalee "kudum" (Drur.), in the environs of Bombay "nhew" or "cadamba" or "cuddam" (Graham), in Assam "kadam" (Robinson), in Burmah "ma-oo" (Mason); in which we recognize the "kadamba," the "holiest of Indian trees" and third "shadow-giving" tree on the mythological mount Meru, mentioned besides in the Avadana Asoka — (Burn. i. 397) and by Valmiki v. 74 (transl. Gorr.), Bhavabhuti 7, Jayadeva, Kalidasa kum. iii. 68, Susrutas, and in the Vishnu purana ii. 2: N. cadambâ was observed by Rheede iii. pl. 33 in Malabar; by Graham, "common about villages in the Southern Concan," its fruit "about the size of a small orange" eaten by the natives; by Roxburgh, and Robinson, as far as Bengal and Assam, but is regarded by Wight as not a native of the peninsula; was observed by Mason "sometimes cultivated" among the Burmese.

where he saw Christian pilgrims from India (Coq.-Montbret in rec. voy. et mem. 27). He next proceeded to Egypt, and visited "the hermits of the Thebaid;" at this time regarded in the regular routine of "the Pilgrimage."

The perfume MVSCVS *musk* mentioned by Hieronymus — (Ainsw.), by the Armenian writer Moses Chorinensis 365 (Spreng.), and by Aetius (Greenhill). Moschus moschiferus, the deer-like animal yielding this perfume, is described by Cosmas Indicopleustes xi. p. 101, Abu Hanifa (in Serapion); and by Benjamin de Tudela as inhabiting Thibet, its well-known native home. The imported perfume is mentioned by Ebn Masawia, Honain, and Symeon Sethus; and its sale in Egypt, by Leo Africanus.

Soon after the departure of Hieronymus (Clint., and T. Wright), Paula followed: and landing at Sidon, "visited the tower of Elijah." Approaching Jerusalem, she passed the tomb of "Helena queen of Adiabene;" and after reaching the city, went to the church of the Holy Sepulchre. On her way to Bethlehem, she visited the "sepulchre of Rachel;" at Sichem, "entered the church built over the well of Jacob, where our Saviour spoke to the Samaritan woman;" and in Sebaste or Samaria, saw the sepulchre of John the baptist.

"386 A. D." (Greg. Turon., and Clint.), Maximus in a personal interview, forbidden by Martinus bishop of Tours to carry the sword into Spain to slay heretics. He had already killed Priscillianus.

Manuscripts of the "Fourth century" (De Wailly pl. ii. 1), presenting the following form of the letter L.

"387 A. D." (Liban., and Clint.), at Antioch, sedition, and the statues of Theodosius, his sons, wife, and father, thrown down by the populace. The "second year" of the preaching of Joannes Chrysostomus.

"The same year" (Mason ii. 20), two copies of the sacred Budhist books brought from Ceylon to Thatung in Burmah.

The Sutta sagitti written as early perhaps as this year. Mention is made of various-coloured Benares stuffs* — (Burn. ii. 486 to 825).

"388 A. D." (Idat., and Clint.), Maximus having entered Italy, slain near Aquileia; and the Western division of the Empire restored entire to Valentinian II. by Theodosius.

England deprived of its young men and military resources in the wars of Maximus, invaded from the North by the Picts and Scots: — whose depredations continued many years (Gildas hist. 14 to 24).

The same year (inscript. at Kermanshah, Agath., and Clint.), Sapor III. succeeded by Vararam IV., eleventh Sasanid king of Persia.

"389 A. D." (Prosp., and Clint.), on account of the death of Priscillianus, his accusers Ithacius and Ursacius deprived of the communion of the church.

"390 A. D." (Sozom., and Clint.), massacre at Thessalonica: and at Milan, Theodosius excluded by Ambrosius from the church, for "eight months" until Christmas.

"At the close of the year" (Clint.), the great temple of Serapis at Alexandria demolished. The building contained the *Alexandrian Library* (see Tertull. apol. 18, Aphthon. 12, Oros. vi. 15, Ammon. Hermead., and Joann. Philopon.). Among those who on this occasion fled from Alexandria, were the two grammarians, Helladius "priest of Jupiter," and Ammonius "priest of the ape" (Socrat. v. 15).

"391 A. D." (Clint.), the orator Symmachus one of the consuls for this year.

"392, May 15th" (Epiphan., and Clint.), death of Valentinian II.; Theodosius now becoming in regular order the fiftieth Roman emperor. Marcellus of Bourdeaux, sometimes termed "archiater," holding the office of "magister officiorum" under Theodosius (Smr. b. d.).

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* *Pentapetes phœnicea* of Tropical Eastern Asia. Herbaceous with shewy flowers, and called in Sanscrit "bandhukamu" or "bandhujivamu" or "bandhujivakamu" (J. F. Wats.); in which we recognize the "bandhudjiva" of the Sutta sagitti — (Burn. ii. 826), Valmiki ram. iv. 29 (transl. Gorr.), Jayadeva, lips like its ruddy flowers, and Susrutas sutr. 6 to kalp. 1: P. phœnicea was observed by Rheede x. pl. 56 in Malabar; by Graham, "in gardens Bombay," flowers axillary, "of a beautiful bright red colour;" by Roxburgh, and Wight, in other parts of Hindustan; by Mason, indigenous in Burmah; by Blanco, once at Manila; and is termed by Rumphius v. pl. 100 "flos impius" from the flowers never looking upward.

Pontederia hastata of Tropical Hindustan. The "ummá" having blue flowers according to the Sutta sagitti — is referred here by Burnouf ii. 826: P. hastata was observed by Nimmo in the environs of Bombay, "rice fields and margins of tanks, Concans" (Graham); by Roxburgh cor. ii. pl. 111 in other parts of Hindustan. Transported to Europe, is described by Plukenet alm. pl. 220, and Morison iii. 15. pl. 4.

Aconitum anthora of the Pyrenees and mountains of middle Europe as far as Siberia. The ANTURA of Marcellus — (Dod. pempt. iii. 4. 14), or "anthora" growing according to Matthæus Sylvaticus in the same situations with the "tora" and an antidote to its poison, its flowers "subrubei" (Caesalp. xiv. 8), mentioned also by Simon Januensis, and Arnoldus Villanova, is referred here by writers: A. anthora is described also by Clusius hist. ii. pl. 98; is known to grow on the Pyrenees (Pall. it., and Steud.) and mountains of Switzerland (Jacq. austr. pl. 382, Pers., and Hausman fl. Tyrol i. 31) confined apparently to calcareous soil (Mohl, and A. Déc.). "A. Pallasii" is regarded by Lindley as a variety only.

Ranunculus aconitifolius of the mountains of middle Europe. One or more species is called in Britain *bolt* (Prior); and the HERBAM called in Gaul BLUTTHAGGO, growing according to Marcellus 9 LOCIS HUMIDIS, its juice instilled in the ear, — may be compared: the "bolte" is translated "petilum, tribulum" by Galfridus pr. pm.: R. aconitifolius is termed "pie di cornacchia" by Matthioli; is known to grow along streams on the mountains of Switzerland, the flowers white (Willd. p. 1316, Curt. mag. pl. 204), the double-flowered variety is called in France "bouton d'argent" (Pers.).

Impatiens balsamina of the mountains of Southern Hindustan. Called in Britain *balsam*, in France "balsamine" (Nugent), in Germany "balsamine" (Grieb), by the Turks "knatziziĕk" (Forsk.), in Egypt "areteneh" (Clot-Bey); in which we recognize the BALSAMI whose seeds are prescribed by Marcellus 20, — and one of the ornamental flowers whose culture is enjoined by Charlemagne: I. balsamina is described by Fuchsius pl. 190, Matthioli, and Cæsalpinus vi. 68; is well known in the gardens of Europe (Blackw., and Pers.); was observed by Forskal in the gardens of Constantinople; by Clot-Bey, in those of Egypt; and by Forskal, under cultivation in Yemen. Farther East, was observed by Rheede ix. pl. 52 in Malabar; by Graham, "everywhere" around Bombay "towards the close of the rains" and called "teerda;" by Mason v. 433 and 764, "exotic" in Burmah, but abounding both cultivated and springing up spontaneously. By European colonists, was carried to Northeast America, where it continues a favourite garden flower.

Malva althæoides of the Mediterranean countries. Annual; yet possibly the bruised or ground root of the MALVAE GRAECAE ALBAE prescribed against colic by Marcellus 27: — M. althæoides was observed by Cavanilles ii. pl. 135 in Spain, the flowers white (Pers.); by Sibthorp, and Chaubard, in the Peloponnesus and Attica.

Brassica arvensis of the Mediterranean countries. The BRASSICAE ERRATICAE of Marcellus 19, the juice of its bruised root to be inserted in the nose, — may be compared: also the "perfoliata sive herba umbilicorum" of the Ortus sanitatis pl. 350: B. arvensis is termed "b. campestris perfoliata flore purpureo" by Tournefort inst. 220; is known to occur in moist cultivated ground in Southern Europe (Pers.); was observed by Boccone pl. 25 in Sicily; by Sibthorp, in the moist cultivated fields of Greece.

Malcolmia maritima of the shores of the Mediterranean. Called in France "giroflée de Mahon" (Pers.): the KERATITIDOS, an HERBAM that we call VIOLAM MARINAM, prescribed by Marcellus 27, — may be compared; M. maritima is termed "hesperis maritima supina exigua" by Tournefort inst. 223; is known to grow wild on the seashore of France, and is besides cultivated to ornament lawns. Eastward, by Forskal, and Sibthorp, on the seashore of Greece and the Greek islands as far as the Dardanelles; by Chaubard, inland in the Peloponnesus colouring the ground in patches with its rose-violet flowers; by Forskal, the "cheiranthus Cluji? foliis dentatis siliquis subulatis" in the gardens of Egypt. "C. lyratus." with pods "erectiusculis rigidis pungentibus," observed by Sibthorp on Cyprus, is regarded by Chaubard as probably not distinct.

Draba verna of Europe and Northern Asia. Called in Britain *whitlow grass* or *nailwort* (Prior); and the UNGUINALIS of Marcellus — may be compared: D. verna was observed by Sibthorp in sunny situations from the Peloponnesus to Cyprus; is known to grow also about Caucasus (Bieb.). Westward, is described by Brunfels ii. 34, Lobel adv. p. 196 and obs. p. 249, Thalius pl. 7 (Spreng.), and Parkinson th. p. 556; is termed "alysson vulgare polygoni folio caule nudo" by Tournefort inst. 217; and is known to grow throughout middle and Northern Europe as far as Denmark and Iceland (fl. Dan. pl. 983, Hook., and Pers.). By European colonists, was carried to Northeast America, where it has become naturalized from upper Carolina (Chapm.) throughout our middle and Northern States, but according to A. Gray is "not found north of Lower Canada."

Saxifraga tridactylites of Europe and Northern Asia. Also called in Britain *whitlow grass* and *nailwort* (Prior); and possibly included in the "unguinalis" of Marcellus: — S. tridactylites was observed by Sibthorp, and Bory, frequent in the Peloponnesus. Westward, is described by Lobel pl. 469 (Bory); is termed "s. verna annua humilior" by Tournefort inst. 252; and is known to grow in Italy and throughout middle and Northern Europe as far as Lapland and Iceland (Pers., Hook., Dec., and Wais.).

Trifolium repens of Europe and the adjoining portion of Asia. Called in Greece "triphulli" (Sibth.), in Britain *white clover* or *Dutch clover*, in Ireland *shámrock* or "seamr-og" holy trefoil; in which we recognize the Celtic name of clover VISUMARUS sheep-sumar in Marcellus 3 — (Prior): T. repens was observed by Sibthorp, and Chaubard, in grassy situations from Crete and the Peloponnesus to Cyprus and Constantinople; is known to grow also about Caucasus (Bieb.) and the Talusch mountains, and throughout Siberia as far as Lake Baikal (Gmel., and Ledeb.). Westward, the "hwite clæfran" is mentioned in the Anglo-Saxon Leechbook i. 20. 21 (Cockayne); is termed "t. pratense album" by Tournefort inst. 404; is known to grow in Barbary (Boiss. i. p. 170) and throughout middle and Northern Europe as far as Lapland and Iceland (fl. Dan. pl. 990, Hook., and Wats.). By European colonists, was carried to Madeira and the Azores (Lem., and Wats.); to Jamaica (Dec.); to Northeast America, where it has become naturalized, multiplying especially in grassy clearings; to Austral Africa (Meyer, and A. Dec.); and to New Zealand, as verified by myself.

Ervum hirsutum of Europe and the adjoining portion of Asia. Called in Britain *tine-tare* from enclosing and imprisoning other plants, in Anglo-Saxon "tynan" (Prior); and the HERBA TINI ALCA of Marcellus 17 — may be compared: E. hirsutum is termed "vicia minima" by Tragus (Spreng.), "v. segetum cum siliquis plurimis hirsutis" by Tournefort inst. 397; and is known to occur as a weed in grain-fields in Italy and throughout middle Europe as far as Denmark (fl. Dan. pl. 639, Pers., and Lenz). Eastward, was observed by Sibthorp in the environs of Constantinople. By European colonists, was carried to Northeast America, where it continues to occur sparingly in waste and cultivated ground from Massachusetts to Virginia and Carolina (Raf., A. Gray, Chapm., and myself).

Potentilla comarum of Northern climates. Called in Britain *purple-wort* or *purple marshwort* or *purple marshlock* (Prior); and the LANTHIDIS HERBAE growing in humidis locis prescribed by Marcellus 17 — may be compared: P. comarum is described by Plukenet phyt. pl. 212; was observed by Scopoli in North Italy; and is known to grow in marshy ground throughout middle and Northern Europe as far as Lapland (Crantz, Gilibert, Lamarck fl. fr., fl. Dan. pl. 636, and Wats.); was observed by Pallas between the Yenisei and Baikal; and by Gmelin, throughout Siberia. Westward, by Hooker on Iceland; is known to grow on Greenland; was observed by Lapylaie from Lat. 52° on Newfoundland; by Michaux, from Hudson Bay to Quebec; by myself, along the Atlantic as far as 42°; by Torrey to 41°; by Nuttall, as far West as the Missouri; by Mertens, at Norfolk Sound on the Pacific; and is known to grow from Bear Lake to Bering's Straits (Hook.). Has been used medicinally, according to W. Coles simpl. 27 as "an excellent remedy against the purples" (Prior).

Cirsium lanceolatum of Europe and the adjoining portion of Asia. The juice of the HERBAM CARDUI AGRESTIS expressed in a mortar, prescribed by Marcellus 6, — may be compared: also the "scearpe thistel" of the Anglo-Saxon Leechbook iii. 12: C. lanceolatus is termed "c. lanceatus latifolius" by Tournefort inst. 440; was observed by Scopoli in Carniolia, by Forskal on Malta; and is known to occur in North Africa (Wats.), and in waste and fallow ground throughout middle and Northern Europe as far as Sweden (fl. Dan. pl. 1173, and Pers.). Eastward, was observed by Sibthorp around Constantinople; and is known to occur in cultivated ground in the Tauro-Caspian countries (Bieb.). By European colonists, was carried to Iceland (Hook.); and to Northeast America, where it has become naturalized, though chiefly occurring along roadsides and in fallow ground as far South according to Chapman as Augusta on the Savannah.

Artemisia valesiaca of Western Europe. The ABSINTHII GALLICI prescribed by Marcellus 15 — may be compared: A. vallesiaca is termed "absinthium vallesiacum tenuifolium, candidum sive herba alba" by Bauhin hist. 179; is known to grow in sandy situations in Italy, Switzerland, France, and Spain (All., Lam., and Pers.); and is enumerated by Lindley among medicinal plants.

Primula auricula of the mountains of middle Europe. Called in Britain *French cowslip* or from the shape of its leaves *bear's-ears*, in medieval Latin "ursi auricula" (Prior); and the HERBAM called in Gaul VERNETUS according to Marcellus 9, its juice to be instilled in the ear, — may be compared: P. auricula is described by Gesner, and Matthioli (Spreng.); is known to grow wild in alpine situations in Switzerland and France (Jacq. austr. pl. 405, Villars ii. 469, Pers., and Beckm.). Transferred to gardens, it has become a favourite flower, cultivated under numerous varieties throughout Europe, and has been carried to Northeast America.

Lathræa squamaria of middle Europe. From the tooth-like scales at the base of the stem called in Britain *toothwort* (Prior); and the HERBAE PEDUNCULARIAE SICCAE prescribed by Marcellus 8 — may be compared. L. squamaria is termed "squamaria orobanche" by Scopoli, "clandestina pendulifiora" by Lamarck fl. fr. (Steud.); and is known to grow in deep shade as far as Britain and Denmark (fl. Dan. pl. 136, and Pers.).

Convallaria majalis of Europe and the adjoining portion of Asia. Called in Britain *wood lily*

or *lily of the valley* or *mugget*, in France "muguet," in Old French "musquet" from "muscatus" scented with musk (Prior), in Greece "krinōs" (Sibth.) or at Constantinople "margaritaria" (Forsk.); and the LILII SYLVATICI SUCCUS prescribed by Marcellus 16—may be compared: the "hamaikĕrasōs" of Euporist. i. 154, a small herb with fragrant flowers having the odour of musk succeeded by cherry-like fruit, is referred here by Gesner, and Sprengel: C. majalis was observed by Sibthorp in the Peloponnesus; by Forskal, in gardens at Constantinople; is known to grow wild on Caucasus, and in the Tauro-Caspian countries (Bieb.), and in Siberia as far as but not beyond the Ural and Irtisch (Gmel., and Pall.). Westward, the "lilium convallium" is mentioned by Platearius, and in the Vulgate translation of Cant. ii. 1: C. majalis is figured in Ortus sanitatis 256; is described also by Joannes Manardus (Spreng.), Brunfels i. 211, Fuchsius, Dodoens, and Lobel; is termed "l. convallium album" by Tournefort inst. 77; was observed by Brotero only under cultivation in Portugal; but is known to grow wild in wooded mountainous situations in middle Europe, and throughout Northern Europe as far as Russia and Lapland (fl. Dan. pl. 854, Pers., Dec., and Wats.). By European colonists, was carried to Northeast America, where it continues a favourite garden flower, and has become naturalized along the Sassafras river in the Delaware peninsula (Baldw.), at the Sweet Springs among the mountains of Virginia (B. S. Bart.), and on the tops of the Alleghanies in Carolina (Mx.).

Stratiotes aloides of the Malayan archipelago? From its sword-like leaves called in Britain *knight's wort* or *knight's woundwort* or *knight's pondwort* or *water soldier* or *water sengreen* (Prior); and the juice of the HERBAE GLADIATORIAE prescribed by Marcellus 16—may be compared: S. aloides is described by Dodōens p. 588; is known to occur in slow-moving waters in Britain and Denmark (fl. Dan. pl. 337, and Pers.); and recently introduced into France, has extended itself in certain localities, although not producing seeds from the presence of one sex only (A. de Juss., and A. Dec.). Eastward, according to Kunth en. iii. 8, grows wild from Malabar to Java and the Moluccas.

Eriophorum vaginatum of Northern climates. The LANUGINEM from VIRIDI PAPYRO, on the summit QUASI PANICULAE EMINENTIS, prescribed by Marcellus 34—may be compared: E. vaginatum is known to grow from Lapland and Russia to France and Switzerland (fl. Dan. pl. 236, Dec. fl. fr., and Wats.); was observed by Gmelin throughout Siberia. Westward, by Hooker on Iceland; by Lapylaie, on Newfoundland; by myself, as far as Lat. 42° near Boston; by Baldwin, as far as 39° 30′ in Delaware; and by Pursh, from "Canada to Virginia."

Polypodium phegopteris of Europe and the adjoining portion of Asia. The roots of the FILI CULAE called in Gaul RATIS and growing often IN FAGO, prescribed by Marcellus 25—may be compared: P. phegopteris is known to grow in Britain (Engl. bot. pl. 2224); and was observed by Sibthorp as far as the Peloponnesus.

"394 A. D." (Philostorg., and Clint.), in Gaul, Eugenius defeated by Theodosius, and put to death. Coins of Eugenius are extant.

"395, Jan. 17th" (Socrat., and Clint.), death of Theodosius; after dividing the Empire between his two young sons, Arcadius and Honorius.—The partition proved final; the community of interest hitherto felt in regard to foreign invasions, soon becoming greatly weakened.

Arcadius thus became head of the Byzantine branch of the Roman empire. Through the intrigues of Rufinus, the Huns and Goths under Alaric at once commenced their ravages: and Stilicho guardian of Honorius, crossing the mountains, found Thessaly already plundered by them.

"396 A. D." (Zosim., and Clint.), Second expedition of Stilicho. From Sicily sailing direct to the Peloponnesus, he encountered the Goths in Arcadia. Priscus and other priests of the ancient religion had been put to death by them.

The art of *painting on glass* (according to Pouchet) began in the "Fourth" century, with the first churches erected by Christians.

The basilica S. Paolo fuori le mura, a church "four hundred and four" feet long, built at Rome "at the end of the Fourth century" (Lubke and Lutrow).—It was burned in "1823."

"Apparently in the fourth century" (Weber, and Ermerius ed. Sor. p. xvii), Caelius Aurelianus writing on medicine, and especially translating from Soranus Ephesius.

"397 A. D. = 'Ioung-ngan,' 1st year of Ngan-ti II., of the Tcin" or Ninth dynasty *—(Chinese chron. table).

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* *Panax quinquefolium* of Northeast America. The *ginseng* is called by the Mohawks "kalondaggough" (Hawley), also in aboriginal American "garent-oguen" (Forst. cat. 47, but Osbeck found the name "garentouges" human-thighs in use in China), by the Tartars Northeast of China "orhota" captain of the plants (Jartona): "from the dynasties of the Tsin and Song down to that of the Tang there was no physician of reputation who did not constantly make use of" jin-seng—(receipts in chin.

"The same year" (Zosim., and Clint.), revolt of Gildo at Carthage; cutting off the supply of corn from Rome; as at this time (according to Claudian), Constantinople received all the corn of Egypt.

"In this year" (Idat., and Clint.), general destruction of temples. A Christian, Synesius, at this time ambassador from Cyrene to Arcadius.

"The same year" (Abulpharag., and Clint.), Vararam IV. succeeded by Yesdejerd or Isdejerd, twelfth Sasanid king of Persia. Christians at this time numerous in Persia.

"400, Jan. 1st" (Clint.), homily of Asterius, against the festive observance of the Calends.

"In this year" (ann. Jap., transl. Tits.), Nin-tok succeeded by Ri-tsiou, eighteenth dairo of Japan. Flowers of "sakoura" * fell into the drinking-cup of Ri-tsiou while once sailing on an artificial lake.

"In this year" (Burm. ann., Bigandet, and Max Mull. p. xvi), Budhaghosha of Thaton visiting Ceylon, where he transcribed the Budhist scriptures, making use of "Burmese or rather Talaing characters." In this form these scriptures were now first communicated to the people living on the shores of the Gulf of Martaban. — The visit of Budhaghosha is placed at least eleven years later by the Ceylon historian Mahanama (Mahavams. xxxvii).

Excavating a "stone temple" or "stone cave," is mentioned by Budhaghosha parab. xviii.

Diospyros hirsuta of Ceylon. Affording the most valuable cabinet-wood of the island, surpassing rosewood in beauty and durability, and from early times in the greatest repute: "ebony forests" are mentioned by Budhaghosha parab. iii: † — D. hirsuta was received from Ceylon by the younger Linnæus; and according to Drury, grows "chiefly in the southern provinces and especially in the forests at the foot of Adam's Peak," but having been prodigally felled "has become exceedingly rare."

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herbal, Du Halde 217; doubtless from the root occasionally resembling the human form): according to the emperor Kang-hi, from the frontier of China to Hei-tong-kiang and from the eastern sea a good distance westward are forests so dense that they hide the sun, some of pine and some of cedar, and in these dark woods grows the "gin-cheng" (mem. Chin. iv. 465); or according to Kaempfer i. 4, "in the provinces of Corea and Fakusai, as also in Siansai, a province of the neighbouring Tartary:" ginseng is described by P. Jartoña in making his map of Tartary, and "in 1709" the emperor ordered ten thousand Tartars to go in quest of the root, and so procured twenty thousand katye or Chinese pounds, Osbeck further found the Chinese in their "apothecary shops always selling ginseng;" among the productions of Yeso, "ninzin" or "ginsen" is enumerated in the San-kokf, and by Siebold; the Ainos of Yeso are known to have long held communication with the Aleutian Islands, and though the plant has not been seen growing in Alaska (Rothr. in Smith's report for 1867), ginseng has been enumerated among Alaskan articles of commerce; I have in fact met with no direct evidence that the plant has been seen growing in Asia, and the law of geographical distribution requires either two species, or else China has always been supplied with ginseng from North America. P. quinquefolium was discovered in Northeast America in "1715" by the jesuit P. Lasitan (Hardie's tablet, and Holmes); "in 1752," its root was extensively collected by the Mohawks and brought to the colonists on the Hudson for exportation to China (G. Hawley hist. coll. iv. 53); "in 1775," Thunberg in Japan found ginseng root "imported unadulterated only by the Chinese," and that "brought by the Dutch, said to come from America," strictly prohibited: P. quinquefolium seems to grow chiefly on and around the Alleghanies, as far according to Kalm as a little North of Montreal; was observed also in Canada by Michaux, and Cleghorn (Hook.); by Pursh, from Canada to Tennessee; by A. Gray, in "rich mountain woods, becoming rare;" by Conrad, as far East as the vicinity of Philadelphia, and by Darlington near West Chester; by Eliot, on the Alleghany mountains of Carolina; and by Chapman, in "rich woods along the mountains, Georgia and northward."

* *Cerasus karinka* of Japan and Yeso. A *cherry tree* called by the Ainos "karinka," in Japan "sakura" (Sieb.), and clearly the "sakoura" in question: — enumerated by Siebold among the edible and useful plants of Yeso.

† *Diospyros chloroxylon* of Eastern Hindustan. A thorny species yielding a kind of ebony; very hard and durable timber, known from early times: — observed by Roxburgh cor. pl. 49 (Pers., and Drur.).

Diospyros cordifolia of Eastern Hindustan. A tree armed with branching thorns and yielding a kind of ebony, timber from early times used for many economical purposes: — observed by Roxburgh cor. pl. 50 (Pers., and Drur.).

Diospyros tomentosa of the Northern parts of Bengal. A tall and elegant tree, deciduous-leaved and shaped somewhat like the cypress; its black hard heavy timber known from early times: — observed by Roxburgh (Drur.). From transported specimens, described by Poiret (Steud.).

Jasminum angustifolium of Southern Hindustan. A woody twiner called in Tamil "caat-

Capsicum frutescens of Tropical America. The *red pepper* or *chilly* is called in Aitian "axi" (Ovied.), in Peruvian "uchu," in Mexican "chilli" (Humb. iv. 9), in Tagalo "pasitis," but in ancient times "lara," a name extant among the Pampangos (Blanco), in Burmah "gna-yoke" (Mason), in Telinga "merapu-kai," in Tamil "mollaghai," in Malabar "capoo mologoo," in Bengalee "gach-murich" (Drur.), in the environs of Bombay "lal mircheé" (Graham), in Yemen "dar felfel," in Greece "pipériés" (Forsk.), in Egypt "felfel ahmar" (Del.); and "red pepper" is mentioned by Budhaghosha parab. 21 as inducing violent sneezing when powdered; — is prescribed by Susrutas sutr. 46: C. frutescens was observed by Rheede ii. pl. 56 in Malabar, is described also by Rumphius v. pl. 88; was observed by Gibson, and Graham, "in every garden" in the environs of Bombay, "also all over the Deccan and Kandesh," and "extensively cultivated about Poosasowlee", and "sent to the Concan markets;" by Roxburgh, and Drury, in other parts of Hindustan as far as Nepaul; by Mason, "exotic" in Burmah; by Blanco, seemingly indigenous on the Philippines: by myself, on the Feejeean and Tongan, by other members of our Expedition on the Samoan Taheitian and Hawaiian Islands, brought by Polynesian voyagers from America. A brother of Manco Capac was named Agar Uchu (G. de la Veg. i. 18): Columbus on his first voyage found "axis" the pepper used by the inhabitants of Aiti or Hayti "very hot, some of it long and some round" (F. Columb. 34 to 36); the "axi" is described by Oviedo gen. hist. vii. 7, as a substitute for pepper; by Gomara, as "especia que les quemo la lengua;" but in the wild state C. frutescens seems unknown (A. Dec). Westward from Hindustan, although observed by Forskal under cultivation in Yemen, and by myself on Zanzibar, by Schweinfurth in Central Africa, C. frutescens appears to have remained unknown in the Mediterranean countries and Europe until the discovery of America; is described by Tragus, Cordus, Fuchsius, Matthioli, Lobel, and Clusius exot. pl. 340; was observed by Forskal, and Delile, in Egypt; by Hasselquist, near Jerusalem; by Forskal, and Chaubard, in Asia Minor and Greece: By European colonists, was however introduced into Northeast America.

One hundred and forty-first generation. Jan. 1st, 401, onward mostly beyond youth: Rab Ashe: the Greek philosopher Plutarchus of Athens; the historians, Eunapius, and Olympiodorus; the grammarian Orion; the rhetor Troilus; the Christian Greek writers, Arsacius, Atticus, the chronologers Annianus and Panodorus, Chrysanthus, Evagrius of Antioch, the ecclesiastical historian Sisinnius, Philippus of Side, Maximianus, and Theodorus of Mopseusta: the Latin writers, the poets Claudianus and Rutilianus Numatianus; the Christian Latin writers, the ecclesiastical historian Sulpicius Severus, Dexter, Cassianus, Marius Mercator, Petronius, Prudentius, Coelestius, Julianus, and Orosius.

"In the very beginning of the fifth century" (journ. Asiat. v. p. 103 to 138, and Elphinstone iii. 3 to 19), the Chinese traveller Fa-hian entering Hindustan visited Behar, at this time the capital; describes also an extensive *Budhist* cave. "He found Budhism flourishing in the tract between China and India, but declining in the Panjab, and languishing in the last stage of decay in the countries on the Ganges and Jamna. Capila, the birthplace of Budha, was 'a wilderness untenanted by man.' His religion was in full vigour in Ceylon, but had not yet been introduced into Java:" — which island Fa-hian visited on his way back to China, "in ships manned by crews professing the *Braminical* religion" (see below 428).

The impression attributed to Guatama's foot on a mountain in Ceylon is mentioned by Fa-hian, — also in the Mahavamsa i. 1. 7, but by Arab travellers from the Ninth to the Fourteenth century is attributed to Adam (Marco Polo 215, and Burn. ii. 622).

"402 A. D." (Prosp., and Clint.), Anastasius succeeded by Innocentius, "thirty-eighth" bishop of Rome.

On the "third of the ides of November" (Idat.), *eclipse of the sun.* "Towards the close of the year" (Clint.), the Goths under Alaric enter Italy.

"404 A. D." (Gothofred., and Clint. iv. p. 379), *gladiatorial exhibitions* finally suppressed by Honorius. In Asia Minor, ravages by Isaurians; from beyond the Taurus chain of mountains.

"The same year" (Blair), the kingdom of Scotland "revived by Fergus."

"405 A. D." (Prosp., and Clint.), in Italy, more than "two hundred thousand" Goths under Radagaisus, shut in among the mountains at Fesulae and defeated by Stilicho.

"406 A. D." (Zosim., and Clint.), Vandali, Alani, and Suevi, crossing the Rhine enter Gaul.

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mallica," in Hindustanee "ban-mallica," in Telinga "adevie-mallie" (Drur.), in the environs of Bombay "reoutee" (Graham); and from early times, its bitter root used medicinally in ringworm: the wrapped up relics of a Budhist saint are compared by Budhaghosha xxviii to a jasmine-bud: — J. angustifolium was observed by Rheede vi. pl. 53 in Malabar; by N. L. Burmann pl. 2, Ainslie, Roxburgh, Wight, and Drury, from Travancore to the Coromandel forests, constantly covered with bright shining green foliage and well-adapted for arbours; by Graham at Bombay, only "in gardens."

At this time (as appears from Vigilantius, Hieronymus, Alsted, and Clint.), image-symbols, lighting of candles, relics of saints, and invocation of saints, already used in Christian worship. Vigilantius writing also against prayers for the dead, vigils, and the celibacy of the clergy.

"In this year" (ann. Jap., transl. Tits.), Ri-tsiou succeeded by his brother Fan-sio, now nineteenth dairo of Japan *

"The same year = beginning of the Thirteenth manwantara" among the Hindus — (Graha Munjari tables, and Benth.)

"407 A. D." (Idat., and Clint.), Hieronymus, Joannes bishop of Jerusalem, Eulogius bishop of Caesarea, Epiphanius of Cyprus, and Theophilus of Alexandria, all seen by Idatius, now in early youth.

"The same year" (Prosp., and Clint.), in Britain, revolt of Constantine a Roman soldier; who taking advantage of his name, extended his authority over the people and crossed into Gaul. Coins of Constantine are extant.

"May 1st" (Prosp., and Clint.), Arcadius succeeded by Theodosius II., at the age of "eight years" second Byzantine emperor. The work of demolishing the temples of the ancient religion continued to be zealously prosecuted (Sm. biogr. dict.); for Monumental history, a disastrous measure.

"The same year" (Zosim., and Clint.), Stilicho put to death at Ravenna. When "thirty thousand" of his troops joining the Goths, Alaric marched and laid siege to Rome. Terms however were offered, and Alaric withdrew.

"409 A. D." (Zosim., and Clint.), second siege of Rome by the Goths. Spain invaded and overrun by the Vandali, Alani, and Suevi: the Vandali continuing beyond into Africa.

"410 A. D. (= 418" of Sam. Aniens., J. Nicholson in Kitt. cycl. bibl.), the *Armenian alphabet* invented by Miesrob; who at the same time commenced a version of the Bible. — More than twenty-one years elapsed before the version was completed; Moses of Chorene being part of the time employed on it. This version is the earliest known example of the *Armenian language*.

"Aug. 24th" (Cedren., and Clint.), after a third siege, Rome captured and plundered by the Goths under Alaric. Who, dying shortly afterwards, was succeeded as king by Ataulfus.

411 A. D. (= 369 + "42 years reign" of the Mahavams. xxxvii.), Upatissa succeeded by his brother Maha-nawma, now king of Ceylon.

Bauhinia acuminata of Tropical Africa? The *white Bauhinia*, a shrub six to ten feet high, called in Burmah "ma-ha-hlæ-ga-phyoo" (Mason); and from early times, cultivated for its large blue-white fragrant flowers: the "mahanel" flower exhaling fragrance according to the Mahavamsa i. p. 8; — may be compared: B. acuminata was observed by Mason v. 405 to 771 "exotic" in Burmah. Westward, by Rheede i. pl. 34 in Malabar; by Roxburgh, and Wight, in other parts of Hindustan; by Graham, "in gardens common" around Bombay, and notwithstanding the opinion of Desvaux, he regards the "farek" seen by Bruce vii. pl. 18 in Abyssinia as possibly identical.

Morinda citrifolia of Tropical shores from the Seychelles and Hindustan throughout the Malayan archipelago and neighbouring Polynesian islands. A small tree called in Hindustanee "al" or "atchy," in Telinga "molagha" or "maddichettoo," in Tamil "manja-pavattay" or "noona" (Drur.), in the environs of Bombay "aal" (Graham), in Martaban and Pegu "nie-pa-hsæ," in Tenasserim "nyau" (Mason), in Ylocano "apatot," in Pampango "taliantar," in Tagalo and Bisaya "bancudo" or "paneudo" or "bangcoro" or "mambog" or "tumbong aso" or "tacpus" or "culit" or "lino" or "niño" (Blanco), on the Tarawan coral-islands "non," on the Otafuan coral-islands and the Tongan, Samoan, and Taheitian rocky groups "nono," on the Marquesas and Hawaiian

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* *Tilia cordata* of Japan. Its bark from early times used for bast and making musquito-nets — (see Jap. centen. comm. 77).

Pueraria Thunbergiana of Japan. From early times used for making cordage and coarse cloth — (see Jap. c. c. 76).

Wistaria Chinensis of Eastern Asia. A shrubby twiner called in Japan "too" or "fudsi" (Thunb.), and from early times used there for making cordage and coarse cloth, also for braiding hats and other articles, and planted for arbours in gardens — (see Jap. c. c. 76 to 81): observed in Japan by Kaempfer v. 856, and Thunberg, described also by Houttuyn viii. pl. 64.

Salix Bisergèriana of Japan. A *willow* from early times used for making bast — (see Jap. c. c. 76).

Musa basho of the Philippines. Called in Tagalo "abaca" (Blanco), yielding *Manila hemp*, and from early times used in Japan for making cordage and coarse cloth — (see Jap. c. c. 76). Farther South, observed by Dampier only on Mindanao; by Blanco, a most useful plant carefully cultivated in Camarines and other parts of the Philippines.

Islands "noni" (Hale); the "hal-trees" of the Mahavamsa ii. p. 30 — may be compared: M. citrifolia was observed by Rheede i. pl. 52 in Malabar; by Graham, "common in Bombay, extensively cultivated in Kandesh, Berar, Surat, and about Punderpore," its roots "used in dying;" by Drury, the scarlet dye "exported in large quantities from Malabar to Guzerat and the northern part of Hindoostan;" by Roxburgh, and Wight, the tree occurring as far as Coromandel; by Mason v. 112, "exotic" in Burmah, cultivated for the red dye obtained from the roots; is known to occur in Anam, its fruit used medicinally; was observed by Bontius 97, and Rumphius iii. pl. 99, in the Malayan archipelago, by myself to all appearance indigenous there; by Blanco, on the Philippines. Farther East, by myself seemingly indigenous on the Feejeean, Tongan, Samoan, and Taheitian islands, occurring also throughout the Paumotuan coral-archipelago, but on the Hawaiian Islands only cultivated and naturalized, its root further ascertained by Rich to be used for dyeing by Polynesians. Westward from Hindustan, was observed by Bojer on the Seychelles and Gallega, but by European colonists was carried to the Mauritius Islands and cultivated.

"In this year" (Augustin., and Clint.), at Carthage, conferences with the Donatists: "two hundred and seventy nine" Donatist bishops being present; and "two hundred and sixty-six Catholicæ partis," including Augustinus.

"412 A. D." (Socrat., and Clint.), Theophilus bishop of Alexandria succeeded by Cyrillus.

"23d day of 1st lunat." (ann. Jap., and Klapr.), Fan-sio succeeded by his brother In-kio, now twentieth dairo of Japan.

"Nov. 21st" (Percev. i. 244 to 415), commencement of the Naci era of the Arabs.

"413 A. D." (Prosp., Blair, and Clint.), commencement under Gundicar of the Burgundian kingdom; Westward of the Upper Rhine.

At this time, lake-temples dedicated to local deities in various parts of Northern and middle Europe; one being mentioned in the following inscription found at Autun in Burgundy, "licnos contextos ieuru Anvalonnacu canecosedlon," — the last word translated "domum lacustrem" "lake-house" by A. Pictet (Troyon p. 198). Gregorius of Tours glor. confes. ii. speaks of a lake on Mount Helanus in Gévaudan having been an object of worship; furious storms arising on the occasion of offerings, the phenomenon ceasing only after a church had been built near by and the people converted to Christianity; again in miracul. ii., he speaks of a sacred fountain and lake at Brioude sur l'Allier, into which the people cast the idols after their conversion to Christianity. A pit filled with water and consecrated to demons at Vierzon among the Bituriges, is mentioned in the life of St. Sulpice de Bourges (act. Benedict. ii. p. 172): and Gervasius Tilberiensis (Leibniz i. 982) speaks of an invisible palace of demons on Mount Cavagum in Catalogne, in a lake, into which if a stone be thrown a storm at once arises: the superstition of storms arising from throwing a stone into a lake, also occurs in the traditions of Germany and Finland (Grimm mythol. Deutsche 388).

"414 A. D." (Theodoret., Sozom. ix. 4, Plate, and Clint.), at Suza, a fire-temple destroyed by the Christian bishop Abdas. Who, when ordered by king Yesdejerd to rebuild it, refused, and was put to death. Some persecutions against Christians ensued in Persia.

"415 A. D." (Socrat., and Clint.), at Alexandria, Hypatia daughter of the philosopher Theon, murdered.

Cedrela toona of Tropical Hindustan, Burmah, and the Malayan Archipelago. An Egyptian harp made of *East Indian mahogany*, — was seen by Rosseline in Florence (athenæum July 22d 1837, and Royle antiq. hind. med. p. 130). Eastward, C. toona is called in Bengalee "toon" or "lood" (Lindl.); is described by Rumphius iii. pl. 39; was observed by Graham in "ravines at Kandalla, the beautiful timber is not inferior to mahogany, the flowers are used in Mysore in dying cotton a beautiful red colour, while the bark is considered equal" to that of the Soymida "as an antiperiodical in fevers;" and according to Roxburgh cor. iii. pl. 238, Wight, and Lindley, the trunk is "erect, of a great size and height," the "bark a powerful astringent, and though not bitter, a tolerably good substitute for Peruvian bark" in "remitting and intermitting fevers." Farther East, enumerated by Mason v. p. 539 as found by Nuthall "in Aracan," by McClelland "in Pegu," and furnishing the *toon* timber of commerce: observed also by Blume bydr. 199, and Horsfield, in Java.

"The same year" (Prosp., and Clint.), death of Ataulphus in Spain, and Sigericus elected king of the Goths. After "seven days," he was succeeded by Vallia or Wallia.

"417 A. D." (Olympiodor., and Clint.), marriage of the Roman general Constantius with Placidia, daughter of Theodosius and widow of the Gothic king Ataulphus.

"The same year" (Alst., and Nicol.), Innocentius succeeded by Zosimus, thirty-ninth bishop of Rome.

"418 A. D." (Idat., and Clint.), in Spain, the Vandali and Alani defeated and nearly exterminated by the Goths; who returning into Gaul, received through Constantius the province of Aquitania, from "Tolosa to the ocean." Their king Wallia dying in this year, succeeded by Theodores.

On the "fourteenth of the Calends of August" (Marcellin., and Clint.), *eclipse of the sun.*

"The same year" (Prosp., and Clint.), the decree of a synod at Carthage against Pelagius submitted to the bishop of Rome; approved by Zosimus, and everywhere accepted by the churches. A synod at Carthage afterwards assembled, Augustinus and Prosper being present (Alst. pp. 344 and 368), and a decree issued, That no appeal, nor any authority over the African bishops should henceforward be conceded to the bishops of Rome.

Appuleius Barbarus possibly identical with L. Appuleius M. Mago mentioned by Augustinus — (Gesen. inscript. phoen. 383).

Thalictrum aquilegifolium of middle and Eastern Europe. A species of *meadow-rue*; and the ERYPHION called by the Italians RUTAM AGRESTEM, having according to Apuleius Barbarus 126 the form of API and the flower PURPURE. SIMILEM, — mentioned also by Serapion (Trag. 335), may be compared: T. aquilegifolium is described by Dodoens (Spreng.); is termed "t. alpinum aquilegiæ foliis florum staminibus purpurascentibus" by Tournefort inst. 270; "t. atropurpureum" by Jacquin austr. pl. 348: is known to grow on the mountains of Austria and Switzerland (Pers.); and was observed by Sibthorp in woods from the Peloponnesus to mount Haemus.

Potentilla tormentilla of Europe and the adjoining portion of Asia. Called in Britain *septfoil* (Prior); in which we recognize the "seofenleafe" identified in the Anglo-Saxon version with the HEPTAPHYLLON or SEPTIFOLIUM of Apuleius Barbarus 118: — the "tormentilla" is mentioned in the Liber Saladini, and the Ortus Sanitatis pl. 481; P. tormentilla is termed "t. sylvestris" by Tournefort inst. 298; is known to grow in Britain, Denmark, and throughout middle Europe (fl. Dan. pl. 589, Engl. bot. pl. 863, Vill. delph., and Pers.). The root according to Lindley is "very astringent," and "produces its astringent effects without causing excitement."

Trichodesma Africana of the Egyptian portion of the Desert. An herb called in Egypt "lusseq" or "horreyq" (Forsk., and Del.); in which we recognize the CORRAGO given as the original name of borage by Apuleius Barbarus, — also the "horraik" identified by Ebn Baitar with the "banat elnar" of Elbasri, and others: T. Africana was observed by Forskal, and Delile, as far North as Cairo, growing in the Desert.

Scorzonera resedifolia of Egypt and the Mediterranean countries. Called in Greece "lagōpsŏmi" (Sibth.), in Egypt "jamrur" (Forsk.); in which we recognize the LACTUCA LEPORINA of Apuleius Barbarus 113: — S. resedifolia was observed by Sibthorp, and Fraas, in Southern Greece; by Forskal p 144, and Delile, growing in the Egyptian Desert. Westward, by Boccone xiii. pl. 7 in Sicily, by Desfontaines ii. p. 226 in Barbary, is known to grow also in Spain and France (Pers., and Steud.).

Picridium vulgare of the Mediterranean countries. Called in Greece "tōu lagōu tō psŏmi" (Sibth.), and possibly included in the "lactuca leporina" of Apuleius: — P. vulgare was observed by Forskal, Sibthorp, and Chaubard, from Asia Minor and Cyprus to the Greek islands and the Peloponnesus. Westward, is described by Lobel pl. 236; is termed sonchus "lævis angustifolius" by Tournefort inst. 475; and is known to grow in Barbary and Southern France (Allioni ped. pl. 16, Lam. fl. fr., Pers., and Steud.).

Nepeta cataria of Europe and the adjoining portion of Asia. Called in Britain *nep* or *cat-mint* (Ainsw., and Prior), in Italy "cataria" or "erba gattaria" (Lenz), in which we recognize the "nepte" identified in the Anglo-Saxon translation with the NEPITAMON of Apuleius Barbarus 95: — the "nepeta" of the capitularia of Charlemagne is referred here by Antony, and Sprengel; is mentioned also by Walafridus Strabus p. 225; and the "nepite," by Nicolaus Præpositus 126: N. cataria is described by Brunfels pl. (Spreng. præf.), Dodoens i. 4. 14, and Gerarde p. 544; is termed "cataria major vulgaris" by Tournefort inst. 202; is known to occur in waste places in Italy and throughout middle Europe as far as Denmark (fl. Dan. pl. 580, Pers., and Lenz). Eastward, was observed by Sibthorp around Constantinople. By European colonists, was carried prior to 1670 (Joss.) to North-east America, where it has become frequent around dwellings and along roadsides, and is called *cat-nip*. In conformity with the statement of Dodoens I have found it perhaps the only plant noticed by cats, and have seen them smell and rub against it; according to Lindley, "it is said to have been advantageously exhibited in amenorhœa."

Digitaria sanguinalis of the Malayan archipelago. A grass called in Germany "hahnenbein" (cocksleg), in which we recognize the CRUS GALLI of Apuleius Barbarus 45, — identified in the Anglo-Saxon version with the "attorlathe," mentioned also in the Leechbook, and from figures in manuscripts G. T. A. referred here by Cockayne: the "venich" of Hildegarde, is also referred here by Sprengel: D. sanguinalis was once regularly cultivated in Europe (Beckm.); but was growing spontaneously in Britain in the time of Gerarde p. 25, Parkinson, and Ray, as after occasional introduction to the present day (Wats.); is described by Lobel pl., and Camerarius pl. . .; is termed "gramen dactylon folio latiore" by Tournefort inst. 520; was observed by Desfontaines in Barbary; and is known to occur in waste ground in various parts of Europe, as in Northwestern France and the outlying Jersey isles (Schreb. pl. 16, Leers pl. 2, Curt. lond. iv. pl. 7, Pers., Piquet, and A. Dec.).

Eastward, was observed by Forskal, Sibthorp, and Chaubard, in cultivated ground in Greece, the Greek islands, and around Constantinople and Smyrna; and by Hasselquist, Forskal, and Delile, in Lower Egypt. Farther East, was observed by myself in the Malayan archipelago; by Polynesian colonists, carried to New Zealand, and if not indigenous to Tongatabu, the Samoan, Taheitian, and Hawaiian groups, but seemed absent from the Feejeean. By European colonists, was carried to Madeira (. . .); to St. Helena, ascertained by myself; and to Northeast America, where it has become an abundant weed, observed even in Arkansas by Nuttall. "D. humifusa," by many writers regarded as a distinct species, was observed around Paris by Richard (Pers.); in Sweden by Fries p. 80; in Southern Russia by Bieberstein (Steud.); in Japan by Thunberg, but no native name is given; in Northeast America, has been observed by myself in waste and cultivated ground and in the sand of the seashore, and is described by A. Gray as "in some places appearing as if indigenous, but probably an introduced plant."

Aspidium obovatum of the Mediterranean countries. The herbam radiolum by others called felicinam, resembling felici according to Apuleius Barbarus 84 and having two rows of gold dots on each leaf, — may be compared: A. obovatum is described by Viviani, as observed by him in Lybia or Cyrene; was observed by Bory in the Peloponnesus; and was received by him from Calabria, Corsica, and the Hieres Isles.

"419 A. D. = 'youan-hi,' 1st year of Koung-ti, of the Tcin." Which dynasty was replaced in this year by the Soung, the seat of government remaining at Nan-king — (Chinese chron. table).

"The same year" (Socrat. and Clint.), a schism among the Arians of "thirty-five" or perhaps "twenty-five" years standing, brought to a close.

"The same year" (Alst., compare Nicol.), Zosimus succeeded by Bonifacius, fortieth bishop of Rome.

"420 A. D. = 'young-tsou,' 1st year of Wou-ti III." or Lieou-yu, head of the new dynasty of the Northern Soung — (Chinese chron. table, and Pauth.).

"The same year" (Agath., and Clint.), Yesdejerd succeeded by Vararam V., thirteenth Sasanid king of Persia. The persecution against Christians was continued by Vararam V.

"The same year" (Blair), beginning, on the Lower Rhine under Pharamond, of the kingdom of the French.

"423 A. D. = 'king-ping,' 1st year of Ying-yagg-wang" or Chao-ti, of the Northern Soung or Tenth dynasty — (Chinese chron. table, and Pauth. p. 274).

"The same year" (Cedren., and Clint.), death of Honorius; leaving Theodosius II. sole emperor. Joannes notwithstanding established himself at Rome over the West.

"424 A. D. = 'youan-kia,' 1st year of Wen-ti II.," of the Northern Soung or Tenth dynasty (Chinese chron. table), beginning of the Fifty-second cycle.

"425 A. D." (Prosp., and Clint.), Joannes slain; and Valentinian III. established over the Western Empire through Theodosius II. Incursions of the Vandali in Mauritania.

The TQUPELEΦQC of Abyssinia mentioned by Philostorgius iii. 11 p. 482, — and Nicephorus ix. 19, and described by Cosmas Indicopleustes xi. p. 334 as wild and untameable unlike the Indian species, the accompanying figure also corresponding, is clearly the *African buffalo*, Bos Caffer.

"The same year" (Sm. b d.), end of the Ecclesiastical history of Philostorgius.

"The same year" (cod. Theodos., and Clint.), efforts of Theodosius II. to restore learning: his edict at Constantinople making honorable mention of the Greek grammarians Helladius and Syrianus, the Latin grammarian Theofilus, the rhetors Martinus and Maximus, and the jurist Leontius.

"426 A. D." (Blair), Britain abandoned by the Romans.

"428 A. D." (Pauth. 274), embassy from Hindustan, from the "king of Kapila," bringing to Wen-ti II. "diamonds, precious rings, bracelets, and other ornaments of chased gold, and two parrots, one red and the other white." (The event is placed in 408 by Elphinstone iii. 3, who further remarks, that Capili is "the birthplace and capital of Budha, which the Chinese have put for all Magada," and that the Hindu king "Yue-gnai" is perhaps Yajna).

The "red" parrot was doubtless a *lory*; brought originally from the extreme Southeastern portion of the Malayan archipelago; or from the neighboring Australian coast.

The "white" parrot was of course a *cockatoo*; derived originally from the same quarter: * —

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* *Doryanthes excelsa* of Southern Australia. A liliaceous plant twenty-four feet high, the stem roasted and eaten by the Australians — (geogr. plant. lond. tract soc.). Transported to Europe is described by Correa (Steud.).

Xanthorrhœa hastilis of Southern Australia. The tender inner leaves esculent, and far from disagreeable, having a milky taste with a slight balsamic flavour — (lond. tract soc.): called *grass-tree* by the colonists; and observed by myself in Australia, the trunk two to five feet high, crowned with a tuft of grass-like leaves from which the true stem arises.

"bianchi pappagalli" are mentioned by Valmiki ramayan. vi. 11 (transl. Gorres.); cockatoos, "papagaus tous blance come nois et ont les pies et le bec vermoil," were seen in Hindustan by Marco Polo 180.

"The same year" (Prosp., and Clint.), the Franci or the French along the Rhine, defeated by the Roman general Aetius; sent by Valentinian III.

"429 A. D." (Prosp., and Clint.), the churches of Britain recalled from the Pelagian opinions of Agricola, by Germanus; sent there for this purpose by Celestinus, forty-first bishop of Rome.

Hardly earlier than this date (Graha Munjari tables, Puranas, and Bentl.) Vichitrasena reigning in Hindustan.

"430 A. D." (Socrat., and Clint.), death of Barbas, Arian bishop of Constantinople. About this time, the Burgundians receiving Christianity.

"To this year" (Steinschneid. i. 5), in Palestine, Hillel being Jewish patriarch, the *new moons* "determined by testimony" (officially witnessed and announced). — A practice continuing among the Muslims at the present day.

"431 A. D." (Idat., Prosp., and Clint.), on account of the depredations of the Suevi, the mission of Idatius to Aetius in Gaul. Palladius ordained, and sent by Celestinus as first bishop of the Scots.

"The same year" (Clint.), Third general ecclesiastical Council. Convened at Ephesus; "two hundred" bishops being present, and Cyrillus of Alexandria presiding. Nestorius bishop of Constantinople was deposed, and his opinions condemned. — The authority of this council continues to be recognized by the Greek church (E. A. Soph.).

Hardly later than this year (= 410 + "21 yrs.," Kitt. cycl. bibl.), Moses of Chorene employed on the Armenian Version of the Bible.

Scleranthus annuus of Europe and the adjoining portion of Asia. Called in Britain *knawel* (Prior), in Sweden "tandgras" (Linn.); and the worm dyeing red, found according to Moses of Chorene about the root of a grass that grows on Ararat, — is referred by Sprengel to *Coccus radicis*, occurring within certain geographical limits on S. annuus: a plant mentioned by Lobel adv. 183 (Spreng.), termed "knafwel" by Dodoens pempt. 115, "polygonum minus alterum" by Tabernæmontanus 1217, "vermiculata nova planta" by Columna ecphr. i. pl 294, "k. folio et flore viridi" by Ruppius 85, and known to occur from Sweden and Russia throughout middle Europe (C. Bauh., Tourn., fl. dan. pl. 504, engl. bot. pl. 351, and Wats.): was observed by Linnæus in Sweden, everywhere in cultivated and fallow ground, the vapour of its decoction among the Swedes and Germans drawn into the mouth to cure toothache; was observed by Persoon in France, in cultivated and especially calcareous soil; by Sibthorp, on the Bithynian Olympus; by Bieberstein, in fallow ground about Caucasus. Westward, by Hooker on Iceland; clearly by European colonists was carried to North-east America, where it seems naturalized in sunny situations and on rocks, observed by myself from the environs of Salem to Philadelphia; by A. Gray, in "sandy waste places" in the State of New York.

Nonnus of Panopolis in Egypt may have been at this time writing. — He is mentioned among recent poets and is quoted by Agathias (Sm. b. d.).

Dipterocarpus lævis of Burmah. The ΔΕΝΔΡΟΝ ΑΘΗΝΗΣ distilling oil from the ends of its branches in the forest beyond the Hydaspes, according to Nonnus dion. xxii. 27, — seems to imply knowledge of the *oil tree*. D. lævis is described by Buchanan; and according to Mason v. p. 493 and 516, is "one of the most widely diffused trees" in the forests of Burmah, yielding a gum "used by the natives to make torches," also oil in large quantities similarly employed and emitting "a brilliant and durable light," the timber besides much used; the exported product is one of the *wood oils* of commerce, "used for house varnish," and as "a good substitute for fish oil in currying leather," dissolves caoutchouc, but is properly a balsam identical in chemical composition with copaiva.

About this time, "422 to 451 A. D." (tab. hist. de l'Asie, and Pauth. 283), the art of making *coloured glass* brought into China by a merchant from Youe tchi or Scythia. Previously, specimens had been imported "from the West," and sold at high prices.

433 A. D. (= 411 + "22 yrs reign" of the Mahavams. xxxvii.), Maha-nawma succeeded by his son Sangot, and soon afterwards by Samatissa, now king of Ceylon. — He reigned "one year."

One hundred and forty-second generation. May 1st, 434, onward mostly beyond youth: the Syriac ecclesiastical writer Isaac of Antioch: the Armenian writer Moses of Chorene: the Greek poets, Ammonius, and Cyrus of Panopolis; the philosopher Hierocles; the medical writer Jacobus; the grammarian Hyperechius; the rhetors, Lachares, and Nicolaus; the Greek ecclesiastical writers, Paulus the Novatian, the three ecclesiastical historians Socrates and Sozomenus and Theodoretus; Euthalius, and Thalassius: the Latin ecclesiastical writers, Possidius, Eucherius, Vincentius Lirinensis, Philippus presbyter, and Musaeus of Massilia.

"The same year" (Marcellin., and Clint.), Honoria excluded from the palace by her brother Valentinian III.; and her message, inviting Attila king of the Huns into Italy.

About this time (see Alst), the Irish converted to Christianity by Patricius.

"435 A. D." (Prosp., and Clint.), the Burgundians under Gundicar, defeated by Aetius.

Aghastier or Agastya, translator of Sanscrit medical writings into Tamil (the language of Southern Hindustan) as early possibly as this date. — He is mentioned in the Ramayana (Wils., and Royle antiq. hind. med. p. 48).

"436 A. D." (Prosp., and Clint.), Narbo in Gaul besieged by the Goths: who were in other directions exceeding their limits.

"The same year" (Elphinst. iii. 3), in Hindustan, end of the reign of Pulimat or Pulomarchish, and of the Andra dynasty.

"437 A. D." (Prosp., and Clint.), in North Africa, bishops maintaining the "catholicam fidem" persecuted by Genseric king of the Vandals; who sided with the Arians.

"438 A. D." (Clint.), the Theodosian codex of laws published; having been accepted in Rome by the Senate.

"439 A. D." (Prosp., and Clint.), Carthage captured by Genseric king of the Vandals.

Datisca cannabina of the mountains of Asia Minor and Crete. The XUMENION of Zosimus — is referred here by Stapel 721: D. cannabina is termed "cannabina cretica florifera etiam fructifera" by Tournefort cor. 52; and was observed by Sibthorp pl. 960 on mount Sipylus in Phrygia. Farther South, the imported seeds are enumerated by Forskal mat. med., and Delile, as used in Egypt for an emetic and called "djabal hendi."

"440 A. D." (Prosp., and Clint.), invasion of Sicily by Genseric. Death of Xistus; and after some days, Leo Magnus ordained "forty-third bishop" of Rome. Many writings of Leo Magnus are extant.

"The same year" (Agath., and Clint.), Vararam V. succeeded by Yesdejerd II., fourteenth Sasanid king of Persia.

"441 A. D." (Marcellin., and Clint.), irruption of the Huns into Illyricum.

"443 A. D." (Idat., and Clint.), mission of the poet Merobaudes into Spain.

"In or about 445 A. D." (Percev. i. 236), the Coraysh under Cossay, having obtained the charge of the Caba or temple at Mecca, building dwellings around it: the founding of the city of Mecca.

"446 A. D." (Gildas, and Clint.), letter to Aetius from the people of Britain, complaining of the Picts and Scots: "repellunt nos barbari ad mare, repellit nos mare ad barbaros: inter haec oriuntur duo genera funerum, aut jugulamur aut mergimur," the barbarians drive us to the sea, the sea drives us back on the barbarians, and we have two kinds of funerals, we either have our throats cut, or are drowned. Aetius warring against Attila was unable to extend aid.

"447 A. D." (Beda, Clint., see also Blair), invited by king Vortigern, the "gens Anglorum sive Saxonum" in "three long ships" first come into Britain. — Instead of aiding, they turned against their employers (Gildas hist. 23).

On the "ninth of the calends of January" (Idat., and Clint.), *eclipse of the sun.*

"448 A. D." (Prisc., and Clint.), plot of Theodosius II. to assassinate Attila: — To whom Maximinus and the historian Priscus were afterwards sent as ambassadors.

"449, October" (Clint. iv. p. 675), Flavianus bishop of Constantinople deposed, and succeeded by Anatolius.

Manuscripts of the "Fourth or Fifth" century (De Wailly pl. ii. 2) presenting the following forms of the letters, h, p. The form p also in Coptic inscriptions of the "Fifth" century (Silvest. i. pl. 4).

"450, July" (Marcellin., and Clint.), Theodosius II. succeeded by Marcian, third Byzantine emperor.

"451 A. D." (Neumann transl. Elis.), Yesdejerd II. attempting to force fire-worship or the Magian religion throughout his dominions, opposed by the Armenians, a Christian nation. "June 2d," the Armenians finally defeated on the river Dekhmund, and their leader Vartan slain. The account is given by Elisæus, a cotemporary historian, eye-witness of many of the events he relates.

In the Armenian language "bun" signifies ground or nature, and is therefore the equivalent of the Chinese "pun" signifying basis or nature (Neum. note 33 p. 6).

"Fourteenth of the calends of July" (Idat., and Clint.), a *comet* beginning to appear: was in the West on the "calends of August."

"After Sept. 27th" (Idat., Isidor., and Clint.), Attila defeated at Chalons by the Romans under Aetius aided by the Goths. The Gothic king Theodores or Theodoric, slain in the battle, succeeded by his son Thorismus or Torismond.

"In autumn" (Marcellin., and Clint.), Fourth general ecclesiastical Council. Convened at Chalcedon; consisting of "six hundred and thirty" bishops; and attended "Oct. 25th" by the emperor Marcian. Jerusalem was declared a patriarchate (Kitt. bibl. cycl.), and the opinions of Eutyches were condemned: a measure equivalent to excommunication of Egypt, where these opinions were

general, — and where they prevail among the Christian population to the present day. About a century after the condemnation, the proscribed Sect received the name of "Jacobites" (from Jacobus of Edessa, pronounced Yacobus); and hence apparently the term "Copts," employed by Europeans but unknown in Egypt. The authority of this Council continues to be recognized by the Greek church (E. A. Soph.).

Pulmonaria officinalis of Europe and the adjoining portion of Asia. An herb called in Britain *lungwort*, in medieval Latin "pulmonaria," and from its spotted leaves supposed to be a remedy for diseased lungs (Prior): possibly the pulmonaria of the Italians, notwithstanding the statement of Vegetius: — P. officinalis is described by Ruel ii. 116 to 145; is termed "p. Italorum ad buglossum accedens" by Tournefort inst. 136; is known to grow in woods in middle Europe (Pers.); but in Britain is regarded by Borrer, and Watson, as perhaps exotic and only naturalized. Eastward, was observed by Sibthorp, and Chaubard, in cool shaded situations in the Peloponnesus and other parts of Greece. (See Helleborus foetidus.)

"452 A. D." (Jornand., and Clint.), Venetia and the country North of the Po ravaged by Attila. Who on the Mincius was met by Leo bishop of Rome, and persuaded to retire to his own country beyond the Danube. The founding of Venice is referred here by some writers, the location affording protection against ravages by land (Blair).

"The same year" (Idat., and Clint.), Torismond succeeded as king of the Goths, by his brother Theodoric II.

"The same year" (cod. Justin., and Clint.), Proterius ordained bishop of Alexandria.

"453 A. D." (Cassiod., and Clint.), death of Attila. Followed by wars for the succession among his sons.

"454 A. D. = 'hiao-kien,' 1st year of Hiao-wou-ti II., of the Northern Soung" or Tenth dynasty (Chinese chron. table).

"In this year" (ann. Jap., transl. Tits.), In-kio succeeded by his son An-ko, now twenty-first dairo of Japan.

"The same year" (Blair), a Saxon kingdom established in South Britain.

Cardiospermum helicacabum of Subtropical North America. The *balloon-vine* or *heart-pea* is called in Tagalo "bangcoton" (Blanco), in Burmah "malamai" (Mason), has a Sanscrit name (Pidd.), is called in Bengalee "shibjool" or "nuphutkee," in Telinga "budda-kanka-rakoo" or "nellagoolisienda," in Tamil "moodaeottan, in Malabar "palloolavum ulinja" (Drur.), in Yemen "hadk" or "dharu'æsuæd" (Forsk.); has a native name in Dongola (Caill.); and the αγκαρδου of the antidote of Theodoretus — (Theoph. Nonn. 35), also mentioned by Aetius (Royle antiq. hind.); Paulus Aegineta, Nicolaus Praepositus, and Nicolaus Myrepsus, may be compared; C. helicacabum is described by Valerius Cordus, Tragus, Fuchsius, and Matthioli, continues under cultivation in gardens, and in Southern Spain springing up spontaneously in cultivated ground (Boissier, and A. Dec.); was observed by Delile in gardens at Cairo; by Cailliaud, in Dongola; by Grant, in Equatorial Africa, "common, 7° S. to 2° N., leaves are made into spinage by the Wahiyou;" is known as far as Guinea and Cape Verd (Benth. fl. nigr.); was observed by myself seemingly wild on Zanzibar; by Forskal, in moist places near the base of the mountains of Yemen; by Graham, in the environs of Bombay, "common in hedges etc. during the rains," but appeared to me only naturalized; by Rheede viii. pl. 28, in Malabar, rubbed up with water and applied in rheumatism and stiffness of the limbs; by Ainslie, Roxburgh, Wight, and Drury, "common everywhere" in Hindustan, and used for various medicinal purposes. Eastward, by Mason v.; "exotic" in Burmah, "raised in great quantities by the natives, but more as a vegetable than a medecine;" by Blanco, on the Philippines, employed by the natives medicinally; by Rumphius vi. pl. 24, on the Moluccas, its leaves cooked as a vegetable; by myself, occurring a weed on the Feejeean, Tongan, Samoan, Taheitian, and Hawaiian Islands. Farther East, by E. James, "native" on the Canadian branch of the Arkansas and on the Missouri (Torr.); was received by Pursh from "Kaskaskias" (below the mouth of the Missouri); was observed by Chapman in "South Florida, apparently native, and not uncommon in cultivation;" by Maycock, on Barbadoes. By European colonists, was carried to our Middle and Northern Atlantic States, where it continues in gardens; and to the Mauritius Islands (Boj.).

"455, March 16th" (Prosp., and Clint.), Valentinian III. slain; succeeded by Maximus as Western emperor. At the end of about two months, Maximus was slain, and by invitation of the widow of Valentinian III., the Vandals under Genseric entered and pillaged Rome. Through the intercession of the Roman bishop Leo, Genseric was afterwards persuaded to retire.

"The same year" (Clint.), end of the chronicle of Prosper Aquitanus. Chiefly a continuation of that of Hieronymus.

Hardly earlier than this date (Graha Munjari tables, and Bentl.), Vichitra reigning in Hindustan.

"456" (Idat., and Clint.), by Marcian, Avitus acknowledged Western emperor: and a poem

addressed to him by Sidonius Apollinaris. But before the close of the year, Avitus was deposed and ordained bishop of Placentia.

"The same year" (Idat., and Clint.), expedition of the Gothic king Theodoric II. into Spain, and the king of the Suevi captured by him at a place called "Portucale." In this year also, the Heruli, "about four hundred men in seven ships," make their appearance on the Northern coast of Spain, plundering.

"457, Jan. 26th to Feb. 7th" (Marcellin., and Clint.), Marcian succeeded by Leo, fourth Byzantine emperor. Who was crowned by a priest: — an innovation adopted by Christian potentates generally, and from which in the words of Gibbon, the clergy eventually "deduced the most formidable consequences."

"April 1st" (incert. Chron., and Clint.), at Rome, accession of Majorianus as Western emperor.

"The same year" (Clint.), the *Paschal cycle* of "five hundred and thirty-two" years, invented by Victorius of Aquitain.

"In this year" (ann. Jap., transl. Tits.), An-ko succeeded by his brother You-riak, now twenty-second dairo of Japan.

"458 A. D." (Agath., and Clint.), Yesdejerd II. succeeded by Firoze, fifteenth Sasanid king of Persia.

"In this year = 4th of the 'ta-ming' of Hiao-wou-ti" (Hoei-chin trav., and Klapr.), Buddhism introduced into Fou-sang (Yeso?) by five priests from Ki-pin (Bokhara according to Leland and lond. sat. rev. 1875).

"459 A. D." (Max Müll. p. xl) accession of Dhatusena or Dasen Kelliya through the influence of his uncle the historian Mahanama, author of the Mahavamsa. — Dhatusena ruled Ceylon until "477."

"461 A. D." (Marcellin., and Clint.), Majorianus succeeded by Severus as Western emperor. Also in this year, Leo Magnus succeeded by Hilarus or Hilarius, "forty-fourth" bishop of Rome.

"462 A. D." (Idat., and Clint.), Eudoxia widow of Valentinian III., returned by Genseric to Constantinople. The Vandals under him ravaging Italy in this, — and the spring of the two succeeding years.

"464, July 20th, Monday" (Idat., and Clint.), *eclipse*. — Determined to this date by Petavius.

"465 A. D. = 'tai-chi,' 1st year of Ming-ti IV., of the Northern Soung" or Tenth dynasty — (Chinese chron. table.).

"The same year" (Marcellin., and Clint.), at Rome, Severus succeeded by Anthemius as Western emperor.

"466 A. D." (Idat., and Clint.), Theodoric II. king of the Goths, succeeded by Euric.

One hundred and forty-third generation. Sept. 1st, 467, mostly beyond youth: the Syriac ecclesiastical writer Samuel of Edessa: the Greek philosophers, Pamprepius, and Marinus; the historians, Malchus, and Candidus; the grammarian and naturalist Timotheus of Gaza; the chronologer Eustathius; the Greek ecclesiastical writers, Gelasius of Cyzicus, and Theodulus of Coele-Syria: the Latin ecclesiastical writers, Fulgentius, and Victor Vitensis.

The use of *sympathetic ink* (according to Jost iv. p. 35, note in Steinschneid. i. 4), mentioned in the Talmud Jer. sabb. ii.

"Sept. 25th" (Steinschneid. i. 4), death of Mar, son of Rab Ashe, and regarded as the last Talmudical authority. — Within "eight" years, the redaction of the Talmud Babeli (Babylonian) was completed by R. Jose. A gap follows in *Jewish literature* (Leps. eg. and sin. p. 456); until the "Eighth" century and the Seder Olam Rabah, "one of the first writings of the Rabbis" next succeeding.

"468 A. D." (Idat., and Clint.), Hilarus succeeded by Simplicius, "forty-fifth" bishop of Rome. End of the chronicle of Idatius.

"470 A. D." (Jornand., and Clint.), "twelve thousand Britons" under king Riothimus landing at Biturigas to assist the Romans, intercepted and defeated by the Goths under Euric.

"In this year" (Elph. iv. 1), accession of the Rathor dynasty of Hindu kings at Canouj.

"471 A. D." (Vict. Tun., and Clint.), Anatolius bishop of Constantinople succeeded by Gennadius; and before the close of the year, by Acacius.

"472 A. D." (Vict. Tun., and Clint.), at Rome, Anthemius succeeded by Olybrius as Western emperor; and before the close of the year, by Glycerius.

"November" (Marcellin., and Clint.), *eruption* of Mount Vesuvius, covering all Europe with minute dust. — An event commemorated afterwards at Constantinople annually.

In this year (= "16th of You-riak," Klaproth note to ann. Jap.), "mulberries" (Morus alba?) planted in all the provinces of Japan by order of the dairo You-riak.

"473 A. D. = 'Youan-hoei,' 1st year of Tchou-yu" or Tsang-wou-wang, of the Northern Soung or Tenth dynasty — (Chinese chron. table).

"474 A. D." (Marcellin., and Clint.), the emperor Glycerius expelled from Rome by Julius Nepos, and ordained a bishop. Julius Nepos had been recognized by Leo; and coins issued by him are extant.

"Feb. 3d" (Clint.), Leo succeeded by Leo II., fifth Byzantine emperor. Coins issued by Leo II. are extant: but he reigned a few months only, and before the close of the year was succeeded by Zeno.

"The same year" (Clint.), end of the chronicle of Nestorianus.

"In this year" (palm-leaf ann. Jag., and W. W. Hunter, Stirling giving 473), the Yavanas expelled from Orissa by Yayati Kesari, founder of the Kesari dynasty. — Yayati brought back the image of Jagannath to Puri, and commenced the Siva temple-city at Bhuvaneswar.

"475 A. D." (Marcellin., and Clint.), flight of Julius Nepos from Rome; Orestes having entered Ravenna with an army, and further declaring his own son Romulus Augustus (called "Augustulus") emperor. Coins of Romulus Augustus are extant.

"The same year" (Marcellin, and Clint.), the emperor Zeno driven from Constantinople by Basiliscus. Coins of Basiliscus are extant.

"476 A. D." (Jornand., and Clint.), capture of Rome by Odoacer king of the Turcilingi, aided by Sciri, Heruli, and other tribes; and the Western empire brought to a close. Odoacer remaining, established himself as king; but did not wear the "purple and royal insignia."

About this time (Beda 16, Geoff. Monm. viii. 12 to 24, and Nenn. 48), Aurelius Ambrosius the "great king among the kings of Britain," warring against the Saxon invaders. He brought great stones to the cemetery on Salisbury plain, and built *Stonehenge* for a royal burial place: — was himself buried there "within the Giants' Dance;" as were afterwards his successors, Uther, and Constantine.

"477, January" (Clint.), death of Genseric king of the Vandals. In "July." after "twenty months" absence, return of Zeno to Constantinople and his negotiations with Julius Nepos and Odoacer.

"The same year = 'ching-ming,' 1st year of Chun-ti II., of the Northern Soung" or Tenth dynasty (Chinese chron. table).

"479 A. D. = 'kien-youan,' 1st year of Kao-ti" or Siao-tao-tching, head of the new dynasty of the Thsi (Chinese chron. table, and Pauth.). He had murdered the last two emperors.

"480 A. D." (ann. Jap., transl. Tits.), accession of Sei-nei, son of You-riak and now twenty-third dairo of Japan. He was born with white hair (albino), and is called the white-haired dairo.

"Sept. 24th" (Marcellin., and Clint.), *severe earthquakes*, beginning at Constantinople. They continued "forty days."

Hardly earlier than this date (Graha Munjari tables, Puranas, and Bentl.), Nirmoha reigning in Hindustan.

"482, in the beginning of the year" (Greg. Tur., and Clint.), Childeric succeeded by his son Chlodovechus (Clovis) as king of France.

"The same year" (Agath., and Clint.), Firoze succeeded by Balas or Palasch, sixteenth Sasanid king of Persia.

"The same year" (. . . .) the edict "Henoticon" issued by Zeno: allowing the Egyptians some liberty in choosing their creed, and proposing a general union, including Eutychians and Catholics.

"483 A. D. = 'young-ming,' 1st year of Wou-ti IV., of the Thsi" or Eleventh dynasty — (Chinese chron. table).

"March 1st" (Clint.), Simplicius succeeded by Felix, "forty-sixth" bishop of Rome.

"484 A. D." (Clint.), Theodoric king of the Ostrogoths (Eastern Goths) one of the consuls for this year.

"Jan. 13th" (Fabric., and Clint.), *eclipse of the sun*, preceding the death of Proclus.

"The same year = 2d year of the 'young-ming' of Wou-ti IV." (Chinese chron. table), beginning of the Fifty-third cycle.

"485 A. D." (Jornand., and Clint.), Euric succeeded by his son Alaric II., as king of the Visigoths (Western Goths); whose kingdom now included all Spain, Gaul, and Burgundy.

"In this year". (ann. Jap., transl. Tits.), Sei-nei succeeded by Ghen-so, now twenty-fourth dairo of Japan.

"486 A. D." (Clint.), Balas succeeded by Cabades (Kobad), seventeenth Sasanid king of Persia.

"487 A. D." (Marcellin., and Clint.), by Theodoric, Constantinople threatened and the country around laid waste.

"488 A. D." (ann. Jap., transl. Tits.), Ghen-so succeeded by his brother Nin-ken, now twenty-fifth dairo of Japan.

"Four or five centuries A. D." (Jap. centen. comm. 45), beginning of stone-foundations for dwellings in Japan: until now all houses "built upon wooden piles driven into the ground."

"489 A. D." (Marcellin., and Clint.), entrance of Theodoric with an army into Italy: Odoacer retiring into the city of Ravenna.

490 A. D. (= "415 an. jav." of Nata Kasuma, Raffles x.), at Astina in Java, Suantana of Hindu descent succeeded by Abiasa, sixth lineal descendant from Tritresta or Aji Saka, and now chief of the Hindu colony. Abiasa and his father Pula Sara are mentioned in the Madura traditions.

"In or about this year" (Percev. i. 121), Dhou-Chenatir succeeded by Dhou-Nowas, now tobba of Yemen. He declared in favour of Judaism, — which under his reign made great progress in Yemen. He is called Dimion or Dimnus or Dunaan by Syrian and Greek historians.

"491, April 9th" (Clint.), Zeno succeeded by Anastasius, seventh Byzantine emperor.

"492 A. D." (Vict. Tun., and Clint.), Felix succeeded by Gelasius, "forty-seventh" bishop of Rome.

"493 A. D." (Clint.), Gennadius of Massilia writing, mentions Salvianus, Eugenius bishop of Carthage, Julianus Pomerius, and Joannes Antiochenus, as all living.

"The same year" (Cassiodor., and Clint.), capture of Ravenna, and Odoacer slain; Theodoric now becoming second Gothic king of Italy.

Petrus archiater, physician to Theodoric, — is mentioned by Aetius (Sm. b. d.).

Alpinia galanga of Tropical Eastern Asia: The imported root is called in Britain *galangal* (Johns.), in Germany "galgant" (Grieb), in Old Spanish "garingal," in current Spanish and Italian "galanga" (Prior), in Egypt "chaulendjan aqarbi," in which we recognize the "galangae" of Aetius —(Royle antiq. hind. med. p. 77), Nicolaus Myrepsus, Macer Floridus 70; and the "chawlandschan" of Ebn Masawia, Ebn Amran, I. B. Amran, Rhazes, Avicenna, Serapion, and Ebn Baitar: "galanga" from "India" was observed by Alpinus, and Forskal mat. med.. in the drug-shops of Egypt. Farther East, was met with by Marco Polo 126; is called in Sanscrit "koolunjuna" or "koolunyoga" or "dhumoola" or "soogundha" (Lindl.), in Bengalee "chandramul" or "bhumichanpa," in Hindustanee "kulenjin" or "khulinjan" (D'roz.); the living plant is described by Rumphius v. pl. 63; was observed by Nimmo in the Southern Concan (Graham); is known to grow wild on Sumatra and is cultivated on other islands of the Malayan archipelago (Lindl.); was observed by Loureiro wild as well as cultivated in Cochinchina, the fresh roots used to season fish and for other economical purposes. The "galanga major" of commerce is enumerated by Lindley as "a pungent acrid aromatic, forming a kind of substitute for ginger."

"494 A. D. = 'kien-wou,' 1st year of Ming-ti V., of the Thsi" or Eleventh dynasty — (Chinese chron. table).

"496 A. D." (Vict. Tun., and Clint.), by a synod assembled by the emperor Anastasius, Euphemius, defender of the Council of Chalcedon and bishop of Constantinople, deposed. In the West, Gelasius succeeded by Anastasius, forty-eighth bishop of Rome: who (according to Alsted) "was a patron of Eutychians and Nestorians."

"The same year" (Avit. Vienn., Greg. Tur., and Clint.), vow of Clovis, engaged in battle against the Alamanni: gaining the victory, he was baptised shortly afterwards on Christmas day. Christianity now adopted by the French.

"497 A. D." (Alst. p. 369), letter of the bishops of Germany and Gaul, affirming, That the authority of the Councils was superior to the single authority of the bishop of Rome, Anastasius.

"498 A. D." (Clint.), Anastasius succeeded by Symmachus, "forty-ninth" bishop of Rome.

Manuscripts of the "end of the Fifth century" (De Wailly pl. ii. 3), presenting the following form of the letter d.

"499 A. D. = 'young-youan,' 1st year of Tchou-pao-kiouan" or Thoung-houen-heou, of the Thsi or Eleventh dynasty — (Chinese chron. table).

"In this year = 1st year of the 'young-yuan' of Fi-ti of the Thsi dynasty" (Li-yan-tcheou hist., and Klapr.), Hoei-chin, a Buddhist priest, arriving in China from Fou-sang; * a country far Eastward.

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* *Morus Indica* of Yeso and the neighbouring countries. The *Aino mulberry* is called in the environs of Bombay "toot" (Graham), in Hindustanee and Bengalee "tut" (D'roz.), in Burmah "po-sa" (Mason), by the Japanese "kwa," and by the Ainos "tesimani" (Sieb.); and the "fou-sang" tree, whose sprouts and red pear-shaped fruit according to Hoei-chin are eaten, and its bark made into paper and cloth, — may be compared: M. Indica is enumerated by Siebold among the edible and useful plants of Yeso; and was observed by Thunberg in Japan. Southward and Westward, by Loureiro in Anam, preferred to all other species for feeding silkworms; by Mason v. 455, "exotic" in Burmah, cultivated "extensively where the silk worm is raised," and in Tenasserim producing its "very agreeable black berry in great quantities." Farther West, the "kramuka" of Susrutas chik. 28, is referred here by Hessler; M. Indica according to Roxburgh is the species cultivated in Bengal for feeding silkworms; was observed by Rheede i. pl. 49 (Pers.) in Malabar; by Graham,

where there are no wars and the people go unarmed, are however acquainted with writing, employ long-horned *cattle* for carrying burdens, have besides *horses* and domesticated *deer* (Cervus rangiferinus); and (according to a more extended extract in lond. sat. rev. 1875) were acquainted with *iron*, *copper*, *silver*, and *gold*. (Fou-sang, as appears from Klaproth, is one of the names of Japan).

Hoei-chin had heard of country to the Eastward of Fou-sang, where the women were said to be entirely covered over with long hair — (a possible reference to the Kurile Islands.)

"In this year" (ann. Jap., transl. Tits.), Nin-ken succeeded by his son Bou-rets, now twenty-sixth dairo of Japan.*

"The same year = 421 ann. Saca," the Vernal equinox at the beginning of Aswini — according to the rule for *precession* given by the Hindu astronomer Varaha-Mihira (Bentley as. res. viii. 195 to 243). Varaha-Mihira was born at Ujen in 530, and died 587 (Hunter oriss. i. 225).

"The same year" (Clint. fv. p. 718), first appearance of the Bulgarians. — After "three" years, they entered and ravaged Thrace.

"The same year" (Nicol.), a synod assembled in Persia: in favour of the marriage of priests and monks.

The emperor Anastasius continuing the policy of his predecessor in refusing to enforce the decrees of the Council of Chalcedon, and the Western empire having ceased to exist, anathematized by Symmachus bishop of Rome (perhaps the earliest instance of ecclesiastical influence exerted against royal authority).

Christianity (according to Lepsius eg. and sin. p. 158 to 230), penetrated "from Abyssinia" to the Nubians "as early as the Sixth century." Remains of a Coptic Christian monastery occur however at Gebel Barkal; with inscriptions on the tomb-stones "partly Greek, partly Coptic;" also at or near Meroe, a marble slab with the letters Greek or Coptic, but not the language, except the proper names ΓΕΩΡΓΙΟ, and on another piece ΙΑΚΩΒ. — At a later date, a *Gêez inscription* occurs in one of the pyramids at Meroe: of the mounds of brick near Soba, "some are perhaps the remains of Christian churches described by Selim of Assuan in the Tenth century" (Macrizi): and "throughout the whole province of Dongola," remains of Christian churches are "numerous."

One hundred and forty-fourth generation. Jan. 1st, 501, onward mostly beyond youth: the Arab poets, El-Azdee, and Zuheyr (see Fresnel, and Lane dict.): the Greek poet Christodorus; the philosopher Agapius; other Greek writers, Agapetus; the Greek ecclesiastical writers, Basilius of Cilicia, Flavianus the younger of Antioch, Severus of Antioch, Paulus of Antioch, Euphrasius, Epiphanius of Constantinople: the Latin ecclesiastical writers, Avitus Viennensis, Ennodius; the traveller Aculfe (Voyag. Belg.).

"The same year = 'tchoung-hing,' 1st year of Ho-ti, of the Thsi" or Eleventh dynasty (Chinese chron. table). The last year of the Thsi dynasty.

"The same year" (Pagius, Blair, and Clint.), by Aredius, counsellor to king Gundobagaud or Gundebald, publication of the "Laws of the Burgundians."

"About this time" (Assemani iv, and Percev. i. 128), the inhabitants of Nadjran in Yémen converted to Christianity by a Syrian named Faymiyoun.

"502 A. D. = 'thian-kian,' 1st year of Wou-ti V." or Kao-tsou-wou-ti, head of the new dynasty of the Liang — (Chinese chron. table).

In this year (= "415 an. jav. + 12 years" of Nata Kasuma, Raffles x.), at Astina, abdication of Abiasa in favour of his son Pandu Dewa Nata, now "at the age of fourteen" chief of the Hindu colony on Java. Pandu Dewa Nata is mentioned in the Madura traditions.

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around Bombay, its "dark red" fruit sold in the bazars for making tarts etc. (See Broussonetia papyrifera, and Hibiscus rosa-Sinensis).

Bignonia tomentosa of Japan. The "thoung" tree whose leaves are compared by Hoei-chin to those of the "fou-sang," — is referred here by Klaproth: B. tomentosa is mentioned by Ma-touan-lin (Remus. mel. iii. 225); was observed by Kaempfer amoen. pl. 860 in Japan, and according to Thunberg trav. is one of the plants yielding oil for burning and eating.

Dryandra cordata of Japan. The "thoung" tree in question — according to other authorities (lond. sat. rev. 1875): D. cordata was observed by Kaempfer pl. 23, and Thunberg pl. 27, in Japan. Westward, oil of the tree called "thoung" was found by a Chinese official in 1296 imported from China into Cambodia. From transported specimens, D. cordata is termed "d. oleifera" by Lamarck, "aleurites cordata" by R. Brown.

* *Dioscorea Japonica* of Japan. Bou-rets compelled persons to dig with their fingers the root "yama-no imo," — referred here by Klaproth: D. Japonica was observed in Japan by Thunberg, the root esculent and sometimes three feet long; and according to Klaproth, called by the Chinese "chu-yu."

"506 A. D." (Blair), by Anien, chancellor of Alaric II. king of the Western Goths, the Theodosian codex of Laws reformed and published.

"The same year" (Cassiodor., and Clint.), letter of Theodoric, endeavouring to mediate between Alaric II. and Clovis; calling upon the Burgundian king Gundebald to interpose; also upon the kings of the Heruli, Guarni, and Thoringi, and threatening Clovis with combined forces should he persist in war.

Hardly earlier than this date (Graha Munjari tables, Puranas, and Bentl.), Dhritiman reigning in Hindustan.

"507 A. D." (Greg. Tur., and Clint.), by Clovis, Alaric II. defeated, Tolosa occupied, and the Goths driven from Spain.

"The same year" (Chron. Pasch., and Clint.), the Long Wall in Thrace built by Anastasius.

"In this year" (ann. Jap., transl. Tits.), Bou-rets succeeded by Kĕï-taï, now twenty-seventh dairo of Japan.

"In this year under the dynasty of Leam" (Nansu, Ven-hien-tum-kao, and lond. sat. rev. 1875), a Chinese vessel blown by a tempest on an unknown island where the people ate small beans, wore dresses made of a kind of cloth,* and the walls of their houses were built of earth raised in a circle: the women resembled those of China, but the men had faces and voices like dogs, and the Chinese could not understand them. (The term "dog" being applied in China to all savages, the above account is regarded by Leland as referring to America: and indeed there seems some correspondence with the Northern extreme of California, provided the "small beans" can be identified with small seeds collected for food by the Sacramento tribes).

"510 A. D." (Blair), Paris made the capital of the French dominions.

"511, July 10th" (Act. Concil., and Clint.), a synod convened by Clovis at Aurelianum (Orleans). In "November," death of Clovis at Paris, and accession of his son Theoderic as king of the French.

"The same year" (Theophan., and Clint.), Macedonius bishop of Constantinople, the successor of Euphemius, deposed and banished.

512 A. D. (523 + "25 — 35 years" of Cosm. Ind. ii. and xi. = 513). As early probably as this date, the voyage of Sopater to CIELEDIBA, Ceylon, an island according to the inhabitants three hundred ΓΑUΔIA (the Tamil "naliguai") in length and breadth: a small vessel from Persia arriving at the same time, both parties were summoned before the king of the maritime district, and being asked Which of their rulers was the most powerful? Sopater by exhibiting gold coins obtained a decision in favour of PWMEY (Constantinople). He was treated with high honours, and conducted on an elephant throughout the city. — The above particulars were obtained from Sopater and some of his companions by Cosmas Indicopleustes at Adulë.

"514 A. D." (Marcellin., Blair, and Clint.), revolt of the Scythian or Goth Vitalianus; and his fleet before Constantinople burned by a brazen speculum invented by Proclus.

"The same year" (Lib. pontif., and Clint.), Symmachus succeeded by Hormisdas, fiftieth bishop of Rome.

515 A. D. (Theophan., and Clint.), irruption of Huns through the "Caspian Pylae," and Armenia, Cappadocia, Galatia, and Pontus, laid waste by them.

516 A. D. (= "491 an. jav. — 50 years" of Nata Kasuma, Raffles x.), at Astina in Java, accession of Suyudana as ruler of the Hindu colony. The children of Pandu Dewa Nata being excluded, were sent by their grandfather Abiasa "with a thousand families to establish a new country," which they called Amerta.

"518, July 9th" (Clint.), Anastasius succeeded by Justin, eighth Byzantine emperor. Unlike

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* *Apocynum sp.* of California. — Closely resembling but appeared to me distinct from our A. cannabinum or "Indian hemp," and said to furnish fishing-lines and the fringe-cincture worn by the women along the Sacramento. The plant observed by myself frequent on the river-flat.

Linum perenne of Siberia and Northwest America. — The *perennial flax* observed by R. Brown jun. near Klamath lake, and used by the natives for making nets, twine, and ropes (bot. soc. Edin. 1868): "flax growing wild" was seen by Cornado in 1540 in the buffalo country Northeast of Culiacan; "L. Lewisii," by E. James at the sources of the Arkansas; by Nuttall, as far East as Fort Mandan on the Missouri; by Lewis and Clark, in the untimbered valleys of the Rocky mountains; and according to Hooker, grows along the Pacific as far as the Arctic Sea. Westward, L. perenne or "L. Sibericum" was observed by Gmelin from Kamtchatka throughout Siberia, growing according to Pallas from 69° on the Yenisei. Transported to Europe, was naturalized in Britain before the days of Ray angl. iii. 362 (Pers.), and Miller (Steud.), and according to Watson occurs also in Switzerland: clearly by European colonists was carried to Southeast Australia, where it has become naturalized even in the Interior (Th. Corder in phytol. 1845, and A. Dec.).

his predecessor, he carried out the decree of the Council of Chalcedon, and adopted energetic measures against the Eutychians. — And after his reign, this continued the settled policy.

"The same year" (Procop., and Clint.), treaty with Vitalianus. — Who in the following year was recalled by Justin to Constantinople. Coins of Vitalianus are extant.

"519 A. D." (Alst., and Clint.), end of the chronicle of Cassiodorus. On other subjects, he continued writing.

"The same year" (Blair), king Arthur defeated by the Saxons under Cerdic. Giving rise to the Saxon kingdom of Wessex.

"The same year" (Nicol.), by a synod in Wales, David (St. David) "elected archbishop of that country."

"520 A. D." (Malalas, and Clint.), at Antioch, the Olympic games discontinued.

"The same year" (Gildas hist. 26, Matth. of Westm., and anonym.), the Saxons defeated by king Arthur at the siege of Kair Badon, near the mouth of the Severn.

"In or about this year" (scholiast, ann. ulst., and Cockayne iii. 397), a hymn in the *Irish language* written by Brogan in honour of Brigita or St. Brigit; who founded the abbey of Kildare about twenty miles from Dublin, — and who died five years later. The hymn is published by Colgan iii. 515.

"522 A. D." (Theophan., and Clint.), Tzathus vassal of Kobad and king of the Lazi in Colchis, on visiting Constantinople, converted to Christianity and marries a Christian wife.

"523 A. D." (Clint.), Boethius in prison writing "De consolatione philosophiæ." — In the following year, he was put to death by Theodoric. Boethius has been termed "the last Roman."

"August" (Lib. pontif., and Clint.), Hormisdas succeeded by Joannes "fifty-first" bishop of Rome.

"End of October" (Percev. i. 128), the Christian inhabitants of Nadjran in Yemen massacred by the tobba Dhou-Nowas.

"The same year" (Cosm., Theophan., and Clint. iv. p. 787), Cosmas Indicopleustes at Adulë, and the Abyssinian king Elesbas warring against the Homerites (Himyarites of Yemen). — Parts of the work of Cosmas were written "in 535," and other parts at least twelve years later (Montfaucon, and Yule cath. i. p. xlvii).

At this time, there were Christians throughout Arabia and among the Homerites (Himyarites); in Ethiopia, Axum and the whole region around; on the island of Dioscoridis (Socotra), speaking Greek; among the Persarmenians, Medes, Elamites, Bactrians, "Ounnōis," and other Indians, churches and bishops being very numerous throughout all Persia; a church in "Malë" (I have heard Malabar people termed "Malay" at Mocha), a bishop in "Kalliana" (Calicut) ordained in Persia (Nestorian), and a church under a presbyter on Ceylon; but whether there are Christians beyond? not known to Cosmas Indicopleustes iii. p. 178 and xi. p. 336.

Pterolobium lacerans of Abyssinia. A shrub six or eight feet high called "kantuffa" (Bruce), and the thorns composing the hedge on which the Axumites after passing through the Agau country traded for gold in Sas, mentioned by Cosmas ii. 138, — may be compared: P. lacerans was observed by Bruce in Abyssinia, in some parts of the country growing so thickly as to impede the march of armies (R. Brown, and Grev.).

In sailing from the Red Sea to the Persian Gulf, Cosmas Indicopleustes i. p. 132 and xi. p. 337 met with great numbers of the bird called ϹϘUϹΦΩ (*Sula?*) a little more than twice as large as kites, when the crew afraid of being driven into the main ocean and lost turned to the left and kept along the Arabian coast. He describes "Sinthōu" as the beginning of India, separated from Persia by the Indus; the "Ounnōi" (Moguls), white people occupying the Northern portion of India under their king Gollas, who has two thousand *elephants* and a large force of cavalry and rules all India, ϹmΩpqΓΛON being in great request, and imported by "Aithiōpēs" who obtain them through the "Vlemmuōn" (from the *emerald* mines of Upper Egypt); other people of India whose kings have elephants, are "Sinthōu, Orrōtha" (Mahratta?), "Kalliana" (Calicut) producing *copper* and ϹhϹamINΩ ΞUΛq (*Dalbergia*), "Sivŏr," and "Malë" (Malabar) having five emporia from which *pepper* is exported, "Parti, Maggarōuth, Salōpatana, Nalōpatana, Pōuthapatana;" commerce with all this part of India being carried on from Persia, the Homerites, and Adulë. He further describes India as producing *gola*, ΠƐZƐpωTα or ΩNΘpΩKα (*rubies*), and IΩCΠIN or ΛIΘON ΠpΩCINON (*aquamarine?*).

The island of "Siĕlĕthiva" (Ceylon) however, the principal emporium, and ruled by two hostile kings: one holding the district producing UΩKINΘON (*sapphires?*), of which one of extraordinary size is said to be kept in a temple; and the other king holding the remainder of the island, including the seaports frequented by ships from all India, Persia, and Ethiopia. Among the exports, are ΩΛOHN and TϹΩNΛΩNΩN; KOXΛIOUϹ (*pearl oysters*) from "Marallŏ" on the main land (a pearl-fishery at the mouth of the river near Tinnevelly is mentioned in the Raghu-vansa iv. p. 50, res. Asiat. viii. p. 330); ΩΛΩBΩNΛHNON (compare *nutmegs* produced principally on Banda) from

"Kavĕr" (Nicobar Islands?); ΚΑΡΥΟΦΥΛΛΟΝ from the next region; and at last ΜΕΤΑΞΗΝ (*silk*) from "Tsinista" (China), beyond which there is nothing but ocean Eastward.

Pterocarpus santalinus of Southern Hindustan. Called in Bengalee "rutka-chundun" or "chundana," in Sanscrit "chandana;" in which we recognize the ΤΖΑΝΔΑΝΑΝ exported from Ceylon in the days of Cosmas Indicopleustes xi. p. 337: — *red sandalwood* was found by Hieronymo de Santo Stephano so abundant in Coromandel that houses were built of it (R. H. Major in soc. Hakl.); and is known to be the product of P. santalinus, a lofty tree growing on the Palicat mountains (Pers.). The imported timber is described as heavy and of a deep red colour, marked with blackish veins; but according to Lindley, is "chiefly used by the dyers and colour manufacturers of the present day."

Caryophyllus aromaticus of the Moluccas. The ΚΑΡΥΟΦΥΛΛΟΝ brought from the far East to Ceylon in the days of Cosmas Indicopleustes, — and known in the Mediterranean countries to Paulus Aegineta vii. 3, and Symeon Sethus, is admitted to be *cloves*: among the Arabs, cloves are mentioned by Rhazes, and Avicenna; I met with a quantity imported by the way of Mecca into the Thebaid; and the medicinal use in Egypt of "qurumfil abjad" is enumerated by Forskal mat. med. Even in the Moluccas, C. aromaticus is perhaps unknown in the wild state (A. Dec.); an indigenous tree producing buds that are not aromatic being regarded by Rumphius ii. pl. 1 to 3 as the origin: the cultivation of the aromatic kind, unknown elsewhere until recently, has been successfully introduced by the Arabs into Zanzibar, the climate in both instances being strictly Equatorial. Besides the use as a spice, cloves are "stimulant and carminative," and the oil "is a common remedy for toothach" (Lindl.).

"524 A. D." (Wathen soc. calcutt. iv. 480, and Elph. iv. 1), in Guzerat, the Ballabi dynasty of kings terminated by an invading army of barbarians (supposed by Tod to be Parthians). It was succeeded by the Chauras, another Rajput tribe.

"525 A. D." (Alst. p. 404, Holmes from Beda hist. p. 28 places in "567"), the earliest instance of the use of the *Christian Era*. In the writings of Dionysius Exiguus, a Scythian monk. — This substitution for the Diocletian Era was by degrees adopted throughout Europe: but the original computation has continued uninterrupted among the Christian population of Egypt to the present day (Lane).

"In this year" (Percev. i. 130), through the cooperation of Justin and the patriarch of Alexandria, Dhou-Nowas defeated and slain by the forces of the Abyssinian king Elesbas or Caleb: the victorious general Aryat becoming governor or viceroy of Yemen.

Manuscripts of about this date, "523 to 526 A. D." (De Wailly pl. iii. 1 and 2), presenting the following forms of the letters ϛ, m, n.

"526 A. D." (Lib. pontif., and Clint.), Joannes bishop of Rome returning from Constantinople, imprisoned at Ravenna by Theodoric; and dying "May 25th," his body transported to Rome, and Felix ordained his successor. — Theodoric is called "Dietrich of Bern" (Verona) in the Niebelungen-Lied (Sm. b. d.).

"Aug. 30th" (Paul. Diac., Lib. pontif., and Clint.), death of Theodoric, and accession at Ravenna of his grandson Athalaric, third Gothic king of Italy.

"In the Sixth century under the Eastern Gothic government" (Lubke and Lutrow), the basilica S. Apollinare built near Ravenna. — "This wonderful church is still well preserved."

Aetius about this time writing. — He is mentioned by Alexander Trallianus (Sm. b. d.).

Eryngium? lateriflorum of the East Mediterranean countries. A singular plant, dividing above into numerous branches (Pers.): the "eryngium montanum" of Aetius, having small narrower leaves, and yellow flowers in the form of an eye, — may be compared: an "eryngium" having "aureum vel galbineum" flowers is mentioned also by Vegetius i. 17 to iii. 2 (Dod. iv. 4. 13): E. lateriflorum was mistaken for a grass by Tournefort cor. p. 39 and termed "gramen orientale spicatum;" is known to grow "in Oriente" (Pers.); but according to Delaroche is not an Eryngium (Steud.).

Thymus graveolens of Greece. The black ΘΥΜΟC called ΕΛΛΕΒΟΡΟC, to be avoided according to Aetius — (Caesalp. xi 47), may be compared: T. graveolens is described by Sibthorp pl. 576, as observed on mount Parnassus.

Serapias rubra of Europe and the adjoining portion of Asia. An orchid called in Germany "ragwurtz" (Fuchs.); and the ΤΡΙΟΡΧΙC of Aetius, — and Paulus Aegineta, may be compared: S. rubra, triple-rooted, is termed "triorchis serapias mas" by Fuchsius pl. 559, "helleborine montana angustifolia purpurascens" by Tournefort inst. 436; was observed by Crantz in Austria, by Haller pl. 42 in Switzerland; and is known to grow from Denmark throughout middle Europe (fl. Dan. pl. 345, Engl. bot. pl. 437, and Pers.); was observed by Sibthorp in woods on mount Parnassus.

"527, April to July 31st" (coins, Cedren., and Clint.), Justin succeeded by Justinian, ninth Byzantine emperor.

"In or about this year" (Bentl. as. res. viii. 233), the positions of the colures found by Brahma

Gupta to differ "23° 20′ from the time of Parasara. Brahma Gupta founded a new System with a period of millions of years, and no Sanscrit writing following the new System earlier therefore than this date.*

"Under Justinian" (Sharpe), traces of an independent Egyptian *coinage* again make their appearance: the inscriptions continuing in Latin; but the abbreviated name of Alexandria is in Greek letters, and the system of weights differs from that of Constantinople.

"At this time" (Leontius act. Sanct. Jan. xxiii.), corn carried in Alexandrian ships to Cornwall in Britain, and exchanged for *tin*.

528 A. D. (Pauth. 277), after reigning "twenty-six" years, Wou-ti V. abdicating, became a convert to *Budhism*, and made himself a bonze or priest. He was however brought back to the palace by the chief men, and reinstated. — From this time Budhists and Budhist temples became numerous in China.

The teocallies or pyramids or Teotihuacan, the most ancient *Mexican monuments*, built before the arrival of the Toltecs — (Humb. atl. pict.; see A. D. 648).

Phaseolus vulgaris of Tropical America. The *kidney-bean*, called in the bay of St. Lawrence "sahe" (J. Cart.), on the Roanoak "okindgier" and a smaller kind "wikozowa" (Har.), in the Quichua language of Peru "purutu," in Mexican "ayacotli;" and cultivated by American tribes from the earliest times — (Humb. . . . iv. 9): "a sort of beans" was found by Columbus under cultivation on Cuba, and "red and white beans" were afterwards seen by him in Honduras (F. Columb. 28 to 90): beans were found by De Soto cultivated by the aboriginals in Florida: "febues" were seen by J. Cartier in the bay of St. Lawrence: beans of various colours, by Hariot on the Roanoak, also a smaller kind little differing in form but more like pease (De Bry i.): "beanes" were seen by Newport in 1607 in ascending the James river: "beans of various collours," by the English colonists in 1620 on first landing on Cape Cod; and "Indian beans falsely called French beans" are enumerated by Josselyn rar. 56: P. vulgaris is known to be cultivated in Northeast America from Florida nearly to 48°. By European colonists, may have been carried from Canada by the way of France to England; was already in Europe in the days of Fuchsius 768, Matthioli, and Dodoens; was observed by Chaubard in Greece; by Forskal, "lubia Frandji" in Egypt; by Royle, under cultivation at Cashmere (A. Dec.); by Graham, "commonly cultivated" in the environs of Bombay, but not seen by myself; by Wight, in other portions of peninsular Hindustan; by Thunberg, in Japan; also by European colonists was carried to the Hawaiian Islands, verified by myself.

Phaseolus coccineus, by some considered a variety only, probably also known to the tribes of Northeast America: — it is called *scarlet runner*, and continues to be planted with the preceding, as though by borrowed custom. Transported to Europe, is termed "faseolus puniceo flore" by Cornuti pl. 185, as cultivated for ornament at Paris; is described also by Linnæus, and Kniphof cent. xii. 75 (Steud., and Pers.); and was observed by Chaubard on the Greek islands.

Manihot utilissima of Eastern Equatorial America. The *cassava* or *tapioca* shrub, called in the West Indies "yuca" (Ovied.), and cultivated by American tribes from the most remote antiquity — (Humb. iv. 9): "cazabi" seasoned with "axis" was found by Columbus the principal diet of the natives of Aiti or Hayti (F. Columb. 34 to 36; and a kind of bread called "caçabi," made of roots of the "yuca," is mentioned by Oviedo nat. hyst. f. 6; is known to have also been cultivated by the native tribes throughout Brazil (Pohl): M. utilissima was observed also in and around the West Indies by J. Acosta, Plumier, and Sloane. By European colonists, was carried to Equatorial Africa (Thonn. guin., and Benth. fl. nigr.), observed by Grant in Interior Africa South of the Equator, ascertained by myself to be cultivated by the Unyamuezi, observed also on Zanzibar; was carried also to the Mauritius Islands (Thomas stat. Bourb. ii. 18, and A. Dec.); "by the Portuguese" to Hindustan, observed by Ainslie, and Graham, in gardens as "an ornamental shrub," but now according to Drury extensively cultivated in the Southern districts and called in Malabar "maracheenie," in Tamil "maravallie," the poorer classes living on the root during three months of the year; to Burmah, where it is called "pu-lau-pe-nang-myouk," and its root boiled and eaten by Karens and Burmese (Mason v. 507); and to the Philippines, where it is called in Tagalo "camoting cahoi," and many varieties are cultivated (Blanco).

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* *Hiptage madablota* of Tropical Hindustan and Burmah. A large woody climbing plant called in Hindustan "madhavilata" (W. Jones), in the environs of Bombay "bokhee" or "utimookta" (Graham); a favourite with Sakuntala, who terms it "delight of the woods," — mentioned also by Jayadeva, and Kalidasa (W. Jones as. res. iv. 282), and the "atimukta" by Susrutas chikits. 19 to kalp. 7 f. H. madablota was observed in Hindustan by Rheede vi. pl. 59, Roxburgh, and Wight; by Graham, "in great abundance on the Ghauts," the flowers fringed and very beautiful, one of the petals yellow and the other four white; the bark according to Lush "a very good sub-aromatic bitter." Farther East, is enumerated by Mason as indigenous in Burmah.

Manihot aipi of Eastern Equatorial America. The second species of *cassava*, differing in the leaves and its crude sap not poisonous, also cultivated by American tribes from remote antiquity — (Humb. iv. 9); with the preceding throughout Brazil, Guayana, and the warmer parts of Mexico (A. Dec.); and the "aipim" by the Purus of the Upper Amazon (Spruce in Markh. edit. p. 347); the "aipimakaxera" roasted according to Nieuhoff can be eaten without danger; the "wild mandihoca" figured in Piso and Marcgraf 55, is referred here by Pohl; but M. aipi has not been found in the indigenous state. By European colonists, was carried to Equatorial Africa, for "mahogo" is mentioned by Grant as the staple food of the Zanzibar people, where some kinds are "eaten raw;" to Hindustan, where besides instances of poisoning, Drury states that the natives "cook the raw root for curries;" to the Philippines, where according to Blanco the "digitata" variety is the most abundant, and its roots are cooked and eaten without further preparation.

"529, April 16th" = "16th of the calends of May" (cod. Justin., Blair, and Clint.), publication of the Justinian codex of Laws.

"After Sept. 1st" (Malal., and Clint.), edict transmitted to Athens by Justinian, prohibiting the teaching of "philosophy and astronomy." Damascius of Syria, Simplicius of Cilicia, Eulamius of Phrygia, Priscianus of Lydia, Ermeias and Diogenes of Phoenicia, and Isidorus of Gaza, withdrew in consequence into Persia.

"530 A. D." (Lib. pontif., and Clint.); Felix succeeded by Bonifacius, fifty-third bishop of Rome.

"531 A. D." (Procop, and Clint.), treaty of alliance between Justinian and the Abyssinians and Homerites (Himyarites or emirs of Arabia); the latter engaging to invade the Persian territory.

In connexion apparently with this opening of intercourse with Abyssinia, the fortified monastery on Mount Sinai built by Justinian. — But according to Lepsius (eg. and sin. p. 558), the earliest bishop of Mount Sinai, Jorius, died in "1033."

"Sept. 13th" (Agath., Malal., and Clint.), Cabades succeeded by Chosroes (Khoosroo surnamed Nushirwan), eighteenth Sasanid king of Persia.

The ΤΖΑΡΠΑ, *boots* of Persian kings and Byzantine emperors, of *red leather:* none of their subjects were allowed to wear red leather (Procop. iii. 247. 14, and Cedren. ii. 47. 14:) — The Greek word is regarded by E. A. Sophocles as the origin of the German "schenkel," Anglo-Saxon "scanc," and English and Swedish "shank."

In "the reign of the Persian king Nooshirwan," 531 to 579 A. D., the Fables of Pilpay translated from Sanscrit into Pehlevi by the physician Barzouyeh, who brought the original with other books from Hindustan (De Sacy, and Royle antiq. hind. med. 68).

"532 A. D." (Lib pontif., and Clint.), Bonifacius succeeded by Joannes Mercurius, fifty-fourth bishop of Rome.

"533 A. D." (Marcellin., and Clint.), ratification by Justinian of the treaty of peace with Chosroes; and return from Persia of Damascius, Simplicius, and the other philosophers.

"534 A. D." (Procop., and Clint.), by Belisarius, Carthage captured, Gelimer taken prisoner, and the rule of the Vandals in North Africa closed.

"In the spring" (Paul. Diac., and Clint.), death of Theoderic king of the French. At Ravenna, the accession of Theodahad, fourth Gothic king of Italy: coins of whom, are extant.

One hundred and forty-fifth generation. May 1st, 534, onward mostly beyond youth: the Arab poets El-Muhelhil, Ebn-El-Abras, Ebn-Kamee-ah, El-Akbar, Aboo-Du-ad, Ebn-Damreh, and Ebn-Kureya (see Lane dict.): the Greek historians, Joannes Rhetor, Petrus Patricius, Hesychius of Miletus, and Joannes Lydus; the grammarian Hermolaus; the jurist Tribonianus; the architect Anthemius; the Greek ecclesiastical writers, Ephraimius of Antioch, Menas, Eutychius of Amasia, and Theodosius of Alexandria: the Latin writer Corippus; the Latin ecclesiastical writers, Aprigius, Justinianus of Spain, Liberatus Justus, Facundus, and Martinus Dumiensis.

"The same year" (Clint.), end of the chronicle of Marcellinus Comes.

"In this year" (ann. Jap., transl. Tits.), accession of An kan, twenty-eighth dairo of Japan.

"535 A. D." (Procop., and Clint.), war against the Italian Goths; Belisarius, consul for this year entering and occupying Sicily.

"May" (Lib. pontif., and Clint.), Joannes Mercurius succeeded by Agapetus, fifty-fifth bishop of Rome.

"536 A. D." (Act. concil., and Clint.), death of Agapetus at Constantinople; and Silverius appointed fifty-sixth bishop of Rome by Theodahad, and afterwards regularly ordained. Silverius was a "son of Hormisdas" the fiftieth bishop (Alst.).

"August" (Clint.), death of Theodahad, and accession of Witiges, fifth Gothic king of Italy. Coins of Witiges are extant.

"Dec. 9th" (Procop., and Clint.), after capturing Naples, entrance of Belisarius into Rome.

"In this year" (ann. Jap., transl. Tits.), An-kan succeeded by his brother Zin-kwa, now twenty-ninth dairo of Japan.

"537 A. D." (Lib. pontif., and Clint.), Silverius deposed by Belisarius, and Vigilius ordained fifty-seventh bishop of Rome. Before the close of the year, Belisarius, besieged in Rome by an army of Goths under Witiges, sent the historian Procopius on a mission to Naples.

"In or about this year" (Percev. i. 141), Aryat slain and succeeded by Abraha, now second Abyssinian governor of Yemen. — Under his rule, Gregentius sent by the patriarch of Alexandria to Zhafar as bishop.

"538 A. D." (Procop., and Clint.), after a siege of "a year and nine days," withdrawal of the Goths from Rome. Although followed by Belisarius, Witiges reached, and aided by the Burgundians laid siege to Milan.

In this year (= 543 B. C. — "1080 years" in Mahavams. xli.), accession of Ambaharanasala as king of Ceylon. — He "destroyed all the wicked priests and burned their books" (Braminical), and reigned "thirteen years."

Sida stipulata of Tropical Africa and Asia as far as Burmah. Called in Burmah "pyen-dan-gna-len" (Mason), and probably from early times known there and in Hindustan: — observed by Mason v. 519 indigenous in Burmah, growing in company with S. acuta * from which it is "not

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* *Sida acuta* of Tropical Eastern Asia. Branching and shrubby, four to six feet high, called in Tagalo and Bisaya and Pampango "mamalis" or "pamalis" or "vavalisin" or "higot balato," in Ylocano "taquing baca" (Blanco), in Tamil "malay-taynghie" or "arrooa-manopondoo," in Telinga "vishaboddee," in Bengalee "kureta" (Drur.); and from early times, its intensely bitter root valued as stomachic: — observed by Rheede x. pl. 53 in Malabar; by Graham, immediately around "Bombay, not common;" by Burmann, Retz, Ainslie, Roxburgh, as far as Bengal. Farther East, by Mason v. 479 to 519 indigenous, and "the most troublesome weed in Tavoy," affording "a very fine hemp" and its "bitter" root "deemed cordial and stomachic;" by Loureiro, in Anam; by Rumphius vi. pl. 18, on Java (Pers.); by Blanco, on the Philippines, its stamens moving on being touched with a needle. Transported to Europe, is described by Plukenet mant. x. pl. 334.

Hydnocarpus odoratus of Eastern Hindustan. A large Pangioid tree called in Silhet "chaulmoogra" or "petarkura" (Lindl.); and from early times, its seeds employed extensively in Hindustan to cure cutaneous disorders, especially leprosy: — known to grow in Silhet and Assam (Roxb. cor. pl. 299, Wight, and Drur.).

Chickrassia tabularis of Burmah and the mountainous country East of Bengal. A mahogany-like tree, its timber called in Bengalee "chikrassee," in Tamil "aglay marum" (Drur.), and known from early times: — growing on the Dindigul hills and in Chittagong, its close-grained elegantly-veined wood much employed by cabinet-makers, and one of the kinds called in commerce *Chittagong wood* (Roxb., and Drur.); observed by McClelland growing "with teak" in Pegu (Mason v. 539). The bark according to Lindley is powerfully astringent without bitterness.

Celastrus paniculatus of Hindustan. A woody climber called in Tamil "valuluvy," in Telinga "bavungie," in Hindustanee "malkunganee" (Drur.), in the environs of Bombay "kangoonee" or "karung-kangoonee" (Graham); and from early times, a black or deep-scarlet oil procured from its seeds, used medicinally, but principally for horses: — observed by Graham "common on the Ghauts and throughout the hilly parts of the Concan," and found by Murray "at Mahableshwur; by Roxburgh, Royle, Wight, and Powell, from the Punjaub and Dheyra Dhoon to the Neilgherries, Mysore, and the Circar mountains. The oil, according to Royle ill. 167 and antiq. hind. med., and Malcolmson, is "a stimulant and useful medicine," has been found a successful remedy in "beriberi" (Lindl., and Drur.).

Phyllanthus virosus of Eastern Hindustan. Erect, woody, with numerous ascending branches; and from early times, its strong astringent bark thrown into water to intoxicate fish: — observed by Roxburgh on mountains and in the forest (Lindl.). From transported specimens, described by Willdenow (Pers.).

Caturus spiciflorus of Southern Hindustan. A Euphorbiaceous shrub called in Malabar "wattatali" (Drur.); and from early times employed medicinally: — observed by Rheede, Rumphius iv. pl. 37 (Pers.), Burmann pl. 61, from Malabar to Travancore; the flowers according to Lindley "said to be a specific in diarrhœa and similar disorders."

Sapium Indicum of Tropical Hindustan. A small Euphorbiaceous tree with pendulous branches sometimes ending in thorns; called in Bengalee "hoorooa" (Lindl.), and from early times, its seeds used for intoxicating fish: — observed by Rheede iv. pl. 51 in Malabar; by Nimmo, in "various parts in the S. Concan" (Graham), nearly as far as Bombay; by Buchanan, and Roxburgh, as far as the "delta of the Ganges," its "juice highly poisonous" (Lindl.).

Tragia involucrata of Tropical Hindustan. A twining Euphorbiaceous annual having stinging hairs on the leaves, called in Bengalee "bichitee" (Lindl.), in Telinga "doolaghondi," in Tamil "canchoorie" (Drur.), in the environs of Bombay "kooltee" (Graham); and from early times, its

usually distinguished;" by Wight prodr. 57, in Southern Hindustan. Westward, by Bojer, "truly spontaneous" on the Mauritius Islands; and is known to grow in Western Equatorial Africa (Benth. fl. nigr.). Clearly by European colonists, was carried to the West Indies (A. Dec.).

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root used medicinally: — observed by Rheede ii. pl. 39 in Malabar; by Graham, "on bushes above Kandalla tank," in the environs of Bombay; by Burmann pl. 92, on Ceylon; by Ainslie, and Roxburgh, in hedges and shady places as far as Bengal.

Tephrosia purpurea of Tropical Hindustan. A branching Leguminous plant, its bitter root from early times used medicinally: — observed by Rheede i. pl. 55 in Malabar; by Brown, and Graham, "common both in the Concan and Deccan" as far as Bombay, "appearing with the rains and flowering towards the close of them, when it dies away;" by Burmann pl. 32, on Ceylon; by Ainslie, Roxburgh, and Wight, as far as the Coromandel coast, its root in decoction prescribed by native physicians in "dyspepsia, lientery, and tympanitis" (Lindl.); was observed by Mason indigenous in Burmah.

Acacia (*Albizzia*) *odoratissima* of Tropical Hindustan and Burmah. An unarmed tree thirty to forty feet high, called in Tamil "kurroo-vaga," in Telinga "shinduga" (Drur.); and its particularly hard and strong durable timber valued from early times: — observed by Rheede vi. pl. 5 in Malabar; by Graham, in "the Concans" as far as Bombay; by Roxburgh, Wight, and Drury, as far as the Carnatic and Coromandel, "common everywhere" and "one of the most valuable jungle timbers;" by Mason v. 529, indigenous in Burmah. Transported to Europe, is described by Plukenet pl. 351.

Kandelia Rheedii of the tide-waters of Hindustan and Burmah. A mangrove shrub or small tree called in Malabar "tsjeron-kandel" (Drur.); and from early times, its bark employed medicinally: — observed by Rheede vi. pl. 35 in Malabar; by Graham, as far as Bombay; by Drury, common in "the back-waters in Travancore," its bark "used for tanning purposes at Cochin;" by Roxburgh, and Wight, in the deltas of the Ganges and Coromandel coast; by Mason v. 512 to 515, in the "mangrove swamps" of Burmah, its bark "used by the Tavoy women in dying red," probably "as a mordant."

Trichosanthes cordata of Tropical Hindustan. A climbing Cucurbitaceous vine called in Hindustanee "boomee-koomura" (Lindl.); and from early times, its tuberous root employed medicinally: — growing on the banks of the river Megna near its mouth, and described by Rheede, Ainslie, and Roxburgh, its root as large as "a man's head" used by the natives "as a substitute for calumba root" (Lindl., and Drur.).

Hymenodyction excelsum of Western Hindustan. A Cinchonaceous tree fifty feet high called in Bengalee "bundaroo" (Lindl.), in the environs of Bombay "kurwah" or "kurdwah" or "koodyee" (Graham); and from early times, its fine close-grained wood used for various purposes: — observed by Graham "common along the Ghauts" as far as Bombay; by Roxburgh cor. ii. pl. 106, and Wight, as far as the Circars, the two inner layers of the bark possessing all "the bitterness and astringency of Peruvian bark, and when fresh in a stronger degree" (Lindl., and Drur.).

Gardenia campanulata of the forests of Chittagong. A low Cinchonaceous tree, its fruit from early times used in Hindustan as cathartic and anthelmintic: — observed by Roxburgh, its straight trunk "soon dividing and subdividing into numerous stiff erect and spreading branches" (Lindl., and Drur.).

Willughbeia edulis of Eastern Hindustan. A very large Apocynous climber called in Bengalee "luti-am" (Drur.); and from early times, its fruit eaten: — growing in the forests of Sylhet and Chittagong, and when wounded, yielding copiously juice that changes "into an indifferent kind of *caoutchouc*" (Roxb., and Lindl.).

Cicendia hyssopifolia of Hindustan. An herbaceous annual called in Tamil "vallarugu," in Telinga "nella-gullie" or "golimidi" or "chevukurti," in Bengali "kirota," in Hindustanee "chota chiretta" (Drur.); the whole plant bitter, and with other Gentianaceæ, employed in Hindustan from early times as a stomachic: — C. hyssopifolia was observed by Burmann afr. pl. 74, Retz ii. 15, Roxburgh, and Wight, from the banks of the Jumna to Coromandel, in "moist uncultivated grounds" (Pers., Lindl., and Drur.).

Ocymum suave of Tropical Hindustan. A Labiate plant from early times used there medicinally: — probably as at the present day, for "a stomachic, and a cure for infantile catarrh" (Lindl.). From transported specimens, the plant is described by Willdenow (Steud.).

Geniosporum prostratum of Western Hindustan. A Labiate herb, prostrate and much branched, and from early times used as a febrifuge, — as at the present day at Pondicherry (Pers., Burnett, and Lindl.): observed by Rheede x. pl. 92 in Malabar; by Nimmo, in "S. Concan" (Graham), nearly as far as Bombay; by Burmann pl. 70, on Ceylon.

Meriandra Bengalensis of Eastern Hindustan. A straggling Labiate shrub, cultivated from early times: — observed by Graham "in gardens" at Bombay, the "taste and odour of the leaves stronger than that of sage;" by Ainslie, and Roxburgh, as far as Coromandel and Bengal, its "trunk sometimes

Curcuma angustifolia of Southern Hindustan. A stemless Scitamineous plant called in Malabar "kooghei" or "kooa," in Tamil "kooa," in Hindustanee "tikhur" (Drur.); and from early times, arrowroot prepared from its tubers eaten by the natives; — observed by Roxburgh in "forests from the banks of the Sona to Nagpore," the product "sold in the markets of Benares" (Lindl.); by Drury, abounding especially in Travancore, its product "a favourite article of diet among the natives," and largely exported under the name of *East Indian arrowroot*.

"539 A. D." (Procop., and Clint.), Milan captured by the Goths and Burgundians; and entrance into Italy of "a hundred thousand" French under Theudibert. Who after laying waste the country, form a treaty with Belisarius and retire.

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as thick as a man's arm," the "leaves similar in smell and taste to those of" garden sage and "applied to the same uses" (Lindl.); but Wallich remarked "an odour like camphor" when the plant is rubbed. *Indian sage*, "Salvia Indica," described by Morison iii. pl. 13, and called "seotee" in the environs of Bombay where it is also "cultivated" (Graham), is regarded by Nimmo as perhaps not distinct.

Congea villosa of Eastern Hindustan. A Verbenaceous plant, its leaves from early times used in fomentations, — and according to Roxburgh having "a strong heavy disagreeable smell" (Lindl.).

Premna integrifolia, of Tropical shores, from Hindustan throughout the Malayan archipelago and Polynesian islands to Taheiti and beyond. An elliptic-leaved Verbenaceous shrub, from early times occasionally used in medicine (Lindl.): — observed by Rheede i. pl. 53 in Malabar; by Graham, "by the sea shores Bombay," the bruized leaves having "a very peculiar and rather unpleasant smell;" by N. L. Burmann pl 41, Ainslie, and Roxburgh, as far as the Eastern coast; is termed "folium hirci" by Rumphius iii. p. 134; and was observed by myself facing the sea along the Feejeean, Samoan, and Taheitian islands as far as Metia.

Callicarpa lanata of Tropical Eastern Asia. A Verbenaceous shrub or small tree called in Tagalo "palis" or "tubang dalag" from being used to intoxicate fish (Blanco), in Tamil "caat comul," in Bengalee "massandarie," in Hindustanee "bastra" (Drur.), in the environs of Bombay "eisur" (Graham); and from early times employed medicinally: — observed by Rheede iv. pl. 60 in Malabar; by Graham, in the environs of Bombay, and on "the Parr and Rotunda ghauts" as far as "Mahableshwur;" by Ainslie, Buchanan, Roxburgh, and Royle, as far as Travancore and Coromandel, its root employed in Upper Hindustan "in cutaneous complaints," and in Chittagong a fibre procured from the inner bark, called *aroosha fibre* but not much valued (Drur.); is known to grow also on Ceylon (fl. Zeyl.), where its sub-aromatic slightly bitter bark "is chewed by the Cingalese instead of betel-leaves." Farther East, was observed by Loureiro i. 70 common in the hedges of Anam; by Blanco, well known on the Philippines.

Urtica crenulata of Eastern Bengal. Known doubtless from early times, — and according to Leschenault de la Tour one of the most venomous of the tribe, but Roxburgh iii. 591 is silent on this point (Drur.).

Piper sylvaticum of the mountainous Northern border of Bengal. Perennial-rooted, with branches creeping on the ground or rooting ivy-like on trees; called "pahari peepul" *mountain long-pepper*, and known from early times; — observed by Roxburgh, the spikes "used in Bengal both green and ripe as long pepper" (Lindl.).

Homalomena aromatica of Chittagong. A caulescent Araceous plant, with sub-sagittate leaves; called "cuchoo-gundubee" (Lindl.), and from early times, the medicinal virtues of its root in high estimation in Hindustan: — observed by Roxburgh, the root when cut diffusing "a pleasant aromatic scent something like that of Zingiberaceæ" (Lindl.).

Amomum aromaticum of valleys on the Eastern frontier of Bengal. A Scitamineous herb called in Bengalee "morung elachi" (Lindl.); and its spicy seeds known from early times: — observed by Roxburgh, its "fruit similar in quality to cardamoms for which it is sold" in the drug-shops of Hindustan, "the seeds are similar in their shape and spicy flavour" (Lindl.).

Elettaria medium of Eastern Hindustan. Called there "do-keswa" (Lindl.); and its spicy seeds known from early times: — growing in the hilly country in the neighbourhood of Sylhet, and "from the form of the capsule and the acrid aromatic taste of the seeds" suspected by Roxburgh to be the "cardamomum medium" of European writers on materia medica. The "semina cardamomi majora" or "wild cardamoms from Calcutta" examined by Pereira in the drug-shops of Europe, are considered by him belonging perhaps to this species (Lindl.).

Curcuma leucorhiza of Eastern Hindustan. Called "tikor" (Lindl.), and known from early times: — observed by Roxburgh in the forests of Bahar, its tubers yielding a kind of arrowroot (Lindl., and Drur.).

Curcuma rubescens of Eastern Hindustan. Known from early times: — observed by Roxburgh in Bengal, its "pendulous tubers" yielding "a very beautiful pure starch like arrow-root," which the natives "prepare and eat" (Lindl.).

"In this year" (Humb. cosm. i.), a *comet;* the second one whose orbit is known from Chinese observations.

"540 A. D." (Clint.), by Belisarius, Ravenna captured, and Witiges taken prisoner, and conveyed to Constantinople. Ildibad was now elected sixth Gothic king of Italy.

"In this year" (ann. Jap., transl. Tits.), Zin-qua succeeded by his brother Kin-meï, now thirtieth dairo of Japan.

"541 A. D." (Procop., and Clint.), accession of Eraric, seventh Gothic king of Italy. He reigned "five months;" and in "autumn" was succeeded by Totilas. Coins of Totilas are extant.

"The same year" (Clint.), end of the annual consulships; Fl. Basilius being appointed sole consul. — The next "twenty-four" years were numbered in his consulship.

"542 A. D." (Malal., and Clint.), *pestilence;* beginning in Egypt at Alexandria, and gradually extending, — Eastward in the following year to Persia, and Westward to Italy; spreading over and desolating all parts of the known world.

"The same year" (Usher) in Britain, king Arthur slain in battle at Camelon in Cornwall. He is said to have been succeeded by Constantine: — who was buried close by Uther within the structure of stones called *Stonehenge* (Geoff. Monm. xi. 4).

"543 A. D." (Procop., and Clint.), capture of Naples by the Goths under Totilas; who next besieged Dryus, and marched towards Rome.

In the most ancient times, according to Peruvian tradition (Salcam. edit. Markh. 70), "all the nations of Ttahuantin-suyu came from beyond Potosi in four or five armies arrayed for war," and "settled in the different districts as they advanced." After the country became peopled, the land proved "insufficient, there were wars and quarrels, and all the nations occupied themselves in making fortresses, and every day there were encounters and battles." At length there arrived "a bearded man" called Tonapa or Tarapaca, having "long hair," dressed "in a rather long shirt," and travelling with a staff. He "spoke all languages," performed miracles, healing by touch, and taught "the natives with much love." His teachings were in general not much regarded, by some of them were recorded by "marking and scoring sticks."

On visiting the town of Tiyahuanacu, Tonapa found the inhabitants drinking and dancing, and as they would not listen to him, denounced them: on his departure, "all the people who were dancing were turned into stones, and they may be seen to this day" (Salcam. 73, see also C. de Molina). The great unfinished buildings at Tiahuanaco, regarded as the most ancient in Peru, are composed of huge blocks of stone, some of them "thirty-eight feet by eighteen and six deep" (Acost. vi. 14. 419), and brought from a distance. — The district was conquered by Mayta Capac, the fourth inca (Mark. edit. Ciez. p. 378).

On the Viñaque river not far from Guamanga on the Peruvian Andes remains of "great and very ancient edifices," built (according to the natives) by "bearded and white people" who "many ages before" the incas came to these parts "and formed a settlement here." — They resembled the European strangers, and the buildings together with some others seen by Cieza de Leon lxxxvii "were square," and not "long and narrow" like those of the incas.

Further (according to tradition among the inhabitants of the Collao), before their country was conquered by the incas, one of their two great lords Sapana and Cari found upon the large island in Lake Titicaca "a white people who had beards," fought with and exterminated them — (Ciez. C.).

In the anterior ages,* — or perhaps "in the time of the Toltec monarchy" (Humb.), Mexico visited by Quetzalcohuatl, a bearded white man, accompanied by other strangers wearing black garments in the form of cassocks (compare the black dress of the Anamese, and Terminalia catappa used for dyeing black on the Philippines).

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* *Aquilegia formosa* of Northwest America. A species of *columbine*, its root from early times eaten by the natives — (R. Brown jun.): observed by Mertens on Norfolk Sound; and received from Northwest America by Fischer; but regarded as possibly not distinct from A. Canadensis.

Achlys triphylla of Western Oregon. From early times used medicinally by the natives, in decoction for pain in the breast — (R. Brown jun.): growing according to Hooker at the mouth of the Columbia.

Acer macrophyllum of Western Oregon. A *maple* called by the Cowichans "kammalelep" (R. Brown jun.), and from early times used for making paddles, gambling disks and polished sticks: — observed by Lewis and Clark on the Columbia river (Pursh); and according to Hooker, confined to the mountains along the coast from 50° to 40°.

Acer circinatum of Western Oregon. The *vine maple*, from early times used by the natives for making bowls — (R. Brown jun.): observed by Lewis and Clark at the rapids of the Columbia; by myself, tangling swamps between the mount Rainier ridge and the Pacific; and according to Hooker, grows along the coast from 49° to 43°.

"544 A. D. = 10th year of the 'ta-thoung' of Wou-ti V." (Chinese chron. table), beginning of the Fifty-fourth cycle.

The Tchouds or Tchoudaki, ancient gold miners whose diggings are scattered over the Ural

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Cupressus Nutkanus of Alaska. A *cypress*, from early times used for making bowls and boxes by the Tsimpsheans — (R. Brown jun.): received from Northwest America by Fischer, and termed "thuiopsis borealis."

Vicia gigantea of the Columbia. A species of *vetch*, its seeds from early times eaten by the natives — (R. Brown jun.): received by Hooker from the Columbia river.

Rosa fraxinifolia of Western Oregon. From early times, its young shoots eaten by the natives — (R. Brown jun.): growing according to Hooker only along the Pacific.

Rubus Nutkanus of Alaska and Oregon. From early times, its tender shoots eaten by the natives, and its berries collected and dried — (R. Brown jun.): observed by Mertens at 57° on Norfolk Sound; and according to Hooker, grows along the Pacific from 43° to 50°, also at the sources of the Columbia.

Rubus spectabilis of Alaska and Western Oregon. The *salmon-berry*, its fruit from early times collected and dried by the natives — (R. Brown jun.): observed by Lewis and Clark on the Columbia (Pursh); by Menzies, along the Pacific; by Mertens, at 57° on Norfolk Sound; and according to Hooker, grows on Unalaska.

Pyrulus rivularis of Alaska and Western Oregon. The *Alaska crab apple*, its fruit from early times collected by the natives and preserved in bags — (R. Brown jun.): observed by Douglas, and according to Hooker, growing from the Columbia to Nootka and Northward.

Cerasus mollis of Northwest America. The *Oregon cherry*, its fruit from early times eaten by the natives — (R. Brown jun.): observed by Douglas, and according to Hooker, growing at the mouth of the Columbia and at its source.

Megarhiza Oregana of Western Oregon. A prostrate bryony-like Cucurbitaceous plant, its huge root from early times placed in ponds by the natives to stupefy deer coming to drink — (R. Brown jun.): observed by myself in the flowery prairies around Fort Nisqually, its root sometimes a yard in diameter.

Ribes divaricatum of Alaska. From early times, its berries collected and dried by the natives — (R. Brown jun.): observed by Douglas common along the Pacific from 48° to 52° (Hook.).

Heuchera cylindrica of Oregon. From early times among the Nisqually tribe, bruised and applied to boils — (R. Brown jun.): observed by Douglas west of the Rocky mountains (Hook.).

Eulophus leiocarpus of Western Oregon. Perhaps the "peucedanum leucocarpum" whose stem has been eaten from early times by the natives — (see R. Brown jun.). E. leiocarpus was received by Hooker from Fort Vancouver, near the mouth of the Columbia.

Eulophus triternatus of the Columbia river. Its "fusiform root" from early times eaten by the natives, "baked or roasted" — (Pursh); observed by Lewis and Clark on the Columbia.

Ferula nudicaulis of the Columbia river. Its tops from early times boiled by the natives "in their soups" — (Pursh); observed by Lewis and Clark on the Columbia.

Ligusticum Scoticum of the Subarctic seashore. The *sea lovage* known from early times to the natives of Northwest America, and its green stem eaten — (R. Brown jun.): known to grow from the mouth of the Columbia along the Pacific to Bhering's Straits, also in Labrador (Hook.) and from 67° in Greenland (Wats.); was observed by Hooker in Iceland; by Lapylaie, in Newfoundland; by Michaux, at the mouth of the St. Lawrence; by myself, along the seashore of New England as far as 41° 30′ at the mouth of Narragansett Bay. Eastward, across the Atlantic, was observed by Sibbald in Scotland (Spreng.); is described also by Plukenet alm. pl. 96 (Pers.); and is known to grow on the Hebrides, and on the seashore of Norway, Lapland, and Northern Siberia (fl. Dan. pl. 207, Dec., and Wats.).

Gaultheria shallon of Western Oregon. Called "salal" (R. Brown jun.), and its berries from early times collected and dried by the natives: — observed by Menzies along the Pacific; by Lewis and Clark, at the falls of the Columbia; by myself, a shrub two to three feet high, forming patches around Puget Sound.

Vaccinium ovalifolium of Oregon. The *le brou* plant, its berries from early times made into a cake, considered a dainty by the natives — (R. Brown jun.): V. ovalifolium was observed by Menzies along the Pacific; by Lewis and Clark, on the Columbia (Pursh).

Vaccinium salicinum of Alaska. The berries of various species of Vaccinium, from early times collected and dried by the natives of Northwest America — (R. Brown jun.). V. salicinum was observed by Chamisso on Unalaska.

Pinus monticola of Oregon. From early times its bark used for weaving blankets, and its wood for the long wooden spoons with which the le brou cake is supped — (R. Brown jun.).

mountains and the Altaian, were unacquainted with iron, and appear to have had their chief dwelling-place among the mountains on the Upper Yenisei: where are magnificent tombs containing finely-worked gold ornaments and other precious articles, but their picks and other mining utensils as well as their knives daggers and arrow-points are all of *copper*. They used however an oval stone mallet grooved around to receive a thong, and were acquainted with the manufacture of *leather*. On the contrary, the Mongols and Tartars have always possessed the art of smelting *iron*, but to the present day know nothing of copper. The tombs were found by Pallas iii. 333 to 421 much resembling some he had seen in Brandebourg and other parts of Germany.

Allium fistulosum of the Altaian mountains. Distinguished by its ventricose leaves and called in Britain *welsh onion* from the German "walsch" foreign (Prior), in Germany "schnitzwiebel" (Lenz), in Greece "pikra krōmmuthia" (Fraas), by the Russians among the Altaian mountains "boutoun" (Pall.) and known there from early times; — termed "cepa rupestri radice turbinata dulci Stelleri" by Gmelin i. 64; observed by Pallas iii. 204 to 484 abounding on all the higher parts of the Altaian mountains, pleasant to the taste, suitable for culinary purposes, and succeeding in gardens. Westward, was observed by Fraas under cultivation in Greece, besides springing up spontaneously; and from Germany was introduced into Britain (Prior).

Ribes (*Grossularia*) *saxatile* of the Altaian mountains. Called there "krasnaia smorodina" or "kislitza," its acid red fruit, large as raisins, mixed with water from early times as a refreshing drink; — observed by Pallas iii. 220 near Golzofka.

Spiraea laevigata of the Altaian mountains. Called by the Russians "irga" or "kizilnik," known from early times, — and its stems used for ramrods (Pall.); observed by Laxmann near Kolivan (Steud.); by Pallas iii. 264, also among the Altaian mountains.

Rhododendron Dauricum of East Siberia. Called on the Upper Yenisei "bagoulnik" and known from early times, — observed by Pallas iv. 129 in all the pine woods from Oudinsk to beyond Lake Baical. From transported specimens, is described by Linnæus and Andrews repos. pl. 4.

"The same year" (Humboldt atl. pict., Clavigero i. 84 gives "596"), commencement of the migration of the Toltecs:* who were now leaving their own country, Huehuetlapallan or Tlapallan.

Abronia arenaria of the seashore of Oregon and California. Herbaceous and decumbent, its roots from early times eaten by the Chinnooks — (R. Brown jun.): observed by Menzies in California (Hook.).

Abies Menziesii of Alaska and Western Oregon. A *spruce*, from early times furnishing hats for the sea-going tribes — (R. Brown jun.): observed by Douglas.

Abies Mertensiana of Oregon. A *spruce*, its liber or inner bark from early times used by the natives medicinally, for sticking-plaster — (R. Brown jun.).

Endosmia Gardneri of Western Oregon. Called by the Nisqually "s'hah-gok" (R. Brown jun.), and from early times its root eaten by the natives. — From transported specimens, described by Hooker and Arnott.

Calochortus elegans of the Columbia. Its root from early times "eaten by the natives;" — observed by Lewis and Clark "on the head-waters of the Kooskoosky" (Ph).

Xerophyllum tenax of the Rocky mountains. Its "very tenacious leaves" from early times woven by the natives into "water-tight baskets, which they use for cooking their victuals in;" — observed by Lewis and Clark "on high lands near the Rocky mountains" (Ph).

Rhodymenia sp. of shallow water of the ocean-margin of Northwest America. An esculent *seaweed*, from early times compressed by the natives into cakes for winter use — (R. Brown jun.).

Phyllophora Menziesii of the ocean-margin of Northwest America. A *seaweed*, its long stipes from early times furnishing the natives with excellent fishing-lines — (R. Brown jun.). Transported to Europe, described by Agardh.

* *Aesculus Californica* of California. The *California horse-chestnut*, its nuts from early times ground into a gruel or soup by the natives — (R. Brown jun.): observed by Nuttall.

Trifolium involucratum of Nevada and California. From early times, *clover* as well as *grass* eaten by the Digger tribe — (R. Brown jun.). T. involucratum according to Hooker grows in California, from the Rocky mountains to the Pacific. By Spanish colonists, was carried to Cuba (Ortega, and Pers.); and to Valparaiso in Chili (Hook.).

Arctostaphylos glauca of California. The *manzanitta*, its berries eaten by grizzly bears, and from early times by the natives — (R. Brown jun.).

Quercus sp. of the Sacramento. Its acorns from early times pounded and ground into gruel, cooked in water-tight baskets by the natives: — observed by myself growing in a scattered manner to a short distance on either side of the Sacramento, the only tree throughout its middle course.

Quercus sp. of Northwest America. The acorns of several species of *oak* from early times eaten by the natives — (R. Brown jun.).

Of the arts attributed to the Toltecs, *smelting* metals, cutting the hardest stones, *weaving* cloth, and dyeing with *indigo*, do not appear to have originated in America; but were brought from Asia, though certainly not by Polynesians.

One of the traditional Toltec leaders was Wotan or Wodan, — and at the time of the Spanish conquest, a family in the village of Teopixa boasted of being descended from Wotan (Humb. cosm. iv.). A mythical connexion traceable perhaps through the Ainos of the Kurile Islands and Northern Japan.

"The same year". (Procop., and Clint.), by Justinian, Belisarius recalled from the East, and sent with insufficient forces into Italy.

"545 A. D." (Alst. p. 369), on the authority of the before-mentioned synod at Carthage, the pretensions of the bishop of Rome opposed by the Ligurian, Venetian, and Istrian bishops.

"546, Dec. 17th" (Procop., and Clint.), Rome betrayed to Totilas; who entering in the night, pillaged the city, set it on fire, and destroyed a third of the city wall. He was however soon repelled by Belisarius; who rebuilt the wall and fortifications.

"547, February" (Malal., and Clint.), arrival in Constantinople of Vigilius bishop of Rome; invited by Justinian.

"The same year" (Procop., and Clint.), irruption of Slavonians into Illyricum. Slavonian Czekhes (according to Talvi iii. 1) displacing the Celtic Boii from Bohemia, — which country they occupy to the present day.

"548 A. D." (Marius, and Clint.), death of Theudebert; and accession of his son Theudebald as king of the French.

"549 A. D." (Procop, and Clint.), Belisarius having left for Constantinople, Rome again captured by Totilas; who thence proceeded South to Tarentum and Rhegium, and invaded Sicily.

"550 A. D. = 'ta-paŏ,' 1st year of Kian-wen-ti" or Kian-wen II., of the Liang or Twelfth dynasty — (Chinese chron. table).

"The same year" (= 9th of Sridharasena, Jacquet, and Gildem. 43), date of a Hindu poem composed at Valabhi in Guzerat (Bhattik. xxii. 35).

As early as this date (see Percev. i. 292), the "Djazm" or *Arabic alphabet* invented at Anbar in Irak by Moramir of the Yemen tribe of Tay. — The invention was carried to the Coraysh tribe at Mecca by Harb "in or about 560" (De Sacy). The diacritic points were added under the first Ommiad khalifs.

"551 A. D." (Theoph., and Clint.), the Roman bishop Vigilius remaining in Constantinople, ordered by Justinian to be seized; and taking refuge at the altar, assaulted there.

"The same year" (Theophan. Byzant. in Phot. bibl. cod. 64), living *silkworms*, Bombyx mori, brought from Eastern Asia to the Mediterranean countries; and the manufacture of silk now intro-

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Pinus ponderosa of Southern Oregon. From early times, dug-out canoes made of its trunk by the natives — (R. Brown jun.).

Pinus Lambertiana of Southwestern Oregon and the adjoining portion of California. From early times, a kind of manna or purgative sugar obtained by the natives by scorching its trunk — (Brack., and R. Brown jun.): observed by Douglas in California between 40° and 43°; by Brackenridge, on our land-expedition from the Lower Columbia to the Sacramento.

Taxus brevifolia of Western Oregon and the adjoining portion of California. A species of *yew*, called among the native tribes by names signifying "fighting wood," and from early times used for bows; the arrows being of cedar, or various species of reeds, tipped with poison obtained from the rattle-snake — (R. Brown jun.): T. brevifolia was observed by Nuttall; by myself on the mount Rainier ridge, a slender spruce-like tree sometimes fifty feet high; by R. Brown jun., abundant about Shasta mountain.

Chlorogalum pomeridianum of California. The *amole* plant, its bulbous root from early times used by the natives as a substitute for soap, — also by their successors, the Spanish settlers (R. Brown jun.): detached roots were shown me at the Bay of San Francisco. The plant from transported specimens is described by Kunth.

Hordeum jubatum of the seashore and Interior salines of North America. A tasseled grass, its seeds from early times especially held in request among the Shoshones of Southern Oregon — (R. Brown jun): observed by myself in salt-marshes along the Atlantic from 45° to 42°; by Nuttall, in Massachusetts and on the Missouri; by E. James, along the Missouri and Platte; by Lewis and Clark, on the Missouri; by Drummond, as far as 54° near Fort Cumberland; and according to A. Gray, grows on the shore of the Great Lakes; according to Hooker, as far as Mackenzie river and the confluence of the Columbia with the sea. In the Southern Hemisphere, was observed by J. D. Hooker at Port Famine in the Straits of Magellan; and he thinks a species found by Hænke in Chili will prove identical (A. Dec.). From transported specimens, described by Linnæus (Steud.).

duced. — Silkworms are mentioned soon afterwards by Georgius Pisides (Pouchet). But for some centuries continued to be fed on leaves of the *black mulberry*, Morus nigra (Crescenzio, Targioni, and A. Dec.).

"552 A. D. = 'tching-ching,' 1st year of Hiao-youan-ti" or Youan-ti IV., of the Liang or Twelfth dynasty — (Chinese chron. table).

"The same year" (Paul. Diac., and Clint.), Totilas defeated by Narses, and slain. He was succeeded by Teias, ninth Gothic king of Italy.

"At this time" (Clint.), Jornandes finishing his history of the Goths.

"In this year (= 13th of Kin-mei," ann. Jap., transl. Tits.), by the king of Fiaksaï (in Corea), an ambassador bearing an image of Budha and the classic books of his religion sent to Kin-mei. The introduction of *Budhism* into Japan.

"553 A. D." (Procop., and Clint.), Teias defeated by Narses, slain, and Gothic rule in Italy terminated. The Goths agreeing to quit the country.

"May 4th" (Clint., and Nicol.), Fifth general ecclesiastical Council. Convened by Justinian at Constantinople. The proceedings of the four previous Councils were confirmed; and the opinions of Anthemius, Theodorus, and Origen, condemned (Alst.). — The authority of this Council continues to be recognized by the Greek church (E. A. Soph.).

The worship of Isis and Osiris continuing at Philæ in the latter half of the "Sixth" century (Champ. Fig. p. 228).

"554, August" (Malal., Clint., and others), notwithstanding the immunity attributed by ancient writers to Egypt, a severe *earthquake* felt at Alexandria by Agathias. — Earthquakes have also been experienced in Egypt by modern travellers.

"The same year" (Marius, and Clint.), Theudebald king of the French succeeded by his father's uncle Clothacarius (Chlothaire); who had reigned already "forty-four" years.

"555 A. D. = 'tchaò-taï,' 1st year of King-ti II., of the Liang" or Twelfth dynasty — (Chinese chron. table).

"The same year" (Anonym., Lib. pontif., and Clint.), Vigilius succeeded by Pelagius, fifty-eighth bishop of Rome.

"556 A. D. = 1st year of the 'taï-pïng' of King-ti II.," end of the Liang dynasty — (Chinese chron. table).

"557 A. D. = 'young-ting,' 1st year of Wou-ti VI.," now head of the new dynasty of the Tchin — (Chinese chron. table).

"The same year" (Procop., Agath., and Clint.), under the superintendence of Isidorus of Miletus, the church of St. Sophia at Constantinople restored.

Rosa spinosissima of Europe and the adjoining portion of Asia. The ΕΠΙΓΕΙΑ roses described in the addition to Diosc. i. 130 as ΑΓΡΙΑ, simple-flowered, smaller and for many purposes more efficacious than the garden kinds, — may be compared: R. spinosissima was observed by Sibthorp in the open portions of Southern Greece. Westward, is termed "r. campestris spinosissima flore albo odoro" by Tournefort inst. 638; and is known to grow throughout middle Europe as far as Britain (Engl. bot. pl. 187).

Rosa arvensis of Western Europe. The "ἐπιγεῖα" roses in question — are however referred here by Sprengel: R. arvensis is termed "r. serpens" by Ehrhart, "r. prostrata" by Decandolle, "r. procumbens" by Seringe (Steud.), and is known to grow from Denmark to France (Oeder fl. dan., engl. bot. pl. 188, Dec. fl fr., and Pers.); was observed by Pollich in Germany; by Scopoli, in Carniolia; but has not been found in Greece.

Mathiola tricuspidata of the East Mediterranean countries. The ΛΕΥΚΟΙΟΝ ΘΑΛΑCCΙΟΝ or ΙΟΝ ΘΑΛΑCCΙΟΝ identified in the cod. Cantacuz. addition to Diosc. iii. 128 with the ΒΙΟΛΑ ΜΑΡΙΝΑ of the Romans, — is referred here by Sibthorp: M. tricuspidata was observed by Sibthorp, and Chaubard, frequent in the maritime sands of Greece: and farther South, by Forskal, and Delile, on the Mediterranean border of Egypt. Westward, is termed "hesperis maritima latifolia siliqua tricuspidi" by Tournefort inst. 223, and is known to grow as far as Tripoli (Pers.).

Linum hirsutum of the Mediterranean and Tauro-Caspian countries. The ΙCΑΤΙC ΑΓΡΙΑ described in the addition to Diosc. ii. 216 as having blue or purple flowers, ΣΤΑΥΡΟΕΙΔΗ and rough fruit, with the contained seed as if separated by five equal leaflets, — may be compared: L. hirsutum was observed by Sibthorp, and Chaubard, frequent from the Peloponnesus to Cyprus and the Bithynian Olympus, the flower "cæruleo et rubro;" is known to grow also in Tartary (Pers.); and farther South, was observed by Savigny in Syria, and as far as the border of Egypt (Del.). Westward, is described by Morison v. pl. 26; is termed "l. sylvestre latifolium hirsutum cæruleum" by Tournefort inst. 339; was observed by Scopoli pl. 11 in Carniolia; and by Lapeyrouse, as far as the Pyrenees (Steud.).

Inula Britannica of Europe and the adjoining portion of Asia. The ΤΡΙΤΟΝ ΚΟΝΥΖΗC

growing in watery places according to the addition to Dioscorides iii. 126, its stem thicker and softer, leaves intermediate, and odour stronger and less agreeable, — is referred here by writers: I. Britannica was observed by Forskal, and Sibthorp, frequent in watery situations in Greece as far as Constantinople, and according to Fraas corresponds in the leaves and odour. Westward, is described by Lobel adv. p. 121, and Dalechamp p. 1082 (Spreng.); is termed "aster palustris luteus folio longiori lanuginoso" by Tournefort inst. 483; and is known to grow throughout middle Europe as far as Denmark (All., Lam. fl. fr., fl. Dan. pl. 413, Pers., and Steud.).

"558 A. D." (Malal., and Clint.), pestilence; continuing "six months" at Constantinople, and apparently, from the description, the *plague*.

"560 A. D." (inscript., Lib. pontif., and Clint.), Pelagius succeeded by Joannes the third, fifty-ninth bishop of Rome.

"561 A. D." (Marius, and Clint.), death of Chlothaire, and accession of Sigibert as king of the French.

"564 A. D." (Gild. hist. 26, and pref. by J. Stevenson), in Britain, Gildas writing. He speaks of the two rivers "Thamesis ac Sabrinae" Thames and Severn, formerly ascended by boats bringing foreign luxuries: of idols "portenta ipsa diabolica" remaining on the site of deserted towns: gives a sad account of the morals of the Christian clergy, official station from the bishop downwards being for sale by princes: is equally severe and particular in enumerating the misdeeds of the judiciary and princes: and thinks, that the national historical records, if any, have either been burned in the wars, or carried abroad by exiled citizens.

The Arab poet Imra-el-Keys as early as this date — (Lane dict.). He is the author of one of the seven Moallakats preserved at Mecca.

Dianthus caryophyllus of the Mediterranean countries. Called in Britain *carnation*, by Lyte, and Spenser *coronation*, in mediæval Latin "vettonica coronaria," by Chaucer "clove girofle" (Prior), in Greece "karuōphullōn" (Sibth.), in Egypt "gurumfil" (Forsk.), in which we recognize the scented "karanfoli" of Imra-el-Keys, — referred here by W. Jones iv. p.: D. caryophyllus was observed by Forskal, and Delile, under cultivation in Egypt; and by myself, often kept in vases by the Arabs. Farther North, was observed by Forskal in gardens at Constantinople, and wild on Imros; by Sibthorp, wild in the Peloponnesus. Westward, the "tunici" of Manfredus de Monte Imperiali, growing according to Jacobus de Manliis wild in Lombardy, is referred here by Sprengel; D. caryophyllus is described by Ruellius, Dodoens ii. 18, and Tabernæmontanus ii. 1; is termed "caryophyllus simplex flore minore pallide rubente" by Tournefort inst. 332; is known to grow wild in Italy and along the Pyrenees, and has become naturalized in Britain and Northern France (Noulet, and A. Dec.). Eastward from Egypt, was observed by Roxburgh, and Graham, in the gardens of Hindustan; by Kaempfer, and Thunberg, in Japan, and called "mondō" or usually "iammasuje" or "sogaif." By European colonists, was carried to Northeast America, where it continues under cultivation as a garden flower.

Cadaba farinosa of Tropical Africa and Arabia. A shrub called in Yemen "korrah" or "særah" or "asal" (Forsk.): the "dentifrices of esel-wood" of Imra-el-Keys — (transl. W. Jones iv. p.) may be compared: C. farinosa was observed by Forskal p. 68 along the mountains of Yemen, the fresh branchlets masticated or pulverized and eaten as an antidote against poison. Westward, was observed by Grant "at Madi 3°. N." on the Nile, called "kana" and spinage "made from the leaves."

"565, Nov. 13th" (Theophan., and Clint.), Justinian succeeded by Justin II., tenth Byzantine emperor.

"In the beginning of the reign of Justin II." (Agath. hist. v. p. 149, and Sm. b. d.), Agathias commencing his history. In which he names Alexander Trallianus as a contemporary.

Sedum album of Europe and the adjoining portion of Asia. Called in Britain *worm-grass* (Prior), in Anglo-Saxon "wyrmwyrt" (Cockayne), and the ΕΛΜΙΝΘΟΒΟΤΑΝΟΝ of Alexander Trallianus verm. 6 — may be compared: S. album was observed by Sibthorp, and Chaubard, frequent on the rocks of the Greek islands and mountains, Taygetus, Parnassus, and Athos. Westward, is termed "s. minus teretifolium album" by Tournefort inst. 262; was observed by Forskal near Marseilles; is known to grow on rocks as far as the Northern coast of France (fl. Dan. pl. 66, and Pers.); but in Britain, where it occurs on old walls, is regarded by Watson, and A. Decandolle, as probably exotic and introduced at an early period.

Sium bulbocastanum of middle Europe. The ΒΟΛΒΟΚΑΣΤΑΝΑ of Alexander Trallianus vii. 2. 8 — (changed to "valanōkastana" by Goupyl and Guinter) is referred here by Dodoens p. 333, and Sprengel: S. bulbocastanum has not been observed in Greece. Westward, is described by Dalechamp p. 774, and Morison ix. pl. 2; is known to grow in France and middle Europe as far as Denmark, and has a tuberous edible root (fl. Dan. pl. 220, Gouan ill. 10, and Pers.).

Scabiosa Africana of the Mediterranean countries. An evergreen shrub three or four feet high

called in Greece "iva artĕtēka" (Sibth.), in which we recognize the ΑΡΤΥΤΙΚΗ of Alexander Tralianus: — S. Africana was observed by Sibthorp on the island of Zacynthus. Westward, "seme artetice" are prescribed medicinally by Franciscus Pedemontium ff. 186 and 201; S. Africana is described by Hermann parad. pl. 219; is termed "s. africana arborescens maxima foliis rugosis et crenatis integris major" by Tournefort inst. 465; and is attributed by Persoon to Africa as well as the East. By European colonists, has recently been introduced by the way of Austral Africa into Hindustan (Graham).

Daphne mezereum of middle Europe? A shrub called in Greece "mĕzairĕōn" (Sibth.), and the imported drug at Patna on the Ganges "mameera" (Irvine 256); in which we recognize the ΜΑΜΕΙΡΑC of Alexander Trallianus ii. 5, — "mamēra" of Paulus Aegineta, "mezereum" of Apuleius Barbarus III, and "mazariun" of Elhur, Hobaisch, Elthabari, and Ebn Baitar: D. mezereum was observed by Sibthorp in the Peloponnesus; is described by old English writers as growing in Germany and cultivated in gardens in Britain, where it has since become completely naturalized (Mill., and Wats.); is termed "thymelæa lauri folio deciduo" by Tournefort inst. 595; and is regarded as indigenous in Germany and France (fl. Dan. pl. 268, Pers., and A. Dec.). The bark according to Lindley is "excessively acrid," is collected in Germany "and dried for medicinal use," is employed in France "under the name of 'garou' to produce vesication," and in Britain "is frequently employed as a topical remedy for toothach."

"In this year" (. . . . Humb. cosm. i.), a *comet;* the third one whose orbit is known from Chinese observations.

"In this year" (Cockayne note to Leechb. i. 40), the *small pox* in France, — and "in 572" appeared in Arabia. The disease is described also by Ahrun (Spreng. hist. med. vi. 5), Maserjawia (Steinschn. ii. 22), Abu Zeid, and "in 923" by Rhazes.

"566 A. D." (Coripp., and Clint.), consulship of Justin II. — The years in which, were again numbered consecutively.

"The same year" (Clint.), end of the chronicle of Victor Tununensis. Also, of the chronicle of the anonymous continuator of Marcellinus.

In this year (= "491 an. jav." of Nata Kasuma, Raffles x.), after the conclusion of the Brata Yudha or war of the Pandus, death of Suyudana. Punta Dewa, son of Pandu Dewa Nata, now became ruler at Astina over the united Hindu colonies on Java.

"567 A. D." (Joann. Abbas, and Clint. iv. p. 824), at Narbo, Athanagild succeeded by Liuva, as Gothic king of Spain.

"The same year" = 'kouang-ta,' 1st year of Tchou-pe-tsoung, of the Tchin" or Thirteenth dynasty (Chinese chron. table).

One hundred and forty-sixth generation. Sept. 1st, 567, onward mostly beyond youth: Jacobus of Edessa (Alst. p. 389): the Greek historians, Menander Protector, Joannes of Epiphaneia, Joannes Malalas, and Theophanes of Byzantium; the Greek ecclesiastical writers, Eulogius of Alexandria, and the ecclesiastical historian Evagrius: the Latin ecclesiastical writers, Joannes Biclariensis, Venantius Fortunatus.

"568, April" (Paul. Diac., Blair, and Clint.), by invitation of Narses who had been deprived of his command, the Lombards under their king Alboin leaving Pannonia establish themselves in Italy. — From Constantinople, exarchs were sent to Ravenna against the Lombards.

"The same year" (Isidor., and Clint.), Liuva Gothic king of Spain, succeeded by his brother Leuvigild.

"The same year" (Menand. Protect., Theophan. Byzant., Joann. Epiphan., and Clint.), arrival in Constantinople of an embassy from a distant people called "Tourkoi" (Turks); now first mentioned in history.

"In this year" (Humb. cosm. i.), a *comet;* the fourth one whose orbit is known from Chinese observations.

"569 A. D. = 'taï-kien,' 1st year of Hiouan-ti II." or Siouan-ti, of the Tchin or Thirteenth dynasty — (Chinese chron. table, and Pauth. 279).

"In this year" (Menand. 380, and Klapr. mem. ii. 389), Zemarkh sent by Justin II. to Dizaboul khan of the Turks, encamped among the Altaian mountains. Dizaboul, by the Chinese called Ti theou pou li, received the ambassador Zemarchus, and presented a ΧΕΡΧΙC female slave. According to Humboldt cosm. i, the Kirghis, originally a Finnish tribe, — are called "kirkiz" by Abulgazi hist. mong.; life on the Steppes inducing among them, the Baschkirs (Fins), the Turks (Ti Tukiu), the Torgodi and Dsungari (Mongolians), the same nomadic habits, including felt tents carried on wagons and pitched among herds of cattle.

Artemisia pauciflora of the Uralian plains. Called by the Kirghis "juschann," and from early times supplying feed for sheep in the winter — (Pall.): observed by Gmelin ii. pl. 52 along the Volga (Pers.); by Pallas trav. i. 367 and 779, abounding in arid subsaline soil on the Yaik, exceedingly fragrant, and its bitterness not unpleasant.

Ceratospermum papposum of the plains of middle Asia from the Caspian to Tropical Arabia. Called in Yemen "sænàam" or "sælaam" (Forsk.), by the Cossacks on the Yaik "vetlovnik," and known from early times, — observed on the Yaik by Pallas trav. i. 435; by Forskal p. 48, on the basal portion of the mountains of Yemen, the clustered flowers lanate and pappus-like. *C. lanatum*, observed by Lewis, and Nuttall, on the Upper Missouri, may prove distinct.

Scorzonera caricifolia of the Uralian plains. Called by the Kirghis "idschelik," and eaten as greens from early times, — observed by Pallas iii and v. 512 beyond Omsk, and frequent in the sandy plains of the Kirghis Desert.

Crambe Orientalis of the Uralian plains. Called by the Cossacks on the Lower Volga "white katran," and from early times its stem and root eaten crude, — observed by Pallas v. 170; received by Bieberstein from the country around the Taurian mountains and termed "c. aspera." In Britain has recently escaped from a garden near Fochabers, but is not as yet completely naturalized (Wats. cyb. i. 115, and A. Dec.).

Cytisus Wolgaricus of the Uralian plains. A beautiful many-stemmed bush called "tamahneschil-ebessyn" camel-sinew, and from early times valued as feed for horses and sheep, but not eaten by camels, — observed by Pallas v. 203 to 510 from the Lower Volga to tributaries of the Don.

Astragalus cicer of the Uralian plains. Called on the Lower Volga "chlopounzi," and from early times its seeds eaten crude, — observed there by Pallas v. 329; by Sestini, near Constantinople (Sibth.); is termed "glaux" by Rivinus tetrap. pl. 108, "a. luteus perennis siliqua gemella rotunda vesicam referente" by Tournefort inst. 416; and is known to grow as far West as Austria, Germany, Switzerland, and Italy (Jacq. austr. pl. 251, Moench, and Pers.).

Astragalus arenarius of the Uralian plains. Called by the Cossacks of the Upper Irtich "tchiltchasnaia-trava," and from early times given to horses afflicted with the strangles — (Pall.): observed by Gmelin iv. pl. 21 in Siberia; by Pallas iii. 143, on the Irtich beyond Omsk.

Chrysocoma villosa of the Uralian plains. Called by the Cossacks on the Yaik "stepñaia polin" (Pall.), and known from early times: — observed by Gmelin ii. pl. 52 in Siberia and Tartary; by Pallas i. 111 to 435, from 55° on the Volga to the Yaik.

Saussurea amara of the Uralian plains. Called by Cossacks of the Yaik "gorkaia trava" (Pall.), strongly but agreeably bitter, and from early times employed medicinally in intermittent fevers, and applied to animals suffering from poisonous bites: — termed "jacea erecta minor latioribus foliis" by Buxbaum cent. i. pl. 15; observed by Pallas i. 593 on the Lower Yaik; and known to grow in Siberia (Pers.).

Euphorbia agraria of the Uralian plains. Called on the Lower Yaik "koura," and known from early times, chickens losing their eyesight by feeding on it, — observed by Pallas i. 224 to 600 on the Lower Volga and Yaik; described also by Bieberstein (Steud.).

Nitraria Schoberi of the Uralian plains. Called on the Lower Yaik "samanicha," and known from early times, — observed by Pallas trav. i. 606 frequent there.

Anabasis cretacea of the Uralian plains. Called by the Cossacks of the Yaik "joujovnik" also "kislaia trava," and known from early times, — observed by Pallas trav. i. 691 on chalky hills within the Calmuck district.

Calligonum Pallasii of the Uralian plains. A shrub three or four feet high, called by the Kirghis and Calmuks "torlok" (Pall.), and known from early times: — observed by Pallas ii. 548 frequent throughout the sandy plains from the Lower Volga to the Yaik and along the Caspian, said to grow also in the Kirghis district.

Sophora orientalis of the Uralian plains. Called by the Cossacks on the Upper Irtich "prounez," and from early times used medicinally, — observed there by Pallas iii. 187.

Ephedra monostachya of the Uralian plains. Called by the Kirghis "kisiltscha," by the Russians "stepnaia-malina" (Pall.), and its berries eaten from early times: — observed by Pallas iii. 189 on the Upper Irtich; and known to grow as far West as Hungary (Pers.).

Artemisia santonica of the Uralian plains. Its seeds from early times brought under the name of "semen sanctum" from Tartary and Persia — (Pers.): the plant observed by Gmelin ii. pl. 51 in Siberia; by Pallas i. to iii. 290, from the Yaik to the Altaian mountains. From transported specimens described by Lobel icon. 756 (Pers.).

Crypsis aculeata of the Uralian plains. A grass known from early times: — observed by Pallas iii. 186 to 482, in arid saline situations from the Upper Irtich to the Yaik; by Forskal p. 18, Delile, and myself, from Alexandria to Cairo, no native name given; by Sibthorp, and Chaubard, from the base of the Bithynian Olympus to the Peloponnesus; is described also by Matthioli pl. 709; and is known to occur in Italy, Southern France, Spain, and Barbary. By European colonists was carried to North America, observed by myself in the streets of Philadelphia. "C. schoenoides," differing only from growing in more sheltered and fertile situations, was observed by Delile, and myself, in Egypt.

Hemerocallis flava of the Uralian plains. Called on the Upper Obi "tepaia-trava," and from early times made into small mats by the peasants and Tartars to place under saddles, — observed by Pallas iii. 391 on the Upper Obi, becoming frequent towards the Yenisei. Westward, is known to occur seemingly wild on the plains of Hungary and as far as Switzerland (Pers.); is termed "lilium non bulbosum" by Dodoens 204 (Spreng.); and has become a well known garden flower (Linn., and Jacq. hort. pl. 137). By European colonists was carried to Northeast America, where it continues in gardens.

"570 B. C." (Percev. i. 143 to 269, and Badger edit. Varthem. 32), Abraha, having failed to divert the pilgrimage to his church at Sana, and the building having been defiled by a native of Mecca, at the head of an army invading Mecca; riding on an elephant, an animal never before seen there. The Abyssinians were defeated, — and about five years later, with the aid of Persian forces arriving by sea, were expelled from Yemen.

"572 A. D." (ann. Jap., transl. Tits.), Kin-mei succeeded by his son Bin-dats, now thirty-first dairo of Japan.

"573 A. D. (= 1116th year after Gaudama's death," Mason ii. 21), at the mouths of the Irawaddy in Burmah, founding of the city and state of Pegu.

"574 A. D." (Shan annals, Richardson, and Mason iv. 72), on the upper Meinan, the city of Labong founded by the Siamese or Shans. The Karen tribes at this time entering Burmah.*

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* *Dipterocarpus* . . . . *sp.* of the mountains of Burmah. Called by the Karens "ka-nyeen-phu" *lard tree* from the consistence of its oil (Mason); known from early times, — and according to Mason v. 528 to 757 growing on mountains in the Interior.

Agyneia impubes of the Siamese countries. A curious-flowered Euphorbiaceous herb called in Burmah "hta-himen-ksoke-gyee" (Mason); and from early times, its roots used medicinally by the Karens: — described by Buchanan (Steud.); observed in Burmah by Mason v. 503; and known to grow as far as China (Linn., and Pers.).

Syndesmis Tavoyana of Burmah. A Terebinthoid tree called in Burmah "khyæ" (Mason); its wood from early times made into handsome furniture, by steeping in ferruginous mud rendered jet black like ebony, — as the cylinder knobs one or two inches in diameter worn in the ears of Karen women at Tavoy: observed by Wallich, and Mason v. 514 to 540. The valuable dye-wood called in commerce *Mergui red-wood*, is regarded by Mason as probably identical.

Erythrina toung-ka-theet of Burmah. A fine-looking Leguminous tree called "toung-ka-theet" (Mason); and from early times, selected by the Karens in preference to all others on which to train their betel vines: — observed by Mason v. 523 to 531 not uncommon in the Interior, affording "reddish" timber. The wood of two species of Erythrina was found by McClelland to furnish the charcoal for making gunpowder; and according to Mason, "a very tolerable" *gunpowder* is made by the tribes in Northeastern Toungoo, substituting for sulphur "juice of the orange, lime, and some other fruits," which "it is said increases its inflammability."

Dalbergia theet-hsouk-yo of Burmah. A Leguminous tree termed *egg tree* by the Karens (Mason); its hard fine-grained wood known from early times, — "much used for chisel handles:" observed by Mason v. 530 common in the forests.

Paratropia digitata of Southern Hindustan and Burmah. A small Araliaceous digitate-leaved tree called in Malabar "unjala," in Hindustanee "dain" (Drur.), in Burmah "ba-loo-let-wa" (Mason); and from early times, an infusion of the leaves used for many internal diseases by the Karens: — observed by Mason v. 503 indigenous in Burmah. Westward, by Roxburgh, and Wight, on the Circars and Courtallum hills; by Rheede vii. pl. 28, in Malabar, but by Graham in a "garden" at Bombay; according to Drury, "a valuable oil is procured from sections in the trunk."

Marsden a tinctoria of Silhet and Burmah. An Asclepiaceous plant, from early times known to the Karens, — cultivated by them "and sometimes the Burmese" as affording "quite a good" *indigo-blue dye;* observed by Mason v. 510 indigenous in Burmah. Westward, by Roxburgh, and Wight, indigenous in Silhet, and cultivated in Northern Hindustan for its "superior indigo" (Drur.).

Crawfurdia? sp. of the mountains of Burmah. A small herb having the taste and properties of Gentian; and from early times, used in decoction in fevers by the Karens: — frequent according to Mason v. 494 "on the mountains of Toungoo."

Gmelina sp. of Burmah. A Verbenaceous tree, apparently called "yamamee" (Mason); and from early times, its light white wood made into canoes by the Karens in some districts, and by the Burmese into clogs: — observed by Mason v. 526 in the forests.

Laurus (*Sassafras*) *ka-rwae* of Burmah. A very large tree called "ka-rwae," and by the Karens from its fragrance *tree galanga* (Mason); known from early times: — according to Mason v. 542, scattered sparsely throughout Tenasserim.

Piper ribesioides of Burmah. A kind of *wild betel* called "tau-kwon" (Mason); and from early

"The same year" (Clint.), Joannes the third, after an interval of "more than ten months," succeeded by Benedictus, sixtieth bishop of Rome. Who founded the earliest *monastic Order*, that of the Benedictines. — To the monks of this order, the preservation of many ancient writings is attributed.

"In this year" (Humb. cosm. i.), a *comet*; the fifth one whose orbit is known from Chinese observations.

"575 A. D." (Marius, and Clint.), Sigibert king of the French succeeded by his son Childebert II.

"578, Sept. 26th" (chron. Pasch., and Clint.), Justin II. succeeded by Tiberius Constantinus, eleventh Byzantine emperor.

"The same year" (Nicol.), by a synod in Egypt, Paulus Beth-Ucham Jacobite patriarch of Antioch deposed.

The "katas" of ashy plumage described by Schanfara as flying all night long to reach a pool of water, — doubtless a species of *Pterocles* or long-winged grouse. Flocks of Pterocles flying high overhead constitute a marked feature of the Desert, as witnessed by myself in Upper Egypt.

Grewia tenax of Tropical Arabia. Called there "chadar" or "nabba," in which we recognize the long yellow bow of Schanfara, — or the "naba" of which both bows and arrows are made according to a poet quoted by Djewhari, Ebn-Doreid, and the Kamous (De Sacy chrest.): G. tenax was observed by Forskal p. cxiv among the mountains of Yemen.

"The same year" (Lib. pontif., and Clint.), Benedictus succeeded by Pelagius the younger, sixty-first bishop of Rome.

"579 A. D." (Theophylact., and Clint.), Second campaign of Mauricius in Persia: and in "March," death of Chosroes, and accession of his son Hormisdas III., nineteenth Sasanid king of Persia.

Barleria noctiflora of Tropical Arabia and the neighbouring Desert portion of Hindustan. Called in Yemen "sokæjt;" the "Dhou-schatth" or "Dhou-tobbak" where gazelles drop their young, mentioned by Taabbata-scharran, — may be compared; "schatth" and "tobbak" being plants giving name to these places, according to Djewhari (De Sacy chrest.): B. noctiflora was observed among the mountains of Yemen by Forskal. Farther East, was received from the vicinity of Tanschaur "in aridis" by Linnæus suppl. 290 (Pers.).

"580 A. D." (Nicol.), by a synod at Braine, Gregorius of Tours justified.

"The same year" (Chinese chron. table), end of the Tchin dynasty.

"581 A. D. = 'kaï-hoang,' 1st year of Wen-ti III.," head of the new dynasty of the Soui (Chinese chron. table). He promulgated a new *code of laws*; and among other innovations, wished to introduce the division of the people into four castes — (Pauth. 280).

"The same year" (Clint. iv. p. ix), end of the chronicle of Marius Aventicensis.

"582, Aug. 13th" (Clint. iv. p. 827), Tiberius Constantinus succeeded by Mauricius, now twelfth Byzantine emperor. Learning and the arts were protected and encouraged by Mauricius.

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times, its leaves used as a substitute for those of the true betel: — observed by Wallich; and according to Mason v. 495 indigenous in "the Karen forests."

Dioscorea sp. of Burmah. From the size and shape of the root called *elephant-foot yam* (Mason); and from early times, cultivated by the Karens: — observed by Mason v. 464 abundant "in Karen gardens, but is rarely seen among the Burmese or in market," the root white internally.

Dioscorea fasciculata of Tropical Eastern Asia. The *potato yam* is called in the environs of Calcutta "soosnialoo" (Drur.), in Burmah "ka-dwæ-oo" (Mason); and from early times, extensively cultivated by the Karens: — observed by Mason v. 464 "exotic" in Burmah, the root "not much larger than a kidney potato which it much resembles both in appearance and taste." Westward, by Roxburgh, in the vicinity of Calcutta, largely cultivated and a starch made from its tubers (Drur.).

Dioscorea atropurpurea of the Siamese countries. The *dark-purple yam* is called in Burmah "myouk-nee" (Mason); and from early times, cultivated extensively both by Karens and Burmese: — described by Roxburgh; observed in Burmah by Mason, enumerated as indigenous.

Dioscorea dæmona of Burmah. Called "kywæ" (Mason); and from early times, its root though very acrid eaten with that of other indigenous species by the Karens in times of scarcity: — described by Roxburgh; and observed in Burmah by Mason v. 465. (See D. pentaphylla).

Bolbophyllum suripia of the Siamese countries. An epidendric Orchid called in Burmah "tazeen-ban" (Mason); and from early times, its sweet-scented straw-coloured flowers worn by Karen youths in the lobe of the ear, and by maidens in their hair: — observed by Mason abounding in the jungles. Transported to Europe, is described by Lindley.

"586 A. D." (ann. Jap., transl. Tits.), Bin-dats succeeded by his brother You-mei, now thirty-second dairo of Japan.

"In this year" (Isidor., and Clint. iv. p. 824), at Narbo, Leuvigild Gothic king of Spain succeeded by Recared.

"587 A. D." (Cockayne iii. 447), Æscwine succeeded by his son Sledda; one of the two being the first king of Essex or of the East Saxons.

"588 A. D." (ann. Jap., transl. Tits.), You-mei succeeded by his brother Siou-zioun, now thirty-third dairo of Japan.

"The same year (=15 yrs. after Pegu," Mason 21), in Burmah, the city of Sitang founded.*

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* *Murraya . . . . sp.* of Burmah. The fragrant bark from early times used generally for a cosmetic by the Burmese, — is attributed according to Mason v. 500 to an "indigenous" species (see M. exotica).

Xanthoxylum budrunga of Assam and Burmah. A woody creeper called in Burmah "ka-theet-hsoo" (Mason), and known from early times: — observed in Burmah by McClelland; and suspected by Mason v. 500 to furnish the woody tubercles sold in market as "an inferior cosmetic." Farther North, growing in Assam, its warm spicy seeds having the fragrance of lemon-peel and used medicinally by the natives (Drur.). From transported specimens, described by Decandolle.

Elæodendron Orientale of Burmah. A Celastroid tree called "let-pet-ben," its leaves from early times used by the natives for tea, — was observed by McClelland indigenous, and is referred by him to this species (Mason v. 505). E. Orientale from transported specimens is described by Jacq. rar. i. pl. 32, and Jussieu gen. (Pers., and Steud.).

Pongamia tetrapetala of Pegu. A Leguminous tree, known from early times: — observed in Pegu by McClelland, its seeds yielding *karunj* oil, like those of P. glabra (Mason v. 504).

Amherstia nobilis of Siam or Tropical China. Leguminous and the most ornamental flowering tree known, called in Burmah "a-thau-ka," and probably by some Budhist pilgrim — introduced from the Shan States or China (Berdmore): discovered by Wallich on the Salwen and first made known to Europeans, but observed by Morton seemingly wild "in the neighbourhood of Belin" (Mason v. 400 to 770).

Indigofera sp. of Burmah. An *indigo* shrub, from early times occasionally used in forming a *blue dye*: — observed by Mason v. 511 indigenous in Burmah.

Desmodium triquetrum of Tropical Hindustan and Burmah. Branching and shrubby, called in Burmah "moké-hso-hlan-ma" (Mason); and from early times, the root valued for its medicinal properties: — observed by Mason v. 503 indigenous in Burmah. Westward, by N. L. Burmann pl. 52, Roxburgh, and Wight, in Hindustan; by Burmann pl. 81, on Ceylon; by Graham, "common" around Bombay.

Cerbera manghas of Tropical shores from Ceylon throughout the Malayan archipelago. An ornamental Apocynous tree called in Tagalo "toctoc calo" (Blanco), in Burmah "ka-lwa" (Mason); and from early times, oil obtained from the fruit by the Burmese for burning and to anoint their heads: — observed by Burmann pl. 70 on Ceylon; by Mason v. 515, abounding in Tenasserim as far as tide-water extends; by Waiz on Java, its leaves and bark similar in action and substituted for senna (Lindl.); by Blanco on the Philippines, not common and hardly known to the natives; and is described by Rumphius ii. pl. 81. A Cerbera with white bracts or floral leaves, a medium-sized tree, was observed by myself to all appearance indigenous on the Feejeean Islands, but on the Samoan perhaps introduced, and under cultivation on Taheiti. (See C. tanghin).

Wrightia coccinea of Tropical Eastern Asia. An Apocynous timber tree (Roxb.), the most beautiful of its tribe, and its light fine wood known perhaps from early times: — observed by Mason v. 417 to 525 "exotic" in Burmah, planted especially by Europeans, its orange-red flowers exhaling the grateful fragrance of the pine-apple. Westward, by Roxburgh in Hindustan; and from Bengal, was introduced by Nimmo into the environs of Bombay (Graham).

Convolvulus (*Lettsomia*) *setosus* of Burmah. A large red-flowered twiner, known from early times: — described by Roxburgh; observed in Burmah by Mason v. 438 to 784, indigenous, and "during the rainy season on almost every hedge."

Clerodendrum fragrans of Tropical Eastern Asia. A Verbenaceous plant, indigenous in the most arid parts of the forests of Burmah (Mason); and the "hnen-eik," apparently only a fragrant double variety, cultivated from early times: — observed by Mason v. 413 to 792. Westward, the "double variety" is enumerated by Graham as "now pretty common in Bombay gardens." Transported to Europe, is described by Ventenat malm. pl. 70, and Jacquin schoenbr. pl. 338 (Pers., and Steud.); and from Europe has been carried to Northeast America, where it continues in greenhouses.

Curcuma elata of Burmah. Having a coma of a deep rosy or crimson colour, and known from

Santalum ka-ra-mai of the Siamese countries. An inferior kind of *sandal wood* known in commerce as early perhaps as this date; — produced according to Mason v. 500 "by a tree in the southern part of Mergui."

"589 A. D." (Nicol.), a synod at Alexandria. On a dispute between the Jews and Samaritans respecting Deut. xviii. 15.

"The same year" (Steinschneid. i. 4), Chanan, head of a leading Jewish school in Babylonia and the "first to bear the title of Gaon" (meaning excellence).

"590, Sept. 3d" (Clint. iv. p. 841), Pelagius the younger succeeded by Gregorius Magnus, sixty-second bishop of Rome. Who disputed precedence with the bishop of Constantinople.

"Also in September" (Eutych., and Clint. iv. p. 842), death of Hormisdas III., nineteenth Sasanid king of Persia.

"The same year" (art de verif.), Japan divided into seven districts.

"The same year (= 4th year of Recared," Clint.), end of the chronicle of Joannes Biclariensis.

"591, summer" (chron. Pasch., Theophylact., and Clint. iv. p. 830), Bahram or Vararam defeated by the forces of Mauricius, and Chosroes II. restored as Sasanid king of Persia.

"592 A. D." (Mason ii. 21), in Burmah, Wemala succeeded by his son Katha as king of Pegu. Katha was devoted to Budhism; — built monasteries and zayats, excavated tanks, made offerings to the priests, and reigned "seven" years.

Diospyros tau-boke and *D. pen-lay-boke*, "two species of *ebony* in Tavoy," — the one growing near the sea and called sea-"boke," the other in the Interior and called jungle-"boke" (Mason v 542). In seeming connexion with "Bookin," the name of Madagascar among the Soahili of Zanzibar (see D. reticulata).

"March 19th" (Theophylact., Zonar., Theophan., and Clint.), Mauricius on his way to Thrace, and a great *eclipse* of the sun.

"The same year" (M. Russell p. 111), possession of the Arabian and Abyssinian ports acquired by a Persian armament.

Pennisetum dichotomum of the Egyptian and Arabian Desert. A grass called there "tummam" or "thummam" (Forsk), in which we recognize the "thumam" identified with the "djelit" of Nabega Dhobyani, — alluded to by Lobîd as marking an abandoned encampment, mentioned also by Djewhari, and A. A. Elhafits, and by Ebn Baitar as growing in Egypt and the Hedjaz: P. dichotomum was observed by Forskal p. 20 frequent in the Arabian Desert, eaten by camels and donkeys, and employed besides for filling in and thatching the walls and roof of dwellings; was observed by Delile in Desert-ravines near Suez; and farther West, the "Cenchrus rufescens" of Barbary is regarded by him as perhaps identical.

"593 A. D." (ann. Jap., transl. Tits.), Siou-zioun succeeded by his sister Soui-ko, widow of his brother Bin-dats and now thirty-fourth dairo of Japan; the first woman who attained that position.

"In the reign of Suiko" (Jap. centen. comm. 60), "the pagoda of the temple of Koriuji, province of Yamato, was built of *bricks*."

"In the reign of Suiko" (Jap. centen. comm. 83), "the manufacture of *paper*, together with the tree* yielding the best raw material," introduced by the Corean priest Donchio into Japan.

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early times: — received from Burmah by Roxburgh fl. 25; and enumerated by Mason as indigenous there. "From Bengal" was introduced by Nimmo into the environs of Bombay (Graham).

Curcuma petiolata of Burmah. Having small yellow flowers, and known from early times: — received by Roxburgh fl. i. 37 from Pegu; and enumerated by Mason as indigenous. "From Bengal" was introduced by Nimmo into the environs of Bombay (Graham).

* *Broussonetia papyrifera* of Tropical Eastern Asia. The *paper mulberry* is called on Celebes "kaili" (Royle fibr.), in Japan "kodzu," is cultivated as far as central Nippon, and furnishes material so tough that it is sometimes cut into strips and woven like cloth — (Jap. c. c. 77 to 84): B. papyrifera was observed by Kaempfer, and Thunberg, frequent in Southern Japan. Farther East, by myself under cultivation by the natives of the Feejeean, Tongan, Samoan, Tahéitian, and Hawaiian Groups, though the bark of other woody Urticaceæ was sometimes substituted for beating "tapa" or *paper-cloth*. Even on Celebes, Navarrete in 1658 met with people wearing cloth made "from bark beaten with a stone." Westward from Japan, paper is said to be sometimes made from the bark by the Chinese; and the "coarse paper" of the peculiarly-folded Burmese books is often furnished by this tree, which is at hand indigenous "in the forest" (Mason v. 522; see Morus Indica).

Hibiscus (*Abelmoschus*) *manihot* of Subtropical Eastern Asia. Herbaceous, called in Japan "tororo," and "the gummy infusion of" its root used in making paper — (Jap. c. c. 85). Eastward, was carried to Feejeean Islands, and clearly by Polynesian colonists to the Tongan, Samoan, and Tahéitian Islands, as verified by myself; was received by Cavanilles iii. pl. 63 from the "Indiis"

"596 A. D." (Clint. iv. p. 829), end of the reign of Childebert II., king of the French.

"At this time" (Cockayne iii. p. 450) Bercta, daughter of Chariberht king of the Franks, already married to Æthelbryht king of Kent on condition that she have liberty to celebrate Christian worship.

"597 A. D." (Blair), Augustinus with "forty monks" sent by Gregorius Magnus, to Britain, to revive Christianity. Landing at Thanet, he held an interview with Æthelbryht king of Kent; performed service in an old church of Roman times called Berctas; obtained leave to build and restore churches; and recovered an old Roman church for the cathedral at Canterbury (Beda h. e. i. 33, and Cockayne iii. 450).

As early perhaps as this year, Valmiki writing the Ramayana, regarded as probably the oldest work in secular Braminical literature (Wils., and Royle antiq. hind. med. 48). Vrihaspati, Agastya, Kasyapa, Bhrigu, and the priest Vasistha, are mentioned.

Sethia Indica of Tropical Hindustan and Burmah. A small Erythroxyloid tree called in Telinga "adevi gerenta," in Tamil "semmanatty" or "tevadarum," on the Deccan "dewadar" (Drur.); in which we recognize the "deva-daroo" of Valmiki ram. i. 12,* — and the "dibdair" described by Ebn Baitar as an Indian herb: S. Indica is termed "erythroxylon monogynum" by Roxburgh cor. i. pl. 88; was observed by him, Wight, and Drury, from Malabar and Travancore to the Circars; the young leaves and tender shoots according to Ainslie mixed with gingely-oil and applied as a liniment, and the bark occasionally administered in infusion; the wood excellent and fragrant, substituted in Mysore for sandal-wood (Madr. exh. rep.). Farther East, was observed by Mason indigenous in Burmah.

(Pers.); and from the beginning of the present century has been found along the banks of the Mississippi (A. Dec.). Transported to Europe, is described by Dillenius pl. 156.

Hydrangea paniculata of Japan. Called there "nori-no-ki," and "the gummy infusion of" its root used in making paper — (Jap. c. c. 85): H. paniculata was observed and described by Siebold.

* *Dillenia speciosa* of Tropical Asia, from Hindustan throughout the Malayan archipelago. A large and beautiful tree called in Tamil "uva-maram," in Telinga "uva-chitta," in Malabar "syalita," in Bengalee "chalita" (Drur.), in the environs of Bombay "moota kurmul" (Graham), and affording sustenance to man in its fruit and thick fleshy calyx-leaflets: the "shleshmatuka" of Valmiki ram. i. 12 — is referred here by Carey and Marshman: D. speciosa was observed by Nimmo in "the Southern Concan;" by Rheede iii. pl. 38, in Malabar; by Roxburgh, and Wight, as far as Assam and Chittagong; by Mc Clelland, in Pegu; by Thunberg, on Java; by Blanco, on the Philippines, called in Tagalo "catmon," the acid juice of the fruit serving among the natives for vinegar; and "D. elliptica" regarded as not distinct, was observed by Rumphius ii. pl. 45 on Celebes and Amboyna (Pers.).

Nymphæa edulis of Eastern Hindustan. White-flowered with entire leaves, and called in Telinga "koteka," in Bengalee "chhota-sundhi" (Drur.); and from early times, its tubers eaten and employed medicinally, its capsule and seeds also eaten; and the white-flowered lotus having an edible root according to Valmiki iii. 76, — may be compared: N. edulis was observed by Roxburgh, and Wight, from the Circars to Bengal (Drur.).

Crataeva religiosa of Tropical Eastern Asia? A small tree called in Sanscrit "varana" or "varuna" or "tapia" or "tikta-shaka," in Bengalee "tikto-shak," in Tamil "narvala" (J. F. Wats.) or "mavilinghum," in Telinga "maredoo," in Hindustanee "birmi" or "tapia" (Drur.), in the environs of Bombay "varvunna" (Graham), in Burmah "ka-dat" (Mason), in Ylocano "balai namoc" (Blanco); in which we recognize the "tapie" flowers of Valmiki iii. 79 — (transl. Gorr.), and the "varuna" or "tikta" prescribed by Susrutas sutr. 38 to chik. 16, mentioned also by Harivansa 126: C. religiosa was observed by Rheede iii. pl. 42 in Malabar; by Graham, "generally to be met with about temples and Muselmen tombs;" by Roxburgh, Ainslie, and Wight, as far as Mysore and Eastern Hindustan, sometimes employed medicinally by the natives (Drur.); by Mason, "exotic" in Burmah; by Blanco, on the Philippines, called "tapia" around Santa Cruz in the Ilocos district, but known besides to the natives; by Forster prodr., on the Society Islands, planted near the abodes of the dead, the same as in India (Graham).

Flacourtia cataphracta of Tropical Hindustan. A thorny tree called in Bengalee "paniyala," in Hindustanee "jalisputrie," in Telinga and Malabar "talishaputrie" (Drur.), in Tamil "thalisaputheree," in Sanscrit "talisha" or "vidara" (J. F. Wats.); in which we recognize "talisi" on the mountains mentioned by Valmiki iv. 44 — (transl. Gorr.), and the "talisa" or "vidara" prescribed by Susrutas sutr. 46 to chik. 17: F. cataphracta was observed by Rheede v. pl. 38 in Malabar; by Roxburgh, and Ainslie, as far as the Warree country, Behar, Assam and Nepal, the fruit edible, the leaves and young shoots bitter and astringent, and employed medicinally (Drur.).

Pterospermum suberifolium of Tropical Hindustan. A tree called in Sanscrit "mucha-koonda" (Pidd.), in the environs of Bombay "muchúcundá" (Graham): flowering "pterospermi" are men-

Wrightia antidysenterica of Tropical Hindustan and Burmah. Its bark is called in commerce *conessi*, its imported seeds in Arabic "lissamul asafir," in Persian "ahir," and the living shrub in Sanscrit "cheeree" or "kutaja," in Tamil "veppalei," in Telinga "pala codija" or "manoopala"

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tioned by Valmiki ram. iii. 76 to 79—(transl. Gorr.), and the "muchucunda" is prescribed by Susrutas chik. 18: P. suberifolium was observed by Nimmo in "the Concans," its flowers fragrant.

Shorea tumbugaia of Southern Hindustan. A large Dipterocarpous tree called in Malabar "tembagum," in Tamil "tumbugai" (Drur.); and from early times, its valuable timber used in house-building: possibly the "shoree" distinguished from the "sale" by Valmiki v. 54—(transl. Gorr.): S. tumbugaia was observed by Roxburgh, Wight, and Beddome, in the "Palghaut forests, Cuddapah, North Arcot," a *dammer* exuding from the trunk (Drur.).

Xanthochymus pictorius of Western Hindustan. A Calophylloid tree called in Telinga "iwara-memadee," in Hindustanee "dampel" (Drur.); and "xanthocymi" are mentioned by Valmiki ram. iii. 79—(transl. Gorresio): X. pictorius according to Roxburgh cor. il. pl. 196, Wight, and Drury, grows in the Concan, its yellow orange-like fruit eaten, and before ripening yielding a gamboge-like resinous gum that "makes a pretty good water-colour."

Dalbergia frondosa of Western Hindustan. A pinnate-leaved tree thirty feet high, its bark and leaves from early times employed medicinally, and an oil obtained from its seeds: possibly included in the "dalbergie" trees of Ceylon mentioned by Valmiki v. 16—(transl. Gorr.): D. frondosa was observed by Roxburgh, Wight, and Drury, from Travancore to Courtallum.

Pueraria tuberosa of Tropical Hindustan and Burmah. A woody Leguminous climber called in Telinga "daree" or "goomodee" (Lindl.); and the "hedysaro" enumerated among woody plants by Valmiki vi. 96—(transl. Gorr.), may be compared: P. tuberosa was observed by Kaempfer pl. 25, Roxburgh, and Wight, in Hindustan, its roots made by the natives into cataplasms to reduce swellings in the joints (Drur.); by Graham, as far as Bombay, having the habit of Desmodium but "running over high trees;" by Mc Clelland, in Burmah, its root esculent and termed by him *Batraj yam* (Mason v. 465).

Bauhinia racemosa of Tropical Hindustan. A small crooked tree with rigid branches called in Bengalee "bun-raj," in Telinga "arree" (Drur.); and from early times, the bark of its green branches made into ropes: the "bauhinie" is mentioned by Valmiki iv. 29—(transl. Gorr.): B. racemosa was observed by Graham "common on the Ghauts and hilly parts of the Concan" from beyond Bombay; by Roxburgh, and Wight, as far as Mysore and Bengal, its thick bark used by matchlock-men for their matches, which as prepared burn "long and slowly" (Drur.).

Bauhinia Vahlii of Tropical Hindustan. An immense woody climber, its branches one hundred to three hundred feet long running over the highest trees, called in Telinga "adda," in Hindustanee "mahwal" (Drur.), in the environs of Bombay "chambaour" or "chamboolee" (Graham); and from early times, its large leaves a foot in diameter sold for dishes, its seeds eaten, and ropes made from its bark: included perhaps in the "bauhinie" of Valmiki iv. 29:—B. Vahlii was observed by Graham on "the Tull ghaut" and in "ravines at Kandalla" near Bombay; by Roxburgh, and Wight, in mountainous districts of the Circars and Bengal, its ropes occasionally used for suspension bridges over the Himalayan mountain-torrents (Royle, and Drur.).

Barringtonia racemosa of Tropical Eastern Asia and the Malayan archipelago. A Gustavioid tree having large flowers in pendulous racemes and called in Tagalo "potat" (Blanco), in Tamil "samutra-pullum," in Malabar "samudra-poo" or "sam-stravadi" (Drur.); from early times, its slightly bitter root prescribed by Hindu physicians: "barringtonie" are mentioned among flowering trees by Valmiki iii. 79—(transl. Gorr.): B. racemosa was observed by Rheede iv. pl. 6 in Malabar; by Graham, and Nimmo, in "the Concans" as far as Bombay; by Ainslie, Roxburgh, and Wight, as far as Coromandel, the root "not unpleasant," and considered by the natives "aperient, deobstruent, and cooling" (Lindl., and Drur); was observed by Blanco frequent in places inundated by the sea or by fresh water on the Philippines; the "white-flowered" species called "kyai-gyee," observed by Mason in Burmah, may also be compared.

Barringtonia acutangula of Tropical Hindustan and the Siamese countries. A large tree called in Telinga "karpa," in Malabar "sjeria-samstravadi" (Drur.), in Burmah "Kyai-tha" (Mason); and perhaps included in the "barringtonie" of Valmik. iii. 79:—the "nichula" of Susrutas chik. 16 to 19, is referred here by Hessler: B. acutangula was observed by Rheede iv. pl. 7 in Malabar; by Gibson, Law, and Graham, "thinly scattered throughout the Ataveesy," but around Bombay "in gardens;" by Roxburgh, and Wight, as far as Travancore and Bengal, its root and seeds employed medicinally (Powell punj., and Drur.), and according to M'Clelland its wood is hard and of a fine grain and equivalent to mahogany; was observed by Mason indigenous in Burmah.

Ixora bandhuka of Tropical Hindustan. A spreading shrub called in Sanscrit "bandhuka" or

(Ainsl.), or "kutajamu" (J. F. Wats.), in the environs of Bombay "koora" or "inderjot" (Graham); in which we recognize the "kutaja" of Valmiki ram. i. 18, — Bhavabhuti mal. 9, furnishing according to Kalidasa ragh. xix. 37 wreaths of flowers, and prescribed medicinally by Susrutas: W. antidysen-

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"bandhujivamu" or "bandhujivakamu" (J. F. Wats.), in the environs of Bombay "buckoolee" (Graham): mentioned by Valmiki v. 74 — (transl. Gorr.); and the "nipa" freshly blooming of the Mrichchhakati 5, having flame-coloured flowers according Harivansa 66, staining with their pollen according to Kalidasa ragh. xix. 37, prescribed medicinally by Susrutas, is referred here by Hessler: I. banhuka was observed by Rheede ii. pl. 13 in Malabar; by Graham, in the Southern Concan as far as Bombay, common but "generally under the shade of other bushes;" by Roxburgh, in other parts of Hindustan.

Verbesina calendulacea of Tropical Hindustan and Ceylon. A creeping yellow-flowered triennial called in Bengalee "keshoorya," in Tamil "postaley-kaiantagerei," in Telinga "patsoo-poola-goontagalijeroo," on the Deccan "peelabhungra" (Drur.); and from early times, its leaves seeds and flowers employed medicinally: possibly the "verbesinę" of Valmiki iii. 79 — (transl. Gorr.): V. calendulacea was observed by Rheede x. pl. 42 in Malabar; by Graham, in "moist places throughout the Concans," to and beyond Bombay; by Roxburgh, and Wight, as far as Coromandel and Bengal (Drur.); by Burmann pl. 22, on Ceylon.

Symplocos ferruginea of Tropical Hindustan. A tree called in Sanscrit "lodhra" (J. F. Wats.); and the "symplochi" of the Himalaya mentioned by Valmiki iv. 44 — (transl. Gorr.) may be compared; also the "lodhra" of Bhavabhuti mal. 9: S. ferruginea is described in the hort. Bengalensis; and was observed by Honigberger, probably in the vicinity of the Northern Tropic.

Symplocos racemosa of Tropical Hindustan. A tree called in Bengalee "lodh," in Telinga "loddoga" (J. F. Wats.); and possibly the "symplochi" of Valmiki iv. 44: — the "lodhra" of Bhavabhuti mal. 9, Susrutas sutr. 6 to chik. 1 and kalp. 4, furnishing according to Kalidasa kum. vii. 9 a powder mixed in oil, mentioned also by Harivansa 126, is referred here by H. H. Wilson and others: S. racemosa was observed by Roxburgh, and Fleming, from the Western Ghauts and Kotah jungles to Bengal, its bark used to dye red, and exported (Don. fl. nepal., and Drur.). A very beautiful tree, called "hoora" and perhaps not distinct, was observed by Murray "on the table land of Mahableshwur" (Graham).

Echites (*Chonemorpa*) *macrophylla* of Tropical Eastern Asia. A splendid woody climber with large white flowers (Graham); and the "echite" of Valmiki iv. 29 — (transl. Gorr.), may be compared: C. macrophylla was seen by Rheede ix. pl. 5 and 6 in Malabar; was "introduced by Nimmo in 1833" into the environs of Bombay (Graham); and is enumerated among the plants of Hindustan by Roxburgh fl. ii. 13. Farther East, "an indigenous creeper" yielding *caoutchouc* of excellent quality, was seen by Parish in Tenasserim, and is regarded by him as probably "E. macrophylla" (Mason v. 523).

Convolvulus (*Calonyction*) *bona-nox* of Eastern Hindustan and Burmah. The *moon flower* is called in the environs of Bombay "gool" or "chandnee" or "soma deva" (Graham), in Burmah "nway-ka-zwon-a-phyoo" (Mason): the moon enlivening the nocturnal flowers, is mentioned by Valmiki ii. 1; — the rising moon dear to the night-flower, by Bhavabhuti uttar. 5; the night-flower whose fragrance is stifled by the day-star, and the "oskadhi" whose flowers are kindled by the moon, by Kalidasa sacont.: C. bona-nox was observed by Rheede xi. pl. 50 in Malabar; by Graham, "in gardens Bombay," the flowers "three to six inches in diameter," and pure white, "open at sun-set and close up the following morning;" by Roxburgh, Long, and Drury, common everywhere in other parts of Hindustan, the bark of the root used by the natives as a purgative; by Mason v. 437 to 783, indigenous in Burmah, and cultivated besides for its snowy blossoms. By European colonists, was carried to Western Equatorial Africa (Benth. fl. nigr. 465); and to Tropical America (Sloane pl. 96, Pers., and A. Dec.). Transported to Europe, is termed "buenas noches" by Clusius exot. 44 (Spreng.), "ipomaea bona-nox" by Linnæus.

Justicia (*Rhinacanthus*) *nasuta* of Western Hindustan. A poor looking shrub four to five feet high, called in Sanscrit "yoothica-purnee," in Bengalee "jooi pana" (Lindl.), in Hindustanee "palekjoohie," in Tamil "nagamully," in Telinga "nargamollay" (Drur.); and from early times, its leaves root and seeds employed to cure ringworm: the "pluksha" wood on which sacrifices were made, also the "purnin" of Valmiki ii. 12, — may be compared: R. nasuta observed by Rheede ix. pl. 69 in Malabar; by Graham, "in gardens," and wild on "the rocky part of the Rotunda ghaut, Mahableshwur;" by Ainslie, Roxburgh, Wallich, Royle, and Wight, as far as Travancore (Drur.); by Mason, "exotic" in Burmah.

Cordia angustifolia of Western Hindustan. A tree with slender drooping branches and subopposite leaves called in Tamil "narroovalli," in Telinga "nukkeru," in Hindustanee "goond" (Drur.), in the environs of Bombay "goond" or "goondnee" (Graham); and from early times, its

terica was observed by Rheede i. pl. 47 in Malabar; by Graham, "very common on the Ghauts and hilly parts of the Concan;" by Roxburgh, Royle, and Wight pl. 439, in other parts of the peninsula as far as Chittagong, its seeds highly valued by the natives in dysenteric affections (Drur. 245); by

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fruit eaten, its tough wood used for carriage-poles, and strong ropes made from its bark: included perhaps in the "cordie" trees of Ceylon by Valmiki v. 17 — (transl. Gorr.): C. angustifolia was observed by Gibson, and Graham, at Bombay and "about villages in the Deccan and Guzerat;" by Buchanan, in Mysore.

Cordia Macleodii of the Godavery forests. A tree called in Telinga "botka," in the Jubbulpoor forests "deyngan" (Drur.); and its very beautiful wood known from early times: included perhaps in the "cordie" trees of Ceylon by Valmiki v. 17 — (transl. Gorr.): C. Macleodii according to Beddome, and Drury, "is abundant in the forests near Mahadeopur but does not extend to the Circars," is "supposed" to be the "Hemigymnia Macleodii" of Griffith.

Vitex altissima of the mountains of Ceylon and Southern Hindustan. A large ternate-leaved tree, its timber valued from early times: "vitici" are mentioned among flowering trees by Valmiki iii. 79 — (transl. Gorr.): V. altissima was observed by Roxburgh, and Drury, "somewhat common in subalpine forests;" was received by the younger Linnæus from Ceylon; and apparently the same species was seen by Graham in the Bombay district, in a ravine near Nagotnah.

Vitex alata of Western Hindustan. A small ternate-leaved tree called in Malabar "mailelloa" (Rheede); and from early times, its timber valued: included perhaps in the "vitici" of Valmiki iii. 79: — V. alata was observed by Rheede v. pl. 1 in Malabar; by Law, at Duddi in the Southern Mahratta country, and by Graham on hills near Bombay; by Rottler, Roxburgh, and Drury, as far as Tranquebar.

Myristica Malabarica of Western Hindustan. A species of *wild nutmeg* tree called in Malabar "panam palea" (Rheede), its fruit hardly aromatic, but an oil obtained from it from early times applied medicinally: "myristiche" are mentioned among the trees of Hindustan by Valmiki v. 74 — (transl. Gorr.): M. Malabarica observed by Rheede iv. pl. 5 in Malabar; by Nimmo, in "S. Concan" (Graham), nearly as far as Bombay; by Waring pharm. ind., and Drury, in the forests of Travancore.

Amaranthus frumentaceus of Southern Hindustan. Called in Tamil "poong-kirai" (Drur.); and from early times, cultivated for the flour of its seeds as an article of diet; and possibly the "amaranti" of Valmiki iii. 79 — (transl. Gorr.): A. frumentaceus was observed by Buchanan, Roxburgh, and Wight, from Mysore to the Coimbatore district, where it is extensively cultivated (Drur.).

Curcuma aromatica of Hindustan. Called by English residents *wild turmeric*, in Hindustanee "junglee-huldee," in Bengalee "bun-huldee" (Drur.), in the environs of Bombay "bun-huldi" or "apavisha" or "vishabs" or "nirbishi" or "ca-nirvisha" (Graham); and "wild turmeric" is enumerated by Carey and Marshman among the ten drugs in the "survoushudhee" of Valmiki ii. 1: — C. aromatica was observed by Graham "in moist shady places throughout the Concans," its roots "sold in the bazars and used as a perfume;" by Roxburgh, Wight, and Drury, in the Travancore forests and from Malabar to Bengal.

Saccharum spontaneum of Tropical Hindustan and Burmah. A reed called in Hindustanee "kagara," in Bengalee "kash," in Telinga "relloogaddy." (Drur.), in the environs of Bombay "kerpa" (Graham), in Burmah "thek-kay-gyee" (Mason); and seems the species pointed out to W. Jones as. res. iv., in a clump of which according to the Puranas the Hindu god of war was born: the "kasha" is mentioned by Valmiki ram. ii. 24 — S. spontaneum was observed by Rheede xii. pl. 46 in Malabar; by Graham, in the environs of Bombay, "ten or twelve feet" high, having "a very graceful appearance with its large feather-like panicle;" by Roxburgh, in Bengal, the bright silvery wool around the base of the flowers making "a most conspicuous and gaudy appearance," its leaves eaten by buffaloes, used also for mats and for thatching houses (Drur.). Farther East, is very abundant along the banks of the Irrawady forming "a striking object in the landscape" (Roxb.); was observed also by Mason v. 524 in Burmah, one of the two grasses employed in the Interior for thatching native dwellings. (See S. sara).

Arundo (Trichoon) karka of Tropical Hindustan. A reed called in Sanscrit "dhumuna" or "nuda" or "nula" or "potugula," in Hindustanee "nal" or "nul" (J. F. Wats.), in Bengalee "nar nul," in Telinga "naga sara" or "maitantos" (Drur.), in the environs of Bombay "null" (Graham): mentioned by Valmiki v. 74 — (transl. Gorr.); the "d'hamana" or "nada" or "nala" or "potagala," by Susrutas sutr. 29 to chik. 35; and the third Gangetic monarch of Orissa measured his kingdom with "nal" reeds (Hunt. oriss. i. 318): A. karka was observed by Royle in Scinde, the stems made into chairs, and flower-stalks beaten to fibres called "moonyah" used for strings and ropes; by Graham, on "the banks of rivers and tanks" in the environs of Bombay; by Retz obs. iv. 21, and Roxburgh, as far as Bengal, the common "durma" mats at Calcutta made of the split stems (Drur.)

Burmann pl. 77, on Ceylon; by Mason v. 479, indigenous in Burmah, and its bark used medicinally. By European colonists, was carried to the Mauritius Islands (Lindl., not mentioned by Bojer). Its bark called in commerce *canessi*, "has been introduced into European practice on account of its astringent febrifugal qualities" (Lindl.).

Asclepias (*Calotropis*) *gigantea* of Tropical Hindustan. Called in Bengalee "akund," in Telinga "nella-jilledoo," in Tamil "yercum," in Malabar "yerica," in Hindustanee "mudar" or "ark" (Drur.), in the environs of Bombay "arka" or "akaree" or "rowee" (Graham), in Burmah "ma-yo" (Mason), in Tagalo "capal capal" (Blanco); in which we recognize "searching for the herb 'acun' but only desire its milk" of the Ramayana — (transl. W. Jones), honey in the "arkka" flower of a Sanscrit proverb (Wils. edit. Sankh. karik. 1), and the "arka" yielding milk prescribed by Susrutas sutr. 36 to chik. 1 to 25: C. gigantea is termed "madorius" by Rumphius vii. pl. 14 auct. 24; was observed by Rheede ii. pl. 31 in Malabar; by Graham, "common everywhere" as far as Bombay, its powdered root "given to horses," and according to Twemlow an intoxicating liquor called "bar" obtained from the plant by "the hill people about Mahableshwur;" by Ainslie, Roxburgh, and Wight, throughout the peninsula, employed for various medicinal and economic purposes, and according to Royle yielding a kind of manna called mudar-sugar (Drur.); was observed by Mason "exotic" in Burmah; by Blanco, on the Philippines, white-flowered. The plant according to Lindley furnishes the singular substance by Duncan called *mudarine*, "possessing the property of coagulating by heat and becoming again fluid by exposure to cold." (See C. procera.)

Datura metel of Tropical and subtropical Asia. A species of *thorn-apple* called in Egypt "el-nefyr" the trumpet (Del.), in Yemen "mandj" or "bendj" (Forsk.), in Sanscrit "datoura" (A. Dec.), in Bengalee "dhootoora," in Hindustanee "sada-dhatoora," in Telinga "tella-oomatie," in Tamil "vellay-oomatay" (Drur.), in Burmah "pa-daing-phoo," in Tagalo and Pampango "talam-ponai," in Bisaya "tacbibung" (Blanco); and the "dature" of Valmiki ram. iv. 29 — (transl. Gorr.) may be compared: D. metel is termed "stramonia indica" by Rumphius v. pl. 87 (Buchan linn. trans. xiv. 232); was observed by Rheede ii. pl. 28 in Malabar; by myself, around Bombay; by Graham, "among rubbish about villages all over the country" and "fatally used by Bombay thieves" "to deprive their victims of the power of resistance;" by Ainslie, Roxburgh, Wight, and Drury, throughout Hindustan, employed also medicinally; by Mason, "exotic" in Burmah and frequent "around native dwellings;" by Loureiro i. 110, in Anam; by Blanco, on the Philippines, its leaves "algo vellosas." Westward from Hindustan, the "jawz methil" of Gafeki grows according to Ebn Baitar in Africa and Spain and has "a large white flower:" D. metel was observed by myself in waste places on Zanzibar; by Forskal, among the mountains of Tropical Arabia; by him, and myself, frequent in waste places in Egypt; by Belon, and Chaubard, on Crete and the Peloponnesus; by Matthioli pl., Gussone, Moris, and Boissonade, naturalized on Sicily, Sardinia, the Canary Islands (Pers.), and in Southern Spain. By European colonists, was carried to America where it has become naturalized in Mexico, around Guyaquil, and in Southern Brazil (Cham., Dunal, Sellow, and A. Dec.). *D. fastuosa*, with "frequently double flowers," the "krishnad'hattura" or "krurad'hurttaraka" of Susrutas according to Hessler, and "zamr el-sultan," sultan's trumpet of Egypt (Del.), observed by Rheede ii. pl. 29 in Malabar, by Graham as far as Bombay, by Ainslie, Roxburgh, and Buchanan, in other parts of Hindustan, by Mason "exotic" in Burmah, and by Blanco on the Philippines, is regarded as probably not distinct. (See Hyoscyamus muticus.)

Vitex negundo of Tropical Hindustan. A large shrub called in Arabic "fenjengisht" (J. F. Wats.), in Sanscrit "sindoowara" or "sindooka" or "indrasoorusa" or "indranika" or "nirgoondi," in Bengalee and Hindustanee "nisinda" (Lindl.), in Telinga "wayala," in Tamil "vellay noochie" (Drur.), in the environs of Bombay "neergoonda" (Graham); "vitici negundi" are mentioned by Valmiki v. 74 — (transl. Gorr.); the "phenegsenkeset," by Avicenna; the "sinduvara" by Kalidasa kum. iii. 53, its flowers substituted for pearls, is mentioned also by Susrutas: V. negundo was observed by Rheede ii. pl. 12 in Malabar; by Graham, "in large patches both in the Concan and Deccan," as also by myself; by Buchanan, Roxburgh, and Wight, as far as Deyra Dhoon and Bengal, its root fruit and leaves employed medicinally by the natives, the dried leaves smoked by the Mohammedans in cases of headache and catarrh (Drur.).

Vitex trifolia by some writers regarded distinct, its leaves hoary beneath, is called in Telinga "neela vayalie," in Tamil "neer-noochie" (Drur.), in Burmah "kyoung-ban" (Mason); was observed by Rheede ii. pl. 11 in Malabar; by Roxburgh, and Ainslie, as far as Coromandel, its root fruit and leaves also employed by the natives medicinally (Drur.); by Burmann pl. 109 on Ceylon; by Mason v. 413 to 479 "exotic" in Burmah and "much cultivated" by the natives, the leaves applied in "diseases of the spleen." Farther East, was observed by Blanco common along the seashore of the Philippines, called in Bisaya "gapasgapas," in Ylocano "dangla," in Tagalo "lagundi," its leaves used by the natives medicinally; is termed "lagondium vulgare" by Rumphius iv. pl. 18 as observed on the Moluccas.

"The same year" (. . . . Cockayne iii. 453); Sledda succeeded by his son Sæberht as king of Essex. — He was converted and baptized in "604."

"From the Sixth century" (Julien, and Pouchet), *wood-engravings* in use among the Chinese: — and "from the end of the Fourteenth century," in Holland.

Manuscripts of the "end of the Sixth century" (De Wailly pl. ii. 5), presenting the following form of the letter y. .

600 A. D. = "525 an. jav." (of Adi Mang'gala = omitting the two kings of Guj'rat "491 + 2 + 27 + 5 years" of Nata Kasuma, Raffles ix. and x.), death of Jaya Misana, and founding of Brambanan the "first capital of Java" by Sawela Chala. Who came with a fleet of vessels from Guj'rat and made an alliance with Aru Bandan "recently arrived from the Moluccas," to whom he confirmed the "eastern provinces including Balambangan." — The temples at Brambanan "are stated to have been constructed during" the first three reigns "by artists invited from" Hindustan, and (as appears from the very extensive ruins) are exclusively Braminical.

One hundred and forty-seventh generation. Jan. 1st, 601, onward mostly beyond youth: the Chinese historian Li-yan-tcheou (Klapr.): the Arab poets Tarafa, Lebid, Antar, Zohair, Amru, and Hareth (six of the seven authors of the Moallakat preserved at Mecca), Ascha d. 628–9; the Greek grammarian Joannes Philoponus; Secundus historian of the Lombards; the Greek writers, Joannes of the Climax, Anastasius Sinaites, Joannes Moschus: the Latin ecclesiastical writer Jonas Hybernas of England (Alst. p. 404).

"The same year = 'jin-cheou,' 1st year of Wou-ti VII., of the Soui" or Fourteenth dynasty — (Chinese chron. table).

"The same year" (Alst. p. 369), Hesychius or Isychius bishop of Jerusalem enumerating various evidence of the truth of Christianity in his "Commentary on Leviticus."

Pterocarpus dalbergioides of Tropical Eastern Asia. Called in commerce *Andaman red wood*, in Telinga "erra-vegisa" (J. F. Watson); and the crimson "andami" wood of Zohair — may be compared: P. dalbergioides is described by Balfour for. ind. 196.

"The same year" = "20th year of Mauricius" (Clint. iii. p. 574), the last year marked in the Alexandrian chronicle: — the chronicle ending "Nov. 22d" in the following year.

"602, Nov. 23d" (Clint. iii. p. 574), Mauricius succeeded by Phocas, thirteenth Byzantine emperor. Who issued an edict for the "baptism of all the Jews in his dominions" (. . . .).

"603 A. D." (Bed. hist. eccl. i. 34), by Aedilfrid king of Northumbria; the Scots defeated at "Degsastan" i. e. "Degsa lapis," and compelled to quit English territory. The name of the battle-field includes an early example of an English word.

"604 A. D. = 4th year of the 'jin-cheou' of Wou-ti VII." (Chinese chron. table), beginning of the Fifty-fifth cycle.

"In the time of the Soui" (topog. Cant., and Pauth. 473), Chinese ambassadors sent to the surrounding nations. "Mention is also made of a tribe Mozin" (Ainos) "living in the mountains Northwest of" Japan (Sieb. elucid. Vries p. 122).

"In the reign of Suiko" (Jap. centen. comm. 116), "the first notions concerning *gardening*" introduced by a Corean into Japan.

"March 12th" (Clint.), death of Gregorius Magnus, sixty-second bishop of Rome. He was succeeded by Sabinianus.

"605 A. D. = 'ta-yé,' 1st year of Yang-ti, of the Soui" or Fourteenth dynasty (Chinese chron. table). He constructed the Southern and earliest portion of the Great canal; from Hang-tcheou North, as far as Hoai-ho in Kiang-nan (Pauth. 280 and 365).

"The same year" (Nicol.), a synod at Canterbury; "to confirm the foundation of the abbey of St. Peter and Paul, the first" one built in England.

"606 A. D." (Alst., Blair, and Nicol.), precedence granted by Phocas to the bishop of Rome. And Sabinianus succeeded by Bonifacius the third, now made head-bishop of the Christians, or archbishop. A column standing in the Roman forum, has recently been ascertained to be dedicated to the emperor Phocas (Hillard trav. in Ital. x. 3).

"607 A. D." (Alst., and Nicol.), at Rome, Bonifacius the third succeeded by Bonifacius the fourth, second archbishop.

"610 A. D." (Pauth. 282), by the emperor Yang-ti, an expedition sent against the Lieou-khieou (Loo-choo) Islands: and "more than five thousand" of the islanders of both sexes transported into China. A treaty of peace also concluded with the Coreans, recognizing their independence.

"The same year" (Alst. pp. 346 and 392), in a synod at Rome, the institution by the fourth Bonifacius of "All the saints" festival; after, by leave of the emperor, removing from the Pantheon the statue of Cybele, and substituting the Virgin Mary.

"Oct. 5th, Monday" (Clint. iv. p. 827), Phocas slain. He was succeeded by Heraclius, fourteenth Byzantine emperor.

"Dec. 23d" (Percev. i. 409), Mohammed commencing his mission.

Cissus glandulosa of Tropical Arabia. Sometimes but improperly called in Yemen "haluæk" or "hælvæk" (Forsk.): the plant with juice resembling honey in taste and consistence but of a very strong savour, supposed to have given rise to a passage in kor. 66 — (Al Zamakh, and Al Beidawi), may be compared: C. glandulosa is described by Forskal p. 34 as observed by him in Yemen, its tuberous roots called "mimiæ" sweet to the taste, but leaving behind a burning sensation on the tongue.

Inga sassa of Abyssinia. The account by Mohammed kor. 56 of "talh" trees loaded from top to bottom with their produce — may include the "sassa" of Abyssinia; observed by Bruce trav. v. pl. 4 and 5 exuding gum in such quantity as to appear deformed by the size of the concretions. This gum examined by Guibourt is classed by him among the false tragacanths (Lindl.). The "samgh arabi" brought according to Forskal mat. med. from the Hedjas, and from Nigritia by the way of Sennar, may be compared. (See Acacia gummifera.)

Laurus (*Camphora*) *officinarum* of Formosa and Japan. Knowledge of the drug *camphor* is implied by the "çafur" fountain of Mohammed kor. 74 — (Al Beidawi, and others): "cafur" is mentioned also by Meseab, Mesarguil, Ebn Masawia, Maserjawia, Isaac Ebn Amran, Rhazes, Elbasri, Mosih, Avicenna, Serapion, and Ebn Baitar; "kamphora," by Leo Medicus iii. 1, and Matthæus Sylvaticus (Hase); "kaphoura," by Symeon Sethus, and Michael Psellus; oil of camphor by Symeon Sethus (Alpin. bals. 5); and according to Clot-Bey the living tree has been recently introduced into Egypt. Eastward, the drug camphor is mentioned by the Sanscrit writer Bhavabhuti malat. vi. 3; was met with by Marco Polo 157; was known to Masudi as the product of a tree growing in the Indian seas and China (Ebn Wafid); and according to Reeves (med. bot. trans. 1828), is chiefly produced on the island of Formosa, and brought in very large quantities to Canton to be distributed. C. officinarum was observed by Kaempfer, and Thunberg, growing abundantly in Japan, and called "sjo" or usually "kus-no-ki" or "damo" or "surno-fa." By European colonists, was carried in 1833 to the environs of Bombay (Graham); and at different times to other "warm parts of the world," where it continues under cultivation (Lindl.).

"611, May" (Theophan., and Clint.), Syria invaded by the Persians.

Coix lachryma of Tropical Eastern Asia. A reedy grass called in Britain *Job's tears* (Prior p. 127), in France "larme de Job" (Fée); translations of "dima Ayoub" the current name in Egypt (Forsk., and Del.), in Egyptian ΤϵΛΜ tears — (ms. Par. 44. p. 381): the current name containing a Scriptural allusion, seems to imply the Early Christian period of Egypt: C. lachryma was observed by Forskal growing spontaneously around Cairo. Northward and Westward, the "xulomakaros koekois" is mentioned by Leo medicus v. 10 (Erm. p. 220): C. lachryma is described by Dodoens, Lobel, Clusius, and Bauhin hist. ii. 450; is cultivated in Italy, France, and Spain, especially in convent gardens (A. Dec.), and has become naturalized on Sicily and the Canary Islands (Guss. ii. 568, and Webb). Eastward from Egypt, has a Sanscrit name (Pidd.); was observed by Rheede xii. pl. 70 in Malabar, and called "cafre" infidel; by Graham, "in rice fields, margins of tanks etc, both Concans, Deccan, and Guzerat;" and is termed "lachryma Jobi indica" by Rumphius v. pl. 75. Farther East, was observed by Mason "exotic" in Burmah and called "ka-le-thee," by Blanco, well known to the natives on the Philippines, and called in Tagalo "tigbi;" by Kaempfer, and Thunberg, frequent in Southern Japan and called "iokui" or "iokui nin," or usually "dsud-sudama;" by myself, carried by natives to the Feejeean, Tongan, and as far as the Samoan Islands. By European colonists, was carried to Madeira, where it has become naturalized (Webb); to Northeast America, where it continues in gardens.

Coix, possibly a distinct species. — The "ka-le-pouk-pouk" or *coix millet*, according to Mason v. 476 to 522 is "cultivated very extensively by the Red Karens" of Burmah, and its large seeds are "parched" and "often for sale in the bazars:" other varieties or species are also cultivated, and their seeds used for embroidering and ornamenting dresses.

"612 A. D." (Royle antiq. hind. med. p. 74), death of Warka son of Naefal, who is mentioned in the Koran, and who first translated the Old Testament into Arabic.

"613 A. D." (Blair), by Clotaire II., "mayres du palais" instituted as regents of the French kingdoms united by him.

"614 A. D." (Alst. p. 346), a synod of Bavarians, French, and Burgundians. Against the new ceremonies through which Columbanus and Gallus were beginning to oppress the people, contrary to the institutions of their forefathers.

"June" (Chron. Pasch., and Clint.), the forces of Heraclius defeated, and Jerusalem captured by the Persians. — "A year afterwards" (Kitt. bibl. cycl.), "peace was concluded," and "Heraclius entered Jerusalem in solemn state."

"615 A. D." (Alst., and Clint.), at Rome, Bonifacius the fourth succeeded by Deodatus, third archbishop.

In this year (= "5th year of Heraclius and 4th year of Sisibut," Isid.), in Spain, the Jews baptized by order of the Gothic king Sisibut. The latest event mentioned in the Chronicle of Isidorus Hispalensis, — who died "April 4th, 636" (Sm. b. d.).

Alchemilla arvensis of Europe and the adjoining portion of Asia. A small annual called in Britain *breakstone* or *parsley-breakstone* from being administered against calculus, or *parsley-piert*, in France "percepierre" (Coles, and Prior); and the ΣΑΧΙΓΡΑΓΑ of Isidorus breaking up stone in the bladder — (Braunsw. transl. Ort. San.), may be compared: the "percepier" was seen by Lobel n. stirp. 324 near Bristol in England; A. arvensis is termed "a. montana minima" by Tournefort inst. 508; is known to grow from Denmark throughout middle Europe (fl. Dan. pl. 973, and Pers.); and was observed by Sibthorp, and Chaubard, in cultivated ground from the Peloponnesus to Constantinople. By European colonists, was carried to Northeast America, observed by myself naturalized in the Delaware peninsula, by Chapman in "waste places North Carolina and Virginia."

Cneorum tricoccon of the West Mediterranean countries. The CITOCΑΤΙΑ of Isidorus xvii. 9. 65, — and Hildegarde ii. 141, is referred here by Dodoens p. 363: C. tricoccon is described also by Matthioli p. 871; and is known to grow in Italy, Southern France, Barbary, and Spain (Lam. ill. pl. 27, Pers., and Spreng.).

Utricularia vulgaris of Northern climates. Called in Britain *bladder-wort* (Prior); the typhus herba inflating itself out of the water, of Isidorus xvii. 9. 101, — may be compared: U. vulgaris is described by Lobel pl. 791 (Spreng.); is termed "millefolium aquaticum lenticulatum" by C. Bauhin pin. 141; was observed by Gussone in Sicily, by Savi in Italy, by Brotero in Portugal, and is known to grow throughout middle Europe as far as Britain and Ireland (Pers., and Engl. bot. pl. 253). Eastward, was observed by Sibthorp in the Peloponnesus; and is known to grow in middle Asia (A. Dec.). Farther East, was observed by Drummond at Cumberland House Lat. 54° in central North America; by E. James, along the Platte (Torr.); by Nuttall, along the Arkansas; and is known to grow throughout our Atlantic States as far as North Carolina (Pursh, A. Gray, and Chapm.).

"About November" (Percev. i. 388), by advice of Mohammed, sixteen of his partisans, "twelve men and four women," to avoid persecution escaping to Abyssinia. They were soon joined by others, making in all "eighty-three men and eighteen women;" and the Abyssinian king, on hearing extracts from the Koran, protected the refugees and refused to deliver them up to the Coraysh envoys.

"616 A. D. (= 12th year 'tai-nie' of Yang-ti," Remus.), Tchin-la or Cambodia beginning to send tribute and ambassadors to China.

"In this year" (Theophan., and Clint.), Egypt once more invaded by the Persians. Who capturing Alexandria and establishing themselves there, — held possession of the country ten years.

About this time (Sharpe), arrival in Alexandria of the Syrian bishop Thomas, to correct the Syriac version of the New Testament made a century before by Philoxenus. He compared the gospels with three Greek manuscripts in the monastery of St. Anthony: and his corrected edition, is the last effort in sacred criticism attempted at Alexandria or in any part of the East.

"Black *ambergris*" of "the purest fragrance" is mentioned by a poet — quoted in the Arab romance of Antar (Hamilton's vers. i.). The "ambar" of Haly Abbas, Temimi, Avicenna, Serapion, Symeon Sethus, Edrisi, and Ebn Baitar, is referred by F. Adams to ambergris: and according to Marco Polo 189 to 192, "la balenne fait l'anbre," abounding at "Scotra," some islands between there and Hindustan, also at "Zanghibar," and "Madeigascar." The perfume is further noticed by Paludanus; is known to be chiefly brought from the shores of the Indian Ocean; and according to Beale and others, is derived from the *sperm whale*, Physeter.

"617 A. D. (= 13th year tai-nie," Remus. mel. i. 77), ambassadors bearing tribute sent from Cambodia to China. They were received with honour by Yang-ti.

"In this year" (Blair), refusal of peace by Chosroes II. of Persia; unless Heraclius "would abandon Christianity and adore the sun."

"The same year" (Nicol.), at Rome, Deodatus succeeded by Bonifacius the fifth, fourth archbishop.

"The same year" (Cockayne iii. p. 449), Æthelbryht succeeded as king of Kent by his son Eadbald. — Who followed the ancient custom of marrying his father's second wife; but on being converted by Laurentius, abandoned the connexion (Bed. ii. 6).

"In this year = 'y-ning,' 1st year of Koung-ti II., of the Soui" or Fourteenth dynasty (Chinese chron. table): the last ruler of the Soui dynasty.

"Under the Soui dynasty and in the time of Dagobert king of the Franks" (Humb. cosm. iv.), Chinese maps of the country between the Yellow river and Caspian, on which the Kuen-lun and Thian-shan mountain-chains are delineated (but according to the Biograph. univers., Dagobert began to reign "in 622").

"618 A. D. = 'wou-te,' 1st year of Kao-tsou II., head of the new dynasty of the Thang"—(Chinese chron. table).

"622, July 16th, Friday" (Blair, and Nicol.), the *Hejira*, or Mohammedan Era. The flight of Mohammed from Mecca to Medina on the "68th day" afterward, is fixed to "Sept. 21st, fourteen days before the 12th year of Heraclius was ended" (Clint.). At this time, Oman under the rule of Habkar and Abd, descendants of Julanda (Abulfed., and Badger edit. Salil-ibn-Razik p. 7).

"The same year" (Theophan., and Clint.), successful campaign of Heraclius, as far as Armenia, where his army wintered. Georgius Pisides accompanying this expedition.

"623, April 20th" (Theophan., and Clint.), Heraclius and his army entering Persia. At the end of the campaign he wintered in Albania.

The poet Ascha on his way to join Mohammed induced by the Koreisch tribe to change his purpose — (De Sacy chrest.).

Plumieræ gen. . . . . of Burmah. The "lances of Alkhatt" mentioned by Ascha, — Djewhari, and in the Kamous, and the letter of the Karmatians to the Egyptian sultan, made according to De Sacy at Alkhatt on the coast of Bahrein from wood imported from India. The "myet-hna-ban" tree was observed by Mason p. 543 not uncommon at Tavoy, the "timber possessing the properties of lancewood" and called in commerce *Tenasserim lancewood.* A kind of wood called "myet-hna-ban" was found by Berdmore "used in making furniture, bows, etc."

"624 A. D." (Theophan., Cedren., and Clint.), after a victory, Heraclius and his army winter in the enemy's country.

"In this year" (Sm. b. d. ii. p. 404), the remaining portion of the Greek dominions in Spain and on the opposite coast of Africa appropriated by the Gothic king Suinthila.

"625, March" (Theophan., and Clint.), Heraclius and his army crossing the Euphrates. After this campaign, he wintered near the Halys.

"626 A. D." (Alst., and Nicol.), at Rome, Bonifacius the fifth succeeded by Honorius, fifth archbishop. Who is "accused by the Greeks of favouring the Monothelites."

"July 29th" (Geo. Pisid., Theophan., and Clint.), Constantinople assaulted by Slaves, Huns, Scythians, Bulgarians, and Medes, all in alliance with the Persian king; the assault continued "ten" days, the enemy retiring on "Friday, Aug. 8th." Heraclius absent for three years, had planned the defence by letter; and invited the Chazars or Eastern Turks, who passing the Caspian Gates now enter Persia.

"627 A. D. = 'tching-kouan,' 1st year of Tai-tsoung, of the Thang" or Fifteenth dynasty (Chinese chron. table). A treatise by this emperor, on the art of government, is extant.*

"In or about this year (= beginning of the years tching-kouan," Remus. i. 84), Fou-nan annexed by Cha-li-yi-kin-na, king of Cambodia.

"628, Feb. 28th" (Chron. Pasch., and Clint.), Chosroes II. slain. Succeeded by Siroes as Persian king. The war with Persia having now terminated, Heraclius and his army returned in the "7th year" to Constantinople.

Death of Chosroes, the latest historical fact recorded by Theophylactus Simocatta† — (Yule cathay i. p. li).

"May 15th, in the eighteenth year of Heraclius" (Clint. iii. p. 594), end of the Paschal Chronicle.

"629 A. D." (Clint.), Siroes succeeded by Adeser as Persian king; and before the close of the year, by Toorandokht.

"The same year" (Theophan., Eutych., Clint. and Plate in Sm. b. d.), Heraclius on his way to Jerusalem met by an ambassador from Mohammed, and summoned to embrace the new religion. As a matter of condescension, Heraclius entered into a treaty of friendship: — which was soon broken by the Arabs.

"In this year" (ann. Jap., transl. Tits.), Soui-ko succeeded by Zio-mei, grandson of Bin-dats and now thirty-fifth dairo of Japan.

Other plants suitable for making paper discovered in Japan as early perhaps as this year, as the

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* *Magnolia yulan* of China. The yu-lan began to be cultivated under the Thang dynasty, — is mentioned by Han-pao-tcheng, and Li-chi, and under the Ming dynasty was brought from the South to Pekin; its buds are preserved, and are used medicinally, also to season rice (Cibot in mem. Chin. iii. 443). Transported to Europe, is described by Desfontaines, Correa, and Salisbury: and from Europe, was carried to Northeast America, where it continues in gardens in our Middle States.

† *Cupressus patula* of Japan. The "nodding cypresses" lining the banks of the two great rivers flowing through Khubdan (Singan'u in the Chinese province of Shensi), described to Theophylactus vii. 9, — may be compared: C. patula is described by Thunberg 265 as observed by him in Japan (Pers., and Steud.).

"kaji" (*Broussonetia kaji-no-ki*, S.) "but seldom used now;" the "gampi *Wickstroemia canescens* Meisn., or *Passerina gampi*, S. and Z.)" yielding "a fibre of particular beauty and fineness, used mostly for the best writing and printing paper;" the "mitsumata (*Edgeworthia papyrifera*, S. and Z.);" the "karasz-sugi, a kind of *Cryptomeria*;" "a sort of wild cherry (*Pseudo-cerasus*);" the "kawa-yanagi (*Salix Japonica*);" the "hanzi (*Lespedeza cyrtobotria*, Miq.);" and the "niga-ki (*Picrasma ailanthoides*, Planch.); the bark of all these trees and shrubs" used — (Jap. centen. comm. 84).

"630 A. D." (Theophan., Cedren., Zonar., and Clint.), Heraclius at Hierapolis, conferring with Athanasius the Jacobite patriarch.

"631, Apr. 9th (= 219 years of the Naci = 73 series of 3 years," Percev. i. 413), commencement of the 10th year of the Hejra, in which the Naci Era was abolished by Mohammed.

"632 A. D." (R. H. Major in soc. Hakl., and Gildem. p. 43), three years after leaving home, the Chinese traveller Hiouen-thsang entering Guzerat; where Dhruvasena or Dhruvabhatta was reigning, the successor of Sridharasena II. — and predecessor of Sridharasena III. He returned to China in "645" after an absence of "seventeen years" in the Western countries, principally in Hindustan.

Smilax china of China, Corea, and Japan. Called in commerce *china-root* (Lindl.), in Japan "sankira" or "bakats" or usually "kuakuara" (Thunb.); and the "fo-ling" known to Hiouen-Thsang to* — is referred here by Stanislas Julien: S. china was observed by Kaempfer, and Thunberg, in Japan, growing about Papenberg and Kosido, and employed medicinally; is known to grow also in Corea (chin. geogr. transl. Klapr.); and in "wild places in China among fern and brambles," its root eaten by the Chinese as invigorating (Lindl.). Westward, the imported root first became known in Europe "in 1535" (C. Bauhin pin.); is mentioned by Vesalius, Amatus Lusitanus, Garcias, Monardes, and Linschoten; continues to be sold in the drug-shops of Europe (Lindl.); and was observed by Alpinus, and Forskal mat. med., employed medicinally in Egypt.

"June 8th" (Abulf., and Clint.), death of Mohammed. He was succeeded on the same day by Abubekr; and the proposed expedition into Syria was delayed a month.

Nageia Arabica of the mountains of Yemen. Called there "katam," in which we recognize the "katam" employed with henné for staining himself by Abubekr — (Desverg. arab.): the "katam" is mentioned also by Abu Hanifa, Gafeki, and Ebn Baitar; and N. Arabica was observed on the mountains of Yemen by Forskal p. 159.

"June 16th" (Blair, and Clint. iii. p. 368 and iv. p. 240), *Era of Yazdejerd*, "3624 days after the Hejira;" commemorating the accession of Yazdejerd III. as Persian king.

"633, Aug. 12th" (letter of Khaled to Abubekr, and Clint.), battle at Ajnadin in Syria, gained by the Muslims under Khaled.

One hundred and forty-eighth generation. May 1st, 634, onward mostly beyond youth: the Jewish writer, Abu Hafsa Jezid of Yemen: the Greek mathematician Stephanus; the ecclesiastical writers Maximus Confessor, and Eligius; the poet and historian Georgius Pisides (Blair); the Greek writer Theophilus Protospatharius; Hadrianus bishop in Scotland; Esaias the abbot; Dado or Audoenus.

"Aug. 23d" (Blair, and Clint.), Damascus captured by the Muslims, and on the same day, death of Abu-bekr. He was succeeded as khalif by Omar; who is supposed (Wilkinson theb. and eg. p. 533) to have used the Persian Sasanid dies for his *coins*, adding his own name.

635 A. D. = "9th year of the 'tching-kouan' of Tai-tsoung" (inscript. at Si-ngan-fou, Pauth. 297, and Yule cath.), Christianity brought into China by a Nestorian named O-lo-pen — (compare Ulpianus). The sacred books were translated into Chinese; and a decree in favour of the new religion obtained from Tai-tsoung three years later is preserved in the same Inscription.

"November" (Clint.), in Syria, Hems or Emesa besieged by the Muslims under Abu Obeidah, and a truce granted to Heraclius for a year.

"In this (= 14 A. H. comm. Feb. 24th) or the following year" (Gildem. p. 36), Basra on the Euphrates near its entrance into the Persian Gulf, founded by khalif Omar.

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* *Smilax lanceæfolia* of the Eastern frontier of Bengal. Called in Hindustanee "gootea-shook-china" (Lindl.); and probably the species seen by Hiouen-Thsang, — for the root according to Roxburgh is not to be distinguished from china-root, and is much used by the natives, the juice of the fresh tuber taken inwardly and the refuse applied externally in rheumatism (Lindl., and Drur.).

Smilax glabra of Sylhet and the Garrow country on the frontier of Bengal. Called in Hindustanee "hurina" or "hurina-shook-china" (Lindl.); and possibly also seen by Hiouen-Thsang: — its root according to Roxburgh is not to be distinguished by the eye from china-root, and at the present day is used in decoction by the natives of Sylhet and the Garrow country in sores and venereal complaints (Lindl., and Drur.).

The Mahabharata, a Sanscrit epic poem on the wars of the Pandus, hardly earlier than this date.

Solanum melongena of Equatorial Africa. The *brinjal* or *egg-plant* is called in France "aubergine" (A. Dec.), at Constantinople "mĕlisana" or by the Turks "patlisana" (Forsk.), at Aleppo "melanzana" (Rauw.), in Egypt and Yemen "badindjan" (Forsk.), in Hindustanee "badanjan" or "baingan" (Pidd.), in Sanscrit "bhuntakee" (Wall.), in Telinga "wankai," in Tamil "valoothalay" (Drur.), in Burmah "kha-yan" (Mason), in Tagalo "talong" (Blanco): the "melongene" is mentioned in the Mahabharata i. 1020 to 2197—(transl. Pavie 91): S. melongena was observed by Rheede x. pl. 74 in Malabar; by Graham, around Bombay "extensively cultivated for the sake of its fruit," and "next to the potatoe perhaps" the "most useful of Indian vegetables;" by Roxburgh, and Drury, cultivated "all over India;" by Mason, "exotic" in Burmah; by Loureiro, in Anam; by Blanco, universally known to the natives on the Philippines; is termed "trongum hortense" by Rumphius v. pl. 85. Westward from Hindustan, the "badinschan" is mentioned by Ebn Masawia, Rhazes, Avicenna, Serapion, Edrisi, Ebn Baitar, and Makrizi: S. melongena was observed by myself cultivated and naturalized on Zanzibar; is known to be also cultivated in Western Equatorial Africa (Benth. fl. nigr. 473); was observed by myself in Yemen, the fruit in market at Mocha; by Forskal, under cultivation in Yemen and Egypt; by Rauwolf in 1574 in gardens at Aleppo; by Forskal, and Chaubard, cultivated at Constantinople and in Southern Greece; is described also by Dodoens pempt. 458, and C. Bauhin pin. 167. By European colonists, was carried to the Mauritius Islands (Boj.); to the West Indies (Hughes), and our Southern and Middle States, where it continues abundantly cultivated.

"636, November" (Clint.), battles on the river Yermouk, continuing several days and deciding the fate of Syria in favour of the Muslims.

"637 A. D." (Blair, and Clint.); Jerusalem captured by the Muslims; and death of Sophronius, the last bishop there.

"The same year" (Clint.), the Muslims under Saëd ravaging Persia, and the Persians defeated by them in a great battle near Jaloulah; Yazdejerd III. retiring to the Persian city of Ferganah.

"638, before July 4th" (Clint.), flight of Heraclius from Antioch, followed some weeks later by the surrender of the city to the Muslims. Other cities surrendering, the conquest of Syria was completed "six years" after the death of Mohammed.

"Not before September" (Clint., and Nicol.), edict of Heraclius in favour of the Monothelites. It was confirmed by a synod at Constantinople.

"In this year" (Biograph. univers.), end of the reign of Dagobert, king of the Franks.

"638 or 639 A. D." (Mason iii. 43), the *Burman era* established by king Poukpasau:—in use among the Burmese to the present day.

"639 A. D." (Clint.), pestilence in Syria, the Muslims losing "twenty-five thousand" men, including Abu Obeidah; who was succeeded by Moawiyah as lieutenant in Syria. "June 6th," a Muslim army under Amrou entering Egypt.

"640 A. D." (Elphinst. iii. 3), a Chinese traveller writing in this year, that Pataliputra on the Ganges "was a mass of ruins," when visited by him.

"In this year" (Klapr. mem. ii. 360), the Chinese attacking the Kao tchhang or Ouigour, and meeting with success, built there the city of Thing tcheou,—from "702" called Pe thing tou hou fou, and identified by Klaproth with Ouroumtsi and Bich-balik.

"The same year," (Nicol., and Clint.), at Rome, Honorius succeeded by Severinus; and before the close of the year, by Joannes the fourth, seventh archbishop.

Cassia acutifolia of Nubia and Tropical Arabia. Among articles deposited in ancient Egyptian tombs as early probably as this date, leaves and fragments of *senna*—have been met with (Wilk.): the drug senna is mentioned by Abix, Abu Ziad Elarbi, Serapion the elder, Abi Solt, Abu Hanifa, Honain, Hobaisch, Rhazes, Haly Abbas, Ebn Amran, Edrisi, and Mesue: "zinŏphullŏu" or "zēnŏphullŏu" is mentioned by Theophanes Nonnus 173, "sĕnĕ" by Demetrius Pepagomenus podagr. 34, and Actuarius (Bernard), and "senna alexandrina sive foliis acutis" by C. Bauhin pin. 397. The proper Alexandrian senna, called in the drug-shops of Egypt "sena lesan el-a'sfour" or "sena sa'ydy," was found by Delile to consist of leaves of C. acutifolia, and the living plant was observed by him near Syene on the border of Nubia: was observed by Forskal p. cxi and 85 in Tropical Arabia, collected in large quantities in the district of Abu arish; and the stored senna in the warehouses of Mocha and Muscat was found by myself to consist exclusively of this species. Farther East, "C. elongata" according to Graham "indigenous in Goozerat," and observed in Interior Hindustan by Roxburgh, and Royle ill. pl. 37, is regarded by Wight as perhaps not distinct and only naturalized (Lindl.).

Acacia heterocarpa of Nubia. Also pods of this tree—(Champoll.-Figeac 157), called at present "faraeh:" the fruit of "fara ufarfara" is enumerated by Forskal mat. med. as frequently employed in sickness as a fumigatory, and he was informed that the tree occurred in gardens at

Cairo: pods of A. heterocarpa were found by Delile in the drug-shops of Egypt, and he met with the living tree near Kosser on the Red Sea.

"Dec. 22d, Friday" (Eutych., Elmak., Clint., and Marcel.), Alexandria captured by Amrou; the Muslims now obtaining possession of Egypt. They appear to have been hailed as deliverers from a foreign yoke.

IX. THE EARLY MUSLIM PERIOD.

The disposal of the collective agricultural produce of Egypt, throws light on many historical events. The corn of Egypt, fed armies; and in the days of Xerxes, was indispensable to his movement against Greece (compare Herodot. vii. 25). At a later period (see Jos. bell. Jud. iv. 10. 5), it formed an element in making and unmaking Roman emperors. But from the time when the Muslims entered Alexandria, European rulers ceased to control the corn of Egypt.

The further establishment of the *pilgrimage to Mecca* tended to increase the intercourse between India and Europe; now altogether in the hands of the Muslims. There remained indeed some choice of routes, between the Euphrates and the Persian Gulf: but living Tropical plants, perhaps without exception, reached the Mediterranean by the way of Egypt.

In *monumental history*, there is now a striking change, in the exclusion from Muslim countries of representations of external objects: the moon and stars only excepted. — In Egypt, this ceasing of "image-making," marks an epoch in the annals of mankind.

In regard to Europeans, Egypt seems withdrawn from their knowledge; — and for more than eight hundred years During which interval indeed, Europe supplies very little light on her own condition: the records of European nations, the Greeks and Italians excepted, hardly extending as far back as the Muslim conquest; and in general, the popular mind is everywhere limited to the national Literature.

"In or about this year" (Cockayne iii. 447), the abbey of Folkstone founded by Eanswith, daughter of Eadbald king of Kent: — She was buried in this abbey.

"641, Feb. 11th, Sunday" (Niceph., and Clint.), death of Heraclius. He was succeeded by his son Constantinus III.; "May 24th," by another son Heracleonas; and before the close of the year, by a third son Constans.

A Japanese *coin*, "said to be 1135 years old," — presented in 1776 to Thunberg iv. p. 123. With others respectively "758, 748, 718, 651, 596, and 566 years old," it was "of *copper*, with a square hole in the middle."

"The same year" (Chinese annals translat. by De Guignes, Elphinst. iii. 3), arrival in China of ambassadors "from Ho-lo-mien, of the family of Kie-li-tie, a great king in" Hindustan: * (neither the king's name, nor that of the dynasty, has been identified).

"642 A. D." (Clint.), Joannes the fourth at Rome succeeded by Theodorus, eighth archbishop.

"In this year" (ann. Jap., transl. Tits.), Zio-mei succeeded by his widow Kwo-gok, now thirty-sixth dairo of Japan.

"643 A. D." (Clot-Bey), at Fostat, near the site of Cairo, a mosque built by Amru: of which, from frequent repairs, "a very small portion of the original" remains. Another mosque built by Amru at Assuan, is in better preservation; and presents the usual round arches at that time in vogue in the Mediterranean countries (Wilk. Theb. and Eg. p. 310 and 455).

Myristica moschata of the Moluccas. Called in Persian "jouz-bewa" (Lindl.); in which we recognize the "jawz buwwa" of Ahrun, — Ebn Masawia, Miseaben, Albasari, Rhazes, Isaac ben Amran, Serapion (F. Adams), Avicenna, and Ebn Baitar: *nutmegs* are known to have been at first imported overland into Europe, and are mentioned under the name of "karua arōmatika" in the addition to Aetius, also by Symeon Sethus (Spreng.). Eastward, were seen by Marco Polo 163; are called in Sanscrit "jay-phalu," in Bengalee "jati phal" or "jayphal," in Hindustanee "jaephal" (D'rozar.), and the living tree introduced was observed in Hindustan by Roxburgh cor. iii. pl. 274, and Graham. Farther East, M. moschata is enumerated by Mason as "exotic" in Burmah and called "za-te-pho;" but is known to be indigenous in the Moluccas, growing especially on Banda (Rumph. ii. pl. 4). The nutmeg has not as yet been successfully cultivated beyond its natural limits; one sex only occurring among the trees introduced by the Arabs into Zanzibar up to the time of my visit.

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* *Bassia butyracea* of Nepal and Eastern Hindustan. The *Indian butter-tree* called in Bengalee "phulwara" (Drur.), and known from early times: — growing on the Almora hills and in Nepal (Roxb. res. asiat. viii. 477, Don fl. nep. 146, and Royle); and according to Drury, its fruit is eaten, the kernels yield a pure vegetable butter called "choofie" sold at a cheap rate, and sugar made from the flowers is also sold in the Calcutta bazaar.

In this year ("22 A. H., comm. Nov. 29th 642," Gildem.), Khorasan subdued by the Muslim general Ahnaf ben Kais. Ubaidalla is said to have advanced as far as the Indus, but could not obtain permission from Omar to cross the river.

"644 A. D." (art de vérifier des dates, and Blair), Omar slain in the temple at Jerusalem, which he had converted into a mosque. He was succeeded by Othman, third khalif.

"645 A. D." (ann. Jap., transl. Tits.), Kwo-gok abdicating (the first instance in Japanese history), succeeded by her brother Ko-tok, now thirty-seventh dairo of Japan.

"648 A. D." (Blair), conquest of Cyprus by the Muslims under Mu'awiyah.

"The same year" (Clavig., and Humboldt), entrance of the Toltecs upon Anahuac or the Mexican table-land. The Toltecs were acquainted with word-painting, communicating intelligence by paintings: — they built roads, cities, and the Great teocalli or pyramid at Cholula, after the model of the more ancient teocallis at Teotihuacan.

Among the tribes of Northwest America, the "medecine men" always mere sorcerers,* the healing art proper being in the hands of old women — (R. Brown jun.).

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* *Clematis Douglasii* of the sources of the Columbia. Known to the natives from early times, — its root placed by them in the nostrils of exhausted horses (R. Brown jun.): observed by Douglas at the sources of the Columbia (Hook.).

Geranium sp. of Interior Oregon. Its root from early times used among the Lilloets of British Columbia to prevent women bearing children — (R. Brown jun.).

Psoralea physoides of Interior Oregon. Leguminous, and from early times employed by the natives medicinally, as a poultice — (R. Brown jun.): observed by Douglas from the Rocky mountains to the Great falls of the Columbia (Hook.).

Rubus leucodermis of Northwest America. Its berries from early times collected and dried by the natives — (R. Brown jun.): observed by Douglas.

Philadelphus Lewisii of Oregon. A species of *mock-orange*, a shrub, its leaves from early times used by the natives as a substitute for soap — (R. Brown jun.): observed by Clark on the North branch of the Columbia; and according to Hooker, growing in pine woods.

Philadelphus Gordonianus of Oregon. Its leaves also used by the natives from early times as a substitute for soap — (R. Brown jun.).

Lewisia rediviva of the unwooded portion of Interior Oregon. Called "petlum-ard-ilse-nemare," and from early times its root boiled and eaten by the Kootanie, Colville, and other tribes — (R. Brown jun.): observed by Clark on the North branch of the Columbia (Pursh); by Nuttall on the Flat-head river; by myself, towards the Spokane conspicuous in the distance, its large flower rising out of the bare ground at intervals, like a land Nymphæa.

Ribes niveum of Northwest America. Its berries from early times collected and dried by the natives — (R. Brown jun.). From transported specimens, described by Lindley.

Eulophus ambiguus of Interior Oregon. An Umbelliferous plant, its root called *white biscuit root*, from early times collected and dried by the natives — (R. Brown jun.): on the hills of the Upper Yakima, our party fell in with a body of natives engaged in digging biscuit root, and procuring a supply, found advantage from it before reaching our destination: described by Nuttall, as observed on the Flat-head river.

Peucedanum fœniculaceum of Interior Oregon. An Umbelliferous plant, its root also from early times eaten by the natives — (R. Brown jun.): observed by Nuttall.

Valeriana sp. of British Columbia. Called "kunko," and from early times used by the M'Leod Lake and other Takali tribes in rheumatism — (R. Brown jun.).

Symphoricarpus racemosus of Interior North America. The *snowberry*, a shrub from early times in British Columbia used medicinally about Lilloet in colds — (R. Brown jun.): observed by Michaux at Lake Mistassins; by Short, in Kentucky; by Nuttall, from Niagara to Lake Huron and the Missouri; according to A. Gray, grows "from Western Vermont to Pennsylvania and Wisconsin;" according to Hooker, as far as the Saskatchewan and Columbia; and was received by Decandolle from Nootka. Has become a favourite ornamental plant in gardens.

Salix Scouleriana of Oregon. The *cottonwood willow*, canoes from early times sometimes made from it — (R. Brown jun.). From transported specimens, described by Hooker.

Thuya gigantea of the Rocky mountains. The *Oregon arbor-vitæ*, canoes made from it; its bark textile, and its twigs smoked as a substitute for tobacco — (R. Brown jun.): observed by Nuttall among the Rocky mountains.

Pinus contorta of Interior Oregon. From early times used by the natives for torches, and its liber or inner bark in times of scarcity eaten in the passes of the Rocky mountains — (R. Brown jun.).

"649 A. D." (Alst., Clint., and Nicol.), at Rome, Theodorus succeeded by Martinus, ninth archbishop.

"650 A. D. = 'young-hoei,' 1st year of Kao-tsoung, of the Thang" or Fifteenth dynasty — (Chinese chron. table). He continued to patronize Olopen and the new religion (Christianity).

Polygonum tinctorium of China. The large flat stone and large round mallets, used in procuring the blue dye of the "nimi-lan," and celebrated by ancient poets, — are referred here by Cibot (mem. chin v. 499): P. tinctorium was observed by Loureiro in China; and "P. Chinense" called "ai" or "itadori," and yielding a blue dye like indigo, was observed by Thunberg around Nagasaki in Japan. By J. Blake "in 1776," P. tinctorium was carried to England (Ait. ii. 51); and from France, according to Clot-Bey and Figari, has recently been introduced into Egypt.

"In this year" (ann. Jap., transl. Tits.), Ko-tok dying, the government resumed by the empress Kwo-gok, now under the name of Zai-mei as thirty-eighth dairo of Japan. The first instance in Japanese history of the same person reigning twice.

"651 A. D." (Plate in Sm.-b. d.), naval expedition by the Muslims against Sicily. Rhodes captured by them, and the celebrated *colossus* sold and broken up.

"In this year" (Bed. hist. eccl. iii. 25 and chron.), Aidan succeeded by Finan as bishop of the Scots. On the island of Lindisfarne, Finan built a church suitable for the episcopal see, but after the Scottish fashion of hewn oak timber roofed or thatched with "harundine" (*Phragmites communis*).

Psamma arenaria of the seashore of the Mediterranean and North Atlantic. Called in Britain *bent* or *sea-reed* or *mat-weed* from its use in making mats, or *maram* from the Gaelic "muram" or Frisian and Danish "marhalm" sea-straw (Prior): the "foeno" used in the thatching — is referred here by James Raine, the same material being used on Lindisfarne to the present day; "bent" is mentioned in Account Rolls of 1344–5 and 1346–7 (G. Johnston east. bord.): P. arenaria is termed a "grassie or rather rushie reede" by Gerarde p. 39, "gramen spicatum secalinum maritimum maximum spica longiore" by Tournefort inst 518; was observed by Desfontaines in Barbary, by Brotero in Portugal, and is known to grow on the Atlantic seashore as far as Lapland and Iceland (Moris. viii. pl. 4, Pers., Hook., and Wats.). Eastward, was observed by Sibthorp, and Chaubard, in the maritime sand of the Peloponnesus; and by Delile, on the Mediterranean shore of Egypt. Westward from Iceland, is known to grow in Greenland (Wats.), Newfoundland (Lapyl.), on the shores of Lakes Michigan and Superior (A. Gray), and on our Atlantic sea-beaches, ceasing as observed by myself in about Lat. 39°.

"653 A. D." (Cockayne iii. p. 447), Sigeberht succeeded by Sigeberht II. the Good, as king of Essex of the East Saxons; a dependent on Oswin king of Northymbria.

"About this time, 650 to 655 A. D." (Panth. 301), war carried by the Muslims into the region of the Oxus; and an ambassador sent by them to the Chinese emperor.

"654 A. D." (Alst., and Clint.), at Rome, Martinus succeeded by Eugenius, tenth archbishop.

About this time ("650 to 660 A. D.," Assem. iii. 1. 127, and Gildem. 59), letter in Syriac from the Nestorian Yeshuyabus Adiebenus, complaining of interruption of communion with the Persian and Indian churches.

The Mrichchhakati, the earliest Sanscrit drama, written before self-immolation by burning, and intermarriage of Bramins with Sudra females, were prohibited; Buddhist mendicants and convents continuing throughout Hindustan.

Pinus Sabiniana of Oregon. Its seeds from early times eaten by the natives — (R. Brown jun.): observed by Douglas.

Allium reticulatum of Oregon. A wild onion, its root from early times eaten by the natives — (R. Brown jun.): observed by Nuttall.

Gamassia esculenta of Northwest America. Called "gamass," and from early times its onion-like bulb eaten by nearly all the tribes from the Rocky mountains to the Pacific — (R. Brown jun.): observed by Lewis and Clark on the Upper Missouri near the Rocky mountains (Pursh).

Brodiæa grandiflora of Oregon. From early times its root eaten by the natives — (R. Brown jun.). Transported to Europe, described by Smith (Steud.).

Erythronium grandiflorum of Interior Oregon. From early times, its root eaten by the natives, regarded also as a love-philtre — (R. Brown jun.): observed by Lewis and Clark on the Kooskoosky river (Pursh), now called Clearwater; and by N. Wyeth, on his first journey to the Pacific (Nutt.).

Fritillaria lanceolata of the Rocky mountains. From early times, its root eaten by the natives — (R. Brown jun.): observed by Lewis and Clark at the sources of the Missouri and Columbia (Pursh).

Trillium ovatum of Interior Oregon. Its root from early times used by the natives for a poultice — (R. Brown jun.): observed by Lewis and Clark at the rapids of the Columbia (Pursh); by Nuttall, on the Rocky mountains and Flat-head river.

Siva and the unwieldy Mahadeva emblem are mentioned in the Mrichchhati i and iv.: the deghop or dome-like stone emblem of the Braminical cave-temples appeared to me unprovided for in the original construction of those temples, and inserted at a subsequent period. Some approximation to the date may be inferred from one of the Elephanta cave-temples, filled with earth and thus concealed until shortly before my visit, but found on clearing to contain a deghop.

Garcinia pictoria of the mountains of Tropical Hindustan and Burmah. A tall tree called in Sanscrit "tumala," in Telinga "tamala-chettu" or "tamalamu," (J. F. Wats.), in Tamil "mukki" (Drur.), in Burmah "tha-nat-dau" (Mason); in which we recognize the "tamala" tree of the Mrichchhakati 5, — and of Jayadeva, termed lofty by Kalidasa ragh. xiii. 15 to 49, and prescribed medicinally by Susrutas: G. pictoria was observed by Cleghorn, in Mysore along the Western Ghauts at the elevation of from two to three thousand feet; by Roxburgh, and Wight, as far as the high mountain-lands of Wynaad; by Mason v. 481 and journ. as. 1847, in Burmah, abounding on the hills bordering "the valley of the Tavoy river," and one of the two trees yielding the *gamboge* of commerce. (See G. elliptica.)

Clitoria Ternatea of the mountains of Madagascar and the Mauritius Islands. A twining herbaceous plant having Sanscrit names (Roxb., and Pidd), and called in Malabar "shlongo kuspi" or "shunkoo-pushpa," in Telinga "nulla-ghentana," in Tamil "karka kartun," in Bengalee "upara-jita," in Hindustanee "khagin" (Drur.), in Burmah "oung-mai-phyoo" (Mason), in Tagalo "colocantang" (Blanco); and the "blue clitoria" is mentioned as a garden flower in the Mrichchhakati 4 * — (transl. H. H. Wils.): the "kumari" or "gavakshi" or "girikarni" or "sveta" or "hansapada" prescribed by Susrutas chik. 8 to 30, is referred here by Hessler: C. Ternatea was observed by Rheede viii. pl. 38 in Malabar; by Graham, in gardens. "hedges and jungles everywhere" in the environs of Bombay; by Roxburgh, Wight, and Drury, common in other parts of the peninsula; by Mason 413 to 479, "exotic" in Burmah and only naturalized, its root "emetic;" by myself, in the Malayan archipelago; by Blanco, frequent throughout the Philippines, the pods sometimes eaten and the flowers used for dyeing blue; the flowers on Amboyna according to Rumphius v. pl. 31 used to tinge boiled rice a cerulean color. Westward, is known to occur in Tropical Arabia (A. Dec.); was observed by Bojer on the mountains of Madagascar, Mauritius, and Bourbon. By European colonists, was carried to the West Indies, where it continues in cultivated ground, observed on Cuba, Barbadoes, and St. Thomas (Humb., Maycock, Schlecht., and A. Dec.).

Jasminum fruticans of the Southern border of the Caspian. The *yellow jasmine* is called by the Turks "sari-jassemin" (Sibth.), in Sanscrit Hindustanee and Bengalee "hema-pooshpika" (J. F. Wats.); and according to H. H. Wilson is enumerated among garden plants in the Mrichchhakati 4: — the "yut'hica" called "hemapushpica" golden-flowered, not seen by W. Jones as. res. iv. 246, appears to be J. fruticans, the "elegant looking shrub" observed by Graham "in gardens and flower pots" at Bombay. Westward, the yellow-flowered "iasmin" is distinguished by Ebn Masawia (Rhaz. contin., and Spreng.), Isa Ebn Masah, Ishak Ebn Amran, Ebn Joljol, Avicenna, Serapion 176, Ebn Alwam, and Ebn Baitar: J. fruticans is described by Gesner f. 278, Dodoens pempt. 571, and C. Bauhin pin. 298; is termed "j. luteum vulgo dictum bacciferum" by Tournefort inst. 597; is known to occur seemingly wild at the base of the Talusch mountains and Caucasus, and along

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* *Butea superba* of Tropical Hindustan and Burmah. A woody climbing species called in Telinga "tiga-muduga" (Lindl.): the "kimsuka" as distinguished from the "dhak" in the Mrichchhakati viii, — may be compared: the "kinsuka" is mentioned by Kalidasa ragh. ix. 27, and Susrutas (Hessl.): B. superba was observed by Roxburgh cor. i. pl. 22, and Wight, among the Circar mountains, its stem "as thick or thicker than a man's leg" and "very long, running over large trees:" its sensible properties according to Lindley are "altogether the same as in B. frondosa." Farther East, was observed by Mason in Burmah, and called "pouk-nway."

Benincasa cerifera of Tropical Eastern Asia. The *white pumpkin* is called in Guzerati and in the environs of Bombay "pandree-chickee" (J. F. Wats., and Graham), in Burmah "kyouk-phayung" (Mason); and the "preserved pumpkin" of the Mrichchhakati 1., that if kept too long smells badly — (transl. H. H. Wils.), may be compared: also the "pushpap'hala," enumerated among pot-herbs by Susrutas sutr. 46: B. cerifera was observed by Rheede viii. pl. 3 in Malabar; by Graham, "commonly cultivated in Bombay and the Deccan," its "fruit sub-rotund, twelve or fifteen inches in diameter, hairy when young, smooth with a whitish bloom when ripe;" is termed "cucurbita pepo" by Roxburgh iii. 718, and was observed by him, Wight, and Drury 167, common throughout Hindustan; by Mason v. 470, "exotic" in Burmah and cultivated by both Burmese and Karens as "a valuable addition to their curries," but "never eaten by Europeans;" the "cucurbita pepo aspera," observed by Blanco on the Philippines and called in Tagalo "condol," may also be compared.

the Black Sea (Thirke, Bieb., Ledeb., and C. A. Meyer); was observed by Sibthorp in woods throughout Phrygia and as far as Smyrna; by Forskal, in gardens at Constantinople; by Bové, frequent in Algeria; is known to occur seemingly wild in Portugal, Spain, and as far even as France (A. Dec.). "J. humile" observed by Bory in Southern Greece, also "J. odoratissimum" from Madeira, are regarded as not distinct.

"655 A. D." (Plate in Sm. b. d.), the Greeks defeated by the Muslims in *naval combat*.

"656 A. D." (art de verif.), Othman succeeded by Ali, fourth khalif. Copper *coins* supposed to have been issued by him or preceding khalifs, are figured by Marcel p. 26.

"657 A. D." (Clint.), in Rome, Eugenius succeeded by Vitalianus, eleventh archbishop.

"In this year" (Badger edit. Salil-ibn-Razik p. 374), first serious dispute among the Muslims respecting the Imamate: revolt of the Khawarij, of "twelve thousand men" taking offence at Ali's submitting his right to the Khalifate to arbitration.

"658 A. D." (Blair), peace obtained from the Byzantine emperor Constans, the Muslims "agreeing to pay him one hundred thousand crowns annually."

"As late as the Seventh century," Aino tribes spread over the Northern portion of Nippon as far as "Lat. 38°" (Sieb. elucid. Vries p. 97): but "in this year" (Klapr. in transl. San-kokf 215), by the dairo-empress Zai-mei in her "fourth" year, a fleet sent under the command of Abe-no Omi against the Ainos.* With the aid of Aino tribes of Southern Yeso, certain districts were conquered, — others were added in the following year, and a government over Yeso established at Siri-besa.

"659, in the autumn" (Nipponki, Klapr., and Jap. mann. 377), an embassy from Japan to the Chinese emperor taking two natives of Yeso (Ainos) as curiosities. The emperor expressed great astonishment at their strange appearance, and was informed that their country does not produce corn, the people living on animal food, have no houses, but dwell under the trees in the mountains. They presented a white deer-skin, with a bow † and eighty arrows to the emperor. The narrative written by a Corean named Yukino Murazi.

"660 A. D." (Beda h. e. iii. 22, Cockayne iii. 453), Sigeberht II. assassinated by relatives who thought him deficient in rigour. He was succeeded as king of Essex by Swithhelm.

"661 A. D." (art de verif.), assassination of Ali. He was succeeded by Hasan; and at the end of six months, by the Muslim general Mu'awiyah of the Ommiah family. Who removed the seat of government from Medina to Damascus.

Paulus Aegineta writing in the latter half of the Seventh century — according to Abu-l-faraj (Sm. b. d.).

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* *Pedicularis verticillata* of Arctic and Subarctic climates. The leaves of "P. lanata" employed as a substitute for tea by the inhabitants of the Kurile Islands — (Ainsl. mat. ind. i. 1. 228). P. verticillata is known to grow in Siberia, on the Oby in "Lat. 67°" (Pall.), on the mountains of Daouria: and farther East, on the islands of Alaska generally as far as Sitka and Kotzebue Sound (Rothr. in Smiths. report for 1867); at Igloolik in Arctic America (Hook.); and in the alpine districts of Europe (Jacq. austr. pl. 206, and Pers.).

† *Taxus cuspidata* of Japan, as far as Yeso. A species of *yew* called by the Ainos "tarumani," in Japan "araraki" (Sieb.) or "ichii" (Jap. c. c. 30); and from early times bows made from its wood by the Ainos — (Sieb.).

Wistaria Japonica of Yeso and the neighbouring countries. Called "kutsuts," or by the Japanese "ko-fudsi" (Sieb.); in which we recognize the "fousi" whose fine interior bark is used by the Ainos for bow-strings — (according to the San-kokf transl. Klapr.); the use for bow-strings is noted by Siebold; and farther South, W. Japonica was observed by him in Japan.

Gen. ignot. of Yeso. Bow-strings also made by the Ainos of the "ayi;" a creeping plant unknown in Japan — (San-kokf transl. Klapr.).

Aconitum Kamtschaticum of Yeso and the neighbouring countries. Called "sjosinosjurk," and wild beasts killed by the Ainos with arrows poisoned with juice of the root (Sieb.; or according to the San-kokf transl. Klapr.), with bruised seeds of the Aconitum called "bou-si (fou-tsu)," mixed with "araignées à longues pattes" (regarded as probably "Phalangium araneoides)." From transported specimens, A. Kamtschaticum is described by Pallas.

Sinapis Chinensis of Yeso and the neighbouring countries. Called "kurasuf" or by the Japanese "karasi" (Sieb.); in which we recognize the "to-karasi" whose bruised seeds are mixed in the above poison — (San-kokf transl. Klapr.), so rapid in its action that the blood of the wounded bear, wolf, or other animal putrefies in a few minutes (Langsdorff ii. 287). Westward, S. Chinensis was received from China by Linnæus (Dec. prodr.); and in Hindustan (according to Lindley), the "seeds considered by Mahometan and Hindoo practitioners stimulant, stomachic, and laxative."

Veronica serpyllifolia of Europe and Northern Asia. The ΚΕΣΤΡΟΝ ΛΕΠΤΟΚΑΥΜΟΝ of Paulus Aegineta — is referred here by Turner, who further contributed an English name *Paul's betony* (Prior): V. serpyllifolia was observed by Sibthorp, around Constantinople and among grass on the Bithynian Olympus; is known to grow also on Caucasus and the Himalaya mountains and throughout Siberia (Ledeb., Wats., and Benth.). Westward, from Greece, is termed "exfragia nobilis" by Brunfels ii. 20 (Spreng.), "v. pratensis serpyllifolia" by Tournefort inst. 144; was observed by Desfontaines in Algeria; and is known to grow throughout middle and Northern Europe as far as Lapland and Iceland (Hook., and Fries). From Asia, may have been carried by colonists, Ainos or Russian, to the Pacific shore of America, where it was observed by Mertens at Norton Sound: by European colonists was carried to Madeira (Lemann); to Northeast America, where it has become extensively multiplied along roadsides and in grass-grown clearings; to the mountains of Jamaica, where it was observed by Bertero; to the environs of cities on the Andes, Santa-Fe-de-Bogota, Quito, and Quindiu (Kunth); to the Falkland Islands (Gaud., and J. D. Hook.); and to Austral Africa (Benth., and A. Dec.).

"In this year (= 1st of the 'louug-so' of Kao-tsoung," hist. Thang, and Klapr. note to geogr. Chin.); arrival in China of an embassy from Tan-lo (Quelpaerts Island): where the inhabitants wear only skins of a kind of swine, live in huts of leather, and in winter in caves, have no cattle, but cultivate grain by means of an instrument with iron points for harrowing the soil. — A second embassy arrived in "665 = 2d year of the 'lin-tĕ' of Kao-tsoung."

"In the reign of Saimei" (Jap. centen. comm. 59), the art of manufacturing *tiles* brought by a Corean to Japan.

"662 A. D." (ann. Jap., transl. Tits.), Kwŏ-gok or Zaï-meï succeeded by her son Ten-tsi, now thirty-ninth dairo of Japan.

"In the reign of the emperor Tenji" (Jap. centen. comm. 82), folding fans invented by a native of Tamba in Japan; the material at first employed being thin boards of *Chamaecyparis obtusa*. — The invention was afterwards introduced from Japan into China, as admitted in Chinese books.

"664 A. D. = 1st year of the 'lin-te' of Kao-tsoung" (Chinese chron. table), beginning of the Fifty-sixth cycle.*

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* *Uvaria odorata* of Tropical China and the Philippines. A tree called in Burmah "ka-dat-gnan" (Mason), and from early times known in China — (Rumph. ii. pl. 65). Westward, is known to occur on Java (Pers.); was observed by Mason v. 407 to 740 "exotic" in Burmah, planted around native dwellings along the coast for ornament. The "U. Sinensis" and "Unona odoratissima" called in Tagalo "alangilan," observed by Blanco on the Philippines, may be compared.

Triphasia trifoliata of Tropical China. An Aurantiaceous shrub called in the environs of Bombay "China limboo" (Graham); and from early times known in China; — bearing the "berry like an orange in miniature often found in Chinese preserves" (Mason): T. trifoliata was observed by Kaempfer v. 801, and Thunberg in Japan, growing spontaneously near villages, also planted for hedges, and employed medicinally. Westward, was observed by Mason v. 453 "exotic" in Burmah, in gardens of European residents; by N. L. Burmann 35 (Spreng.), in Hindustan; by Graham, common "in gardens" around Bombay, probably introduced from China, but found by Nimmo seemingly "wild in S. Concan." From transported specimens, is described by Linnæus.

Murraya exotica of the Tropical base of the Himalayas as far as Anam and China. An Aurantiaceous tree called in the environs of Bombay "koontee" (Graham), in Burmah "tha-nat-kha" (Mason); in Anam "cay nguyêt qui," in China "cao li yong" (Lour.) and from early times cultivated for its fragrant flowers; — termed "camunium sinense" by Rumphius v. pl. 18; and observed by Loureiro 331 seemingly wild "agrestis" in China and Anam. Southward and Westward, occurs as a shrub only under cultivation in Amboyna and Java (Lour.); was observed by Mason v. 760 "exotic" in Burmah; by N. L. Burmann 104, and Wight, in Hindustan; by Graham, an ornamental shrub "in gardens" at Bombay, "probably introduced from China," but found by Royle wild "all along the jungly tract at the foot of the Himalayas." From transported specimens, described by Linnæus.

Nephelium longan of Tropical Eastern Asia. The *wild rambutan* of the Malays is a large pinnate-leaved tree called in the environs of Bombay "wumb" (Graham), in Burmah "kyet-mouk" (Mason); in Anam "cay nhon" or "laong nhan," in China "lum yen" (Lour.), and from early times cultivated for its fruit: — N. longan was seen in China by Navarrete; grows according to Osbeck on the summit of the highest mountains; its fruit eaten with tea; but was observed by Loureiro 288 under cultivation in Anam and China. Westward, by Mason v. 454, indigenous in Burmah, bearing an agreeable fruit; by Roxburgh, and Wight, in Hindustan; by Graham, principally constituting "a forest" in "a ravine near Parr" in the environs of Bombay.

Quisqualis Indica of Tropical Eastern Asia. A woody climber called in Burmah "da-way-hmaing" (Mason), in Tagalo "niogniogan" or "tagarao," in Ylocano "tartarao," in Bisaya "tango-

"The same year" (Alst., and Nicol.), a synod at Phare in England. On the mode of observing Easter, shaving among the clergy, and other Catholic ceremonies as yet unknown to the English and Scotch.

"In this year (= 44 A. H." of Ferisht., Elph.), first appearance of the Mahometans in India, proceeding from Merv Cabul, where they made "twelve thousand" converts. A detachment under Mohalib penetrated as far as Multan, and brought back prisoners.

"666 A. D." (Alst.), order of the archbishop of Rome, Vitalianus, for the use of the Latin language in church services.

One hundred and forty-ninth generation. Sept. 1st, 667, onward mostly beyond youth: Khaled ben-Yezid: Anastasius of Nice; the poet Aegidius; the theologians, Caesarius abbas Lirinensis (Alst.), Kilianus of Scotland, Julianus of Toledo: the Welsh bard Myrdhyn or "enchanter Merlin" (Thierry in Pouchet).

"The same year" (Clavig. ii.), accession of Chalchiuhtlanetzin, first Toltec king of Mexico.

Eugenia pimenta of the West Indies and neighbouring warm portion of Mexico. Known to grow in the Vera Cruz district, and the use of its product, *pimento* or *allspice*, introduced by the Toltecs * —

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lon," in Pampango "bavebave" (Blanco), in Anam "cay tlun" or "su cuon tu," in China "xi kiun tsu" (Lour.), and from early times its nuts employed as a vermifuge; — observed by Loureiro 336 along hedges and the banks of rivers in Anam and near Canton in China; also by James Reed near Canton, and specimens shown me.; by Blanco, on the Philippines, its fruit eaten by boys; by Rumphius v. pl. 38, on the Moluccas, its seeds long in repute as anthelmintic (Drur.). Westward, by Mason 421, "exotic" in Burmah, cultivated for its "sweet-scented flowers" that change "from white to rose, and with the clouds at sunset, deepen into the richest crimson;" by N. L. Burmann pl. 35, Roxburgh, and Wight, in the gardens of Hindustan; by Graham, "common in Bombay gardens, but no where wild." By European colonists, was carried to the Mauritius Islands, where it is called "liane vermifuge" (Drur.).

Ixora coccinea of Anam and Tropical China. A flowering shrub called in Burmah "pan-sa-yeik" (Mason), in Anam "boung tlang do" (Lour.), in China "kan-long-fa" (Osb.), and doubtless from early times familiarly known: — observed by Osbeck "everywhere on hills" around Canton; by Loureiro 95, in shrubby places in Anam; by Blanco, on the Philippines, planted for ornament by the natives around their dwellings; is termed "flamma sylvarum" by Rumphius vi. pl. 47. Westward, was observed by Mason v. 415 to 786 "exotic" in Burmah, cultivated for ornament; by Burmann pl. 57, on Ceylon; by Rheede ii. pl. 12, in Malabar; by Wight, in peninsular Hindustan; by Graham, only "in gardens about Bombay," but found by Law seemingly "wild" in the Southern Mahratta country. Transported to Europe and North America, is described by Plukenet alm. pl. 59, and has become frequent in greenhouses.

Clerodendrum squamatum of Tropical China. Known there from early times; — and observed by Kaempfer pl. 58 in Japan (Pers, and Steud.). Westward, was observed by Mason v. 413 to 793 "exotic" in Burmah, cultivated for ornament, also to all appearance "naturalized." Transported to Europe, is described by Vahl, and Jacquin far. iii. pl. 300.

Amaranthus tristis of Tropical Eastern Asia. An esculent herb from early times known in China — (Pers.). Westward, was observed by Mason v. 779 "exotic" in Burmah; is termed "blitum indicum secundum" by Rumphius v. pl. 82; was observed by Roxburgh in Hindustan; by Graham, in the environs of Bombay, "cultivated in almost every garden," but he gives no native name. By European colonists, was carried to the Mauritius Islands, and to the West Indies (Moq., and A. Dec.).

Aponogeton monostachyum of Tropical Eastern Asia. An aquatic plant called in Hindustanee "ghechoo," in Malabar "parua-kalanga," in Tamil "kotee-kalangoo," in Telinga "nama" (Drur.); and from early times known in China: — observed there and in Anam by Loureiro i. 173. Westward, by Voight, along the Irrawaddy in Burmah (Mason v. 474); by Ainslie, and Roxburgh, in Hindustan, its tuberous roots eaten by the natives and nearly as good as potatoes; by Rheede xi. pl. 15, in Malabar; by Nimmo, and Graham, "margins of tanks" in the Concans as far as Bombay.

Gracilaria tenax of the China Seas. A somewhat gelatinous, slippery, filiform, dichotomous *fucus*, from early times used very extensively by the Chinese for the same purposes as glue or gum arabic — (Turner fuc. pl. 125, Agdh., Lindl., and Mason v. 508).

**Eugenia acris* of the West Indies. — The *wild clove* is a small tree "supposed to have been confounded with E. pimenta, in whose aromatic qualities it altogether participates" (Lindl.); is known to grow on Antigua, Barbados, and Jamaica (Jacq. obs., Swartz fl. ii. 909, and Pers.), and according to Lunan its berries and sweetly aromatic leaves are used for culinary purposes. By European colonists was carried "from America" to Hindustan, observed by Graham at Bombay, in gardens not common, and called "lung;" by Wight, and Drury, at Courtallum, Travancore, and Madras, its timber hard and heavy. Transported to Europe, is described by Plukenet alm. pl. 155 f. 3, and is distinguished as "caryophyllus racemosus" by Miller (Steud.).

(Humb. iv. 9): E. pimenta was observed by Swartz obs. 202 in the West Indies. Transported to Europe, is described by Plukenet alm. pl. 155. f 4, Blackwell pl. 355, and Miller; and its imported product has become a well-known condiment, used also medicinally (Lindl.); was observed by Rouyer in the drug shops of Egypt.

Zea mays of Tropical America. The cultivation of *maize* or *Indian corn* introduced into Mexico by the Toltecs — (Humb.): the grain was used in the religious rites of both Mexicans and Peruvians (A. Dec. 951), and sugar procured by them from it, also a vinous liquor called "chicha," drunkenness having already become frequent under the Aztec dynasty (Qvied., and Humb. iv. 9): spikes of maize were observed by myself in the ancient Peruvian cemetery at Pachacamac: bread made of "maiz" or "mahiz" was seen by Columbus in the West Indies (F. Columb. 28), also by Oviedo nat. hyst. f. 5. Farther North, Thorwald in 1003 found in Vinland a wooden "kornhjalmr" corn-shed, and Z. mays is known to have been cultivated by the native tribes of Northeast America as far as the Bay of St. Lawrence. Transported to Europe, was seen by Oviedo before 1525 under cultivation in Spain; according to Rhamnusis, "was first seen in Italy in his own time;" and according to tradition and the current names, from Turkey and Syria reached Egypt and the mountains of Yemen (Forsk., and Del.); also directly or indirectly by European colonists was carried to Hindustan, observed by Roxburgh, and Graham, "commonly cultivated" and called "muk jowaree-boota," and according to Drury "next to rice it forms the most important crop in the east" especially "in Behar and Upper India;" to Ceylon, called there "muwa" (Moon); to Burmah, called there "pyoung-boo" (Mason); to the Malayan archipelago, called throughout "jagung" (Crawf.), observed by myself under cultivation on Mindanao, by Blanco, valued and well known on the other Philippine Islands; to China, mentioned by Li-chi-tchin in 1552 to 1578 (A. Dec.); to Japan, brought perhaps from China, cultivated near Nagasaki and called "sjo kuso" or usually "too kibbi" (Kaempf. v. 834, and Thunb.); and to most parts of the world having a suitable climate, the Tropical islands of the Pacific forming at present the only considerable exception.

"668, May 18th" (Pauth. 301), a *comet*. Regarded with much alarm by the Chinese emperor Kao-tsoung. "Oct. 22d," submission of the king of Corea, after the capture of his chief city by the Chinese.*

"The same year" (Sm. b. d.), Constans succeeded by Constantinus IV. Pogonatus, eighteenth Byzantine emperor.

"669 A. D." (Pauth. 302), in the region of Lake Kokonoor, the Chinese army defeated by the Thibetians. Ioulun-Tieghin chief of the Ouigours is known to have warred against the Chinese under the Thang (see Klapr. mem. ii. 333).

"670 A. D." (Cockayne iii. 451), the abbey in Thanet founded by Eormenburh, daughter of Eormenred king of Kent, with the wergild she had exacted for her murdered brothers.

"672 A. D." (Plate in Sm. b. d.), after the capture of Smyrna and most of the Greek islands, the blockade of Constantinople begun by the Muslim fleet. In the defence, *Greek fire*, newly invented by Callinicus, employed with success. — A "kind of fire" was seen by Brocquière at Baruth, that was "launched into the air very high and to a great distance" (evidently after the manner of rockets).

"The same year" (Clint.), in Rome, Vitalianus succeeded by Adeodatus, twelfth archbishop.

"The same year" (Beda. h. e. iv. 18, and Cockayne iii. 449), Æthelthrith, daughter of Anna king of the East Angles, appointed abbess of Ely; the monastery containing both men and women, as was the way in Ireland.

"The same year" (ann. Jap., and art de verif.), Tent-sii succeeded by his brother Tenmu or Tenbou, now "fortieth" dairo of Japan.

Gelidium corneum of Japan. A *seaweed*† called "tengusa;" affording "kanten or vegetable

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* *Urtica Japonica* of Japan. White cloth made by the Coreans of the fibres of the "tchu" as early probably as this date: — this kind of cloth is enumerated among the articles sent as tribute to the Chinese emperor (geogr. Chin. transl. Klapr. 167). U. Japonica was observed in Japan by Thunberg, its fibres used for cords.

Malus baccata of Eastern Asia. Called "men-tsu-fou" by the Coreans, and "lin-khin" by the Chinese — (vocab. Klapr.). Known to grow also in Daouria along the river Schilka, and in Siberia (Pall. i. pl. 19, and Pers.).

† *Chondrus sp.* of Japan. A *seaweed* called "fu," resembling carrageen, and from early times "much used for industrial purposes," as "for instance, the sizing of the warp of silk goods" — (Jap. c. c. 109).

Quercus serrata of Japan. An *oak* known from early times, its branches placed in the sea to promote the growth of seaweed, by furnishing a basis for attachment — (Jap. c. c. 109): Q. serrata was observed in Japan by Thunberg.

isinglass, employed from early times for cooking purposes, making moulds, and "as a substitute for all kinds of gelatines." — Imported into Europe, it is sold under the name of *agar-agar* (Jap. centen. comm. 108).

673 A. D. (= "2d year of Tenmu," art de verif.), in Japan, building of the celebrated temple of Midera.

674 A. D. (= "3d year of Tenmu," art de verif.), *silver* mines opened by the Coreans on the island of Tsussima, and the metal brought to Japan.

675 A. D. (= "4th year of Tenmu," art de verif.), celebration of the first Matsuri; a noted religious festival of the Japanese.

"676 A. D." (Alst., and Nicol.), at Rome, Adeodatus succeeded by Donus or Domnus, thirteenth archbishop.

"678 A. D." (Pauth. 302); near Lake Kokonoor, a Chinese army of "one hundred and eighty thousand" men defeated by the Thibetians.

"The same year" (Alst.). at Rome, Domnus succeeded by Agatho, fourteenth archbishop.

"679 A. D." (Beda, and Cockayne p. xxvi.), in Britain, a surgical operation performed by the leech Cynifrid or Cyneferth; who opened a tumour for Aetheldryth queen and abbess, without saving her life.

"In this year" (Sm. b. d.), after the destruction of many ships by *Greek fire*, the fleet of the Muslims compelled to retire from Constantinople, and wrecked in a storm: their retreating land army also overtaken and defeated by the Greeks, and a treaty of peace signed by khalif Mu'awiyah. The Bulgarians however obtained from the Greek emperor a cession of that country South of the Danube which is still called Bulgaria.

The treatise De aliment. is dedicated to Constantinus IV. Pogonatus.

Portulaca oleracea of Tropical or Subtropical America. Called in Britain *purslane*, by Turner "purcellaine," by Treveris "porcelayne," in Germany "portzel kraut" from "porcellus" according to Fuchsius p. 111, in France "porcellaine" (Prior), in Italy "porcellana" (Lenz), in Greece "glustritha" (Sibth.), in Egypt "baqlæ" or "ridjle" (Forsk.), and the ΧΟΙΡΟΒΟΤΑΝΟΝ of the treatise De aliment., — and Psellus 296, is referred here by E. A. Sophocles: P. oleracea is termed "p. angustifolia sive sylvestris" by Tournefort inst. 236; was observed by Munby in Algeria; is known to occur in Italy and throughout middle Europe, cultivated and growing as a weed (A. Dec., and Lenz); was observed by Forskal, Sibthorp, and Fraas, frequent in waste and cultivated ground from the Peloponnesus to the Greek islands and Asia Minor, and eaten crude; is known to occur also in the Tauro-Caspian countries (Ledeb.). Farther South, the "baklat elhamaka" of Ebn Masawia, Maserjawia, Hobaisch, Rhazes, Mosih, and Avicenna, is identified by Ebn Baitar with the "ridjlat;" the "ridjlet" is mentioned also by Rabbinical writers (Schwarz); mingling its seeds in medicines, by Mesue trocisc., and Abd-allatif i. 6; seeds of P. oleracea were found by Forskal mat. med. sold for this purpose in Egypt, and the living plant was observed by him, and Delile, in gardens as well as growing spontaneously: is called "segettemam" in Nubia (Del.); is known to occur also in Abyssinia (A. Rich.); was observed by Forskal under cultivation on the plains and mountains of Yemen, and called "ridjlet el farras" or "dænneb el farras" or "brabra" or "chamile;" by myself, sold in bundles at Mocha, and growing in the streets of Muscat. Eastward from Arabia, was observed by Rheede x. pl. 36, Roxburgh, and Wight, in Hindustan, according to Graham "common in moist places;" by Mason v. p. 473, a common weed in Burmah, "used by the natives for a pot-herb" and called "myæ-byet;" by Zoll., and Blume, on Java; by Blanco, on the Philippines and called in Tagalo "colasiman" or "olasiman," in Camarines "ausiman;" by Bunge, in Northern China; by Kaempfer, and Thunberg, in waste and cultivated ground everywhere in Japan, and called "bakin," or usually "uma biju" or "siberi fiju;" by myself, among the islands of the Pacific only on Tongataboo, Taheiti, and the Hawaiian Islands, clearly introduced (though perhaps not aboriginally by Polynesians). Farther East, was observed by E. James at the sources of the Arkansas and Platte along the Rocky mountains, by Nuttall on the Upper Missouri, and may have thence accompanied aboriginal agriculture to the Atlantic, for "purselin" was found by Strachey along James river in 1610, "purselane" by W. Wood in New England in 1629, and "wild purcelane" by Josselyn before 1670: P. oleracea having no flowering-season seems essentially a Tropical plant, and "verdolagas o portulaca" is enumerated by Oviedo nat. hyst. 80 and gen. xi. 2 as one of three plants common to Spain and the West Indies, the "portulaca" by Lerius in 1556 among the three plants common to Europe and Brazil, and "purslane" was observed by Richard Hawkins in 1593 on the St. Anne's Islands in S. Lat. 22° 30′ off the Brazilian coast. By European colonists, P. oleracea may have been carried to the Azores (Wats.); to Austral Africa (Thunb.); to the Mauritius Islands (Boj., and A. Dec.); and as intimated above, to the Polynesian islands.

Ribes uva-crispa of Northern Europe and mountains farther South. Called in Britain *gooseberry*, in the Eastern counties *ihape* or *fape* or *feabe* or *fea-berry*, in Germany "kräusel-beere" or by

Matthioli "creutzbeer," in France "groseille" (Prior) or by Dodoens "groisseletz" (A. Dec.), in Brittany "spezad" (Legonid.), in Greece "lagōkĕrasia" (Sibth.): the ΒΑΤΖΗΝΑ Ο ΔΕ ΤΗC ΛΑΓΙΝΙΔΟC ΚΑΡΠΟC of De alim. 13 — may be compared: also the "ribes" growing according to Serapion on the cold snowy mountains of Syria and bearing berries sweet to the taste with some acidity (Isaac, and Ort. San. 392): R. uva-crispa was observed by Sibthorp, and Chaubard, on the mountains of the Peloponnesus; and by Forskal, in its cultivated form in the gardens of Constantinople. Westward, is described by Ruellius p. 283, and Dodoens p. 748; is termed "grossularia simplici acino vel spinosa sylvestris" by Tournefort inst. 639; is known to grow wild in France and throughout Northern Europe (Schmidel pl. i, Pers., Dec. fl. fr., and Ledeb. fl. ross.); and was already cultivated in the days of Matthioli p. 135. By European colonists, its cultivated form "R. grossularia" was carried to Northeast America, where it continues in gardens, lingering and producing only inferior fruit.

"680 A. D." (art de verif.), Mu'awiyah succeeded by Yezid, second Ommiad khalif.

"Oct. 10th" (Badger edit. Salil-ibn-Razik p. 311), Husein, son of Ali, slain in battle at Kerbela in Babylonian Irak.

"Nov. 7th" (Alst., and Nicol.), Sixth general ecclesiastical Council. Convened at Constantinople, against the Monothelites. Marriage among the clergy was sanctioned. — The authority of this Council continues to be recognized by the Greek church (E. A. Soph.).

"681, Jan. 9th" (Nicol.), in a synod at Toledo, king Wamba's renunciation of the throne confirmed.

The same year (= "tenth year of Tenmu," art de verif., see also Jap. centen. comm. 49), *copper* discovered in Japan; *silver* money prohibited, and putjes of *copper* and *bronze* substituted. The empire about the same time divided into sixty-six provinces.*

"683 A. D." (art de verif.), Yezid succeeded by Mu'awiyah II., third Ommiad khalif.

"The same year" (Alst.), at Rome, Agatho succeeded by Leo the younger, fifteenth archbishop.

"Towards the close of the Seventh century" (quart. rev. for 1870), Anglo-Saxon version of Scriptural narratives by Caedmon, a monk residing "in the convent of Streaneshalch (Whitby)," and, regarded as the "father of English poetry."

"684 A. D. = 'sse-tching,' 1st year of Tchoung-tsoung;" his mother Wou-heou being the real ruler — (Chinese chron. table).

"The same year" (art de verif.), Mu'awiyah II. succeeded by Merwan, fourth Ommiad khalif.

"The same year" (Alst., and Nicol.), at Rome, Leo the younger succeeded by Benedict the younger, sixteenth archbishop.

"685 A. D." (art de verif.), Merwan succeeded by Abd-el-Melek, fifth Ommiad khalif. In the reign of Abd-el-Melek (Wilk. theb. and eg. p. 541), a *nilometer* constructed at Helwan (near the present city of Cairo).

Oman, hitherto nominally under the authority of the khalifs, its subjection undertaken by Hajjaj governor of Irak. — After various futile attempts by his generals, he succeeded; the defeated brothers Suleiman and Said, descendants of the Azdite Julanda, taking refuge in Zanj. The earliest emigration on record of Oman Arabs to the East coast of Africa (Badger edit. Salil-ibn-Razik p. xiii and 5).

The Greek physician Theodocus or Tiaduk in the service of Hajaj Ibn Yusuf — (Ebn Osaibi'ah vii. 5, Abu-l-Faraj, and Sm.-b. d.).

The "burak" considered Armenian by Tiaduk (Theodocus), — mentioned also by Ishak Ben Amran, Mahmed Ben Hasan, Jisch Ben Hasan, Mosih, Avicenna, Edrisi, Ebn Wafid, Serapion, Madschul, and Ebn Baitar, or "borad" of the Persians, is referred by J. de Sousa to *borax* or borate of soda. Farther East, this salt is mentioned by the Sanscrit medical writer Susrutas (F. Adams); and was ascertained by Saunders and Turner to be procured from a lake in Thibet. More recently, borax is said to be artificially manufactured in the Mediterranean countries; and has been procured in large quantities from a lake in California.

Gnaphalium leontopodium of Switzerland and the Pyrenees. The "komes elbahri" of Tiaduk, — and Ebn Baitar, is referred here by Sontheimer: G. leontopodium is described by Matthioli p. 828 (Spreng.); is termed "filago stellata" by Lamarck fl. fr.; and is known to grow on the alpine portion of Switzerland and the Pyrenees (Pers., and Steud.)

"The same year" (Alst., and Nicol.), at Rome, Benedictus the younger succeeded by Joannes the fifth, seventeenth archbishop.

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* *Erythronium "grandiflorum"* of Japan. From early times, a kind of starch called "kata-kuri" made there "of the root of a kind of dog's-tooth violet" — (see Jap. centen. comm. 34 and 110).

"In this year (= 10th year of the Gothic king Ricisvintus" of the addit. to chron. Isidor., see Clint. v. p. 399), Ildefonsus appointed bishop of Toledo.

"September" (Alst., and Sm. b. d.), Constantinus IV. succeeded by Justinianus II., nineteenth Byzantine emperor.

Arculf visiting Jerusalem, found on the site of the temple a square Muslim house of prayer; of beams and planks erected in a rough manner upon some remains of old ruins: while at Damascus, a large mosque had been built by the Muslims (said to be a Christian church on the foundations of a Roman temple to Juno, Leps. eg. and sin. p. 343). Proceeding to Egypt, Arculf speaks of Alexandria as a very large city, in a manner the emporium of the whole world; the *pharos* being a large tower lighted up at night with torches, lest mariners might mistake their way and be dashed against the rocks in seeking the entrance to the harbour. Arculf also visited Constantinople, and the church of St. Sophia there, of which he gives a detailed description (T. Wright early trav. in Palest.).

"687 A. D." (Alst.), at Rome, Joannes the fifth succeeded by Conon, eighteenth archbishop.

"The same year" (ann. Jap. transl., and art de verif.), Tenmu succeeded by his widow and niece Dsito or Si-to, now forty-first dairo of Japan. — Under her reign, sakki or *rice-beer* was first brewed.

"688 A. D." (Alst.), at Rome, Conon succeeded by Sergius, nineteenth archbishop.

"692 A. D." (Nicol.), a synod convened in Britain by king Ina. "For the union of the Britons with the Saxons."

About this time (quart. rev 1870), the "Psalms" translated into Anglo-Saxon by Guthlac or Gurthlake, the first Saxon anchorite.

"693, May 2d" (Nicol.), in a synod at Toledo, the book of "Gothic law, or the code of Alaric," confirmed.

"694 A. D." (Nicol.), in a synod at Beaconsfield in England, promise of Vitred king of Kent, "to preserve the liberties and immunities of the churches and monasteries."

"695 A. D." (Elph. iv. 1), Manik Rai, eighth Hindu king of Ajmir, reigning.

"In this year" (Sm. b. d.), revolt at Constantinople and Justinianus II. dethroned, his nose cut off but his life spared by Leontius. — Nine years later "in 704," he recovered his authority.

"697 A. D." (= 1357th of Synmu," art de verif.), Dsito succeeded by Monmu, grandson of Tenmu, and now "forty-second" dairo of Japan.

"The same year" (Nicol.), a synod at Berkhampsted, the king and clergy being present. Twenty-eight canons were made, awarding temporal as well as spiritual punishment.

Manuscripts of the "Seventh or Eighth century" (De Wailly pl. iv. 4) presenting the following form of the letter r.

"698 A. D." = "79th year of the Hejra," inscribed on a coin issued by Abd-el-Melek, and figured by Marcel p. 34. By some writers, this is regarded as the earliest *Muslim coin:* but according to Marcel, *copper* only had been coined by the Muslims until the reign of Abd-el-Melek; who first coined *silver*, to the exclusion of Greek and Persian money.

Owing to the persecutions of khalif Abd-el-Melek, Hashimid Arabs emigrated to Ceylon, and found a refuge there in eight different cities * — (trans. Asiat. i. 538, and Gildem. p. 53).

"From this year" in Britain, Eadfrith bishop of Lindisfarne — twenty-three years. A piece of ornamental writing by Eadfrith, continues extant in the Durham book (Cockayne anglo-sax. ii. p. xxi).

"698 or 700 A. D." (Gildemeist. 6, and Wilson note to Vishnu purana iv. 24), the Muslims engaged in hostilities against Ratbal or Ratibal prince of Cabul; — the Hindu Ratanpal or Ratnapal.

"At the end of the Seventh century" (Pouchet. moyen âge), Iceland discovered. — In "795" (according to Dicuilus) some Irish devotees retired into this island. Relics of hermits, as "books and staffs," were found by the first Scandinavian visitors (see Rafn).

One hundred and fiftieth generation. Jan. 1st, 701, onward mostly beyond youth: Marcellinus presbyter, Andreas of Crete; Anthelmus, Bonifacius or Venofridus of Mayence, the monk Othmarus.

"702 A. D." (Alst.), at Rome, Sergius succeeded by Joannes the sixth, twentieth archbishop.

"704 A. D." (Beda, and Cockayne iii. p. 452), accession of Offa as king of Essex.

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* *Tabernæmontana dichotoma* of Ceylon and Southern Hindustan. Regarded as the forbidden fruit by the natives of Ceylon; who allege the fragrance of the flower, and that the beautiful tempting fruit changed from delicious to poisonous on the occasion of the transgression, and continues to bear the marks of Eve's teeth — (geogr. plant. lond. tract soc.). A small tree called "titul" or "doodee-ka-jhar" in the environs of Bombay, is regarded by Graham as probably identical, growing on the Parr Ghaut and the hills at Jooner, the flowers white and fragrant, and a decoction of the leaves found by Twemlow "used for curing sores on cattle;" described also by Roxburgh ii. p. 21.

The same year (= "8th year of Monmu," art de verif.), a coat of arms, toiaps, assigned by Monmu to each province of Japan.

705 A. D. (= "9th year of Monmu," art de verif.), a square wooden measure called "sio" and "maas," sent as a standard by Monmu to the different provinces throughout Japan.

"The same year = 'chin-loung,' the real commencement of the reign of Tchoung-tsoung," on the death of his mother Wou-heou — (Chinese chron. table, and Pauth. 306).

"The same year" (Alst., and Nicol.), at Rome, Joannes the sixth succeeded by Joannes the seventh, twenty-first archbishop.

"The same year" (art. de verif.), Abd-el-Melek succeeded by Walid, sixth Ommiad khalif. Coins were issued by Walid (see Marcel 34): and during his reign, the mosque El-Djame el-Atyk commenced (near the present city of Cairo).

The "man" of Chuz or Alkanzi, — Maserjawia, Hobaisch, Ebn Masah, Rhazes, and Ebn Baitar, is referred by Ehrenberg, and Royle (Kitt. cycl. bibl.) to the *manna* produced by *Coccus manniparis;* an insect chiefly or altogether confined to the Sinai Peninsula, and feeding on Tamarix Gallica: the substance is also described by Seetzen, as seen by him on the spot.

Convolvulus (*Ipomoea*) *turpethum* of Tropical shores, from Hindustan throughout the East Indies and islands of the Pacific to the Taheitian Group. The "turbud" of Chuz, — Ebn Masawia, Maserjawia, Hobaisch, Rhazes, Haly Abbas, Mesue, Avicenna, Serapion, and Ebn Baitar, is referred by writers to this plant, and its imported product: the medicinal use in Egypt of "turbetum from India" or *turbith* is mentioned by Alpinus, and Forskal mat. med.; and I. turpethum is termed "turpethum repens fol. althaeae vel indicum" by C. Bauhin pin. 149. Eastward from Egypt, the "torbit" of "Melibar" is mentioned by Marco Polo 183; and I. turpethum is called in Bengalee "teoree" or "dood-kulmi," in Telinga "tellatagada;" was observed in Hindustan by Roxburgh, and Wight; by Graham, and Gibson, growing from Goozerat to beyond Bombay in the Concans or low country, and "the bark of the roots" used "by native doctors as a cathartic;" was observed on Ceylon by Hermann cat. lugd. 178. Farther East, was observed by Mason in Burmah; is known to grow throughout the East Indies as far as Timor and the neighbouring portion of Australia, also on the Marianne, Tongan, and Taheitian Islands (Lindl.); and was observed by myself throughout the Tropical Polynesian groups, from the Feejee Islands to Metia.

Lablab vulgaris of Tropical Eastern Asia. Called in Egypt "leblab," in which we recognize the "lebleb" of Alkanzi, — Ebn Masawia, Ebn Amran, Haly Abbas, Elgafaki, Serapion, and Ebn Baitar: L. vulgaris was observed by Alpinus pl. 75, Forskal, Delile, and Clot-Bey, in the gardens of Egypt, cultivated to form arbours, and in Nubia called "ougoudky." Eastward, has a Sanscrit name (Roxb., Pidd., and A. Dec.); was observed in Hindustan by Roxburgh, Wight, Drury, and according to Graham, is called "saim ka puttee" and "several varieties" are "commonly cultivated:" is enumerated by Mason v. p. 466 among esculents, "exotic" in Burmah, called "pai," and "several varieties of one or two species" cultivated by the Karens and Burmese. Farther East, an unobtrusive white-flowered variety was observed by myself aboriginally introduced around dwellings on the Feejeean Islands, and on the Hawaiian Islands decidedly naturalized. By European colonists, the ornamental purple-flowered variety was carried to the Hawaiian Islands; also to Northeast America, where it continues to be cultivated in gardens.

Rhododendron lepidotum of the Himalaya mountains. The "thalisfar" of Elmadschusi, — Honain, Elhuri, Ebn Amran, Ebn Joljol, Avicenna, Elgafaki, and Ebn Baitar, is referred by Royle to the imported leaves, described as "highly aromatic." The living shrub was observed by him on the Himalaya mountains.

"In or about 706 A. D." (quart. rev. for 1870), the "Psalter" translated into Anglo-Saxon by Aldhelm or Ealdhelm, bishop of Sherborn, and "among the first of the Saxon ecclesiastics who was distinguished for learning:"

"708 A. D." (ann. Jap., and art de verif.), in Japan, and Monmu succeeded as dairo by Genonei or Ghenmio, daughter of the "thirty-ninth" emperor Tent-sii. In the first year of her reign, Genonei coined gold and silver money: — but the latter was prohibited in the following year.

"In this year" (Humb. atl. pict.), and "in the reign of Ixtlicuechahuac," second Toltec king of Mexico, the Teo-amoxtli containing the history, mythology, laws, and the remarkable and singularly exact *calendar* of the Mexicans, composed by the astrologer Huematzin. (The accession of Ixtlicuechahuac is placed "667 + cycle of 52 yrs" = 11 years later by Clavigero ii).

The *turkey*, Meleagris gallipavo, domesticated in Central America as early possibly as this date. The bird was brought, perhaps by the way of Mexico from Northeast America; where it is indigenous, — but in no instance on record has been tamed by the aboriginal tribes. Honduras was first visited by Europeans in 1502, when "hens of that country which are better than ours" were brought by the natives to Columbus (F. Columb. 90; or in the words of Gomara) "gallipauos que son mejores que pauos y gallinas." In New Spain, according to Oviedo nat. hyst. 37, there are "otros pauos

mayores y mijores de sabor y mas hermosas," many of which birds have been imported into the islands and into Spain. Some years later, the turkey became generally known in Europe; and after the visit of Alpinus, was introduced into Egypt, where one of its names "Maltese fowl" indicates the route of transmission.

The *musk duck*, Anas moschata, domesticated in Central America as early possibly as this date: —"geese like ours" were observed by Columbus in 1493 in the houses of the natives on Guadalupe; and were afterwards met with in Honduras (F. Columb. 47 and 90). A. moschata is known to occur in the wild state in Guayana (Schomburgk edit. Ralegh), and I have seen specimens from Surinam. As transported to Europe, the domesticated bird is figured by Belon, and has since become well known; its presence in Egypt, may be inferred from a remark of Clot-Bey. The bird is kept with other poultry in our Middle and Southern States, straying in some instances and reverting to secondary wildness. By European colonists also, the bird was carried to the Hawaiian Islands.

Lycopersicum esculentum of Central America or the neighbouring portion of South America. The *tomato* was called "tomatl" and sown among maize by the ancient Mexicans — (Humb. iv. 9). Transported to Europe, is described by Gesner, termed "tumatle americanorum" by Guilandinus, "mala peruviana" by Eyst. (Bauhin hist. iii. 621); is also described by Anguillara, Lobel, and Camerarius; was observed by Chaubard under cultivation in Greece; by Delile, and Clot-Bey, abundantly cultivated in Egypt and called "bydingan toumaten." Also by Europeans was carried Westward across the Pacific to the Philippines, where it has become a favourite with the natives and is called in Tagalo "tomates" or "camatis" (Blanco); to the neighbouring islands, called by the Malays "tomatte" (Rumph. v. 416); to Anam (Loureir.); to Burmah, called there "kha-yan-myæ-phung" (Mason); to Hindustan, observed there by Roxburgh, by Nimmo thriving luxuriantly at Surat, by Gibson, and Graham, naturalized "in many parts of the Deccan," and called "wall wangee;" to the Mauritius Islands (A. Dec.). In Northern climates, its cultivation is increasing in importance, was introduced into Barbadoes only in the middle of the Eighteenth century (Hughes 148), was unknown within my memory in Eastern New England, but I found it extended in 1841 to the Kooskoosky mission-station in Oregon.

"The same year" (Alst., and Nicol.), at Rome, Joannes the seventh succeeded by Sisinnius or Zosimus; and before the close of the year, by Constantinus, twenty-third archbishop.

"709 A. D. About this time" (Blair), the "Laws of the Saxons" published by Ina king of Wessex.

"The same year" (Beda, and Cockayne iii. 452), Offa having abandoned his wife and country to become a monk in Rome, succeeded as king of Essex by Selred.

710 A. D. (= "3d year of Genonei," art de verif.), in Japan, building of the temple of Koobo-kusi, to contain the idol of Xaco, made of gold and bronze by the celebrated sculptor Taisoquan.

"The same year = 'king-yan,' 1st year of Joui-tsoung, of the Thang" or Fifteenth dynasty — (Chinese chron. table).

"The same year" (art de verif.), by permission of khalif Walid, entrance of the Muslims into Spain. — After three years (Blair), they obtained possession.

"The same year" (Alst.), a synod at London. Confirming the use of image-symbols and the celibacy of the priesthood.

"711 A. D." (Biogr. Univ.), accession of Dagobert II., king of the Franks.

"In this year" (Alst.), Justinian II. succeeded by Philippicus, twentieth Byzantine emperor.

"In this year (= 4th of Ghen-mio," ann. Jap. transl. Tits.), Foudo-no Yasou maro (Taï Ngan ma liu) publishing the Ko-si-ki or history of Japan, from the earliest times down to "597 A. D."

"In this year (= 92 A. H." of Ferisht., Elph.), Second Muslim invasion of Hindustan. Leaving Shiraz, Mohammed Casim with "six thousand" men reached Dewal or Dival, the seaport of Sind (near or within the delta of the Indus), captured the temple and town and circumcised the bramins. Next proceeding to the head of the delta and up the Indus, he defeated the Hindu king Dahir, and obtained possession of his capital Alor (near Bakkar on the Indus) and of all Sind.

"713 A. D. = 'kai-youan,' 1st year of Ming-hoang-ti." or Hiouan-tsoung, of the Thang or Fifteenth dynasty (Chinese chron. table). Arrival in this year (Gaubil, and Pauth. 311) of an embassy from the king of Kia-che-mi-lo (Cashmere), a country inimical to Thibet, surrounded by very high mountains, and not easily invaded: from king Chin-tho-lo-pi-li, in Sanscrit Chandrapida, for aid against the Arabs (Gildemeist. 13, and Wilson note to Vishnu purana iv. 24).

"The same year" (Alst.), Philippicus succeeded by Anastasius II., twenty-first Byzantine emperor.

"In this year (= 6th of Ghen-mio," ann. Jap. transl. Tits.), the Foo-to-ki (Fung-thou-ki) completed, containing a description of all the provinces, cities, mountains, plants, birds, and quadrupeds of Japan.

"714 A. D. (= 96 A. H. comm. Sept. 15th," Ebn Khallikan, and Gildem. 12), expedition of the Muslim general Kutaiba ben Muslim against Kashgar; and a treaty made with Chinese legates, the first ever sent to the Arabs.

"715 A. D. (= 1375th of Synmu," art de verif.); Genonei succeeded by Gensioo, granddaughter of Tenmu, and now at the age of fourteen dairo of Japan.

"The same year" (Alst.), Anastasius II. succeeded by Theodosius III., twenty-second Byzantine emperor.

"In this year" (Biograph. univers.), end of the reign of Dagobert II., king of the Franks.

"The same year" (Alst., and Nicol.), at Rome, Constantinus succeeded by Gregorius the younger, twenty-fourth archbishop. At this time (= "720" of Beda), the practice in England among nobles and others, men and women, to make visits or pilgrimages to Rome.

"The same year" (art de verif.), Walid succeeded by Soliman, seventh Ommiad khalif. "In the reign of Soliman," building of the *nilometer* on Rhoda islet (not far from the present city of Cairo); round arches continuing in vogue.

"716 A. D. (= 94 A. H.," Elph. v. 1), date of an inscription in *Persian* in the country between the Oxus and Jaxartes, — seen by Burnes ii. 269 to 356.

"In this year" (Alst.), Theodosius III. succeeded by Leo III. Isaurus, twenty-third Byzantine emperor.

"In or about this year" (Abulfeda in Kitt. cycl. bibl.), the city of Ramleh, "twenty-four" miles Northwestward from Jerusalem, founded by khalif Soliman. The great caravan-road from Constantinople, Smyrna, and Damascus, passes through Ramleh to Egypt. — The city is mentioned about 154 years after its foundation, by the monk Bernard; and in the time of Edrisi, was next after Jerusalem the principal city of Palestine.

"In this year" (Jap. mann. 383), two Japanese students visiting China: one of whom returning became under the designation of Kibino Daisi the most celebrated learned man produced in Japan: the other remaining behind, was so honoured in China that he held the appointment of Archive keeper "sixty-one years."

"717 A. D." (art de verif.), Soliman succeeded by Omar II., eighth Ommiad khalif.

"718 A. D." (Gaubil, and Pauth. 314), a Sanscrit treatise on *Astronomy* translated into Chinese by Y-hang. Who further constructed instruments, and sent mathematicians North and South a long distance, to triangulate and ascertain the length of the degrees of Latitude, and the position of places on the Earth's surface. Y-hang maintained, That the planet Jupiter completes its revolutions in less than twelve years; having in "eighty-four years" made "seven revolutions and traversed in addition one twelfth part of the zodiac."

The Vetala panchavinsati, a series of twenty-five Sanscrit Tales, written as early perhaps as this date.*

"720 A. D." (art de verif.), Omar II. succeeded by Yezid II., ninth Ommiad khalif.

"In or about this year" (hist. Cashm., and H. H. Wils. hind. dram. ii. 4), Yasovarman reigning at Kanoj. He patronized the Sanscrit dramatist Bhavabhuti. Bhrigu, Viswamitra, Jamadagnya (Parasurama son of Jamadagni), also the sage Agastya, Vasishtha, the poetess Sakuntala, and Valmiki author of the Ramayana, are mentioned by Bhavabhuti.†

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* *Erythrina Indica* of Tropical Hindustan and Burmah. A species of *coral tree* called in Malabar "moolloo-moorikah," in Tamil "muruka-marum," in Telinga "badide-chettu," in Bengalee "palita-mandar," in Hindustanee "furrud" (Drur.), in the environs of Bombay "pangara" (Graham), in Burmah "ka-theet" (Mason); in which we recognize the "muruca" tree of the Vetala panchavinsati, — referred here by B. G. Babington (lond. Or. transl.): E. Indica was observed by Rheede vi. pl. 7 in Malabar; by Graham, "common throughout the Concans," a "middle sized tree, trunk and branches armed with black prickles," in the Deccan "generally used as a prop for vines;" by Roxburgh; and Wight, in other parts of Hindustan as far as Coromandel and Bengal, yielding the *mootchie wood*, light and easily worked, much used for boxes, sword-scabbards, toys, idols, and even rafts and canoes (B. G. Bab., and Drur.); by Mason v. 531, indigenous in Burmah, furnishing soft white wood "as easily worked as the pine."

† *Elæocarpus ganitrus* of Tropical Hindustan. A tree called in the environs of Bombay "oodrach" (Graham); and the sacred rosary around the wrist of the military student mentioned by Bhavabhuti uttar. iv. — (transl. H. H. Wils.), the circlet of grains of "aksha" of Kalidasa ragh. xi. 56, and the "aksha" prescribed by Susrutas, are referred here by writers: E. ganitrus is described by Rumphius iii. pl. 101; was observed by Nimmo in the Southern Concan, the nuts "worn as necklaces by Brahmins and Faqueers" (Graham); by Roxburgh, and Wight, in other parts of Hindustan; and by Burmann pl. 20, on Ceylon. By European colonists, was carried to the Mauritius Islands, where it continues in gardens (Boj.).

Cedrela (*Soymida*) *febrifuga* of Tropical Hindustan. A large tree called in Sanscrit "rohuna," in Mahratti "rohuni" (J. F. Wats.), in Hindustanee "rohana," in Bengalee "rohun," in Telinga

Mimusops elengi of Tropical Hindustan. An ornamental tree called in Sanscrit "bakula" or "vukoola" (J. F. Wats.), in Bengalee "bukul," in Hindustanee "mulsari," in Malabar "elengee," in Telinga "poghada," in Tamil "maghadam" (Drur.), in Mahratta "bugool" or "buckoolee," in the environs of Bombay "vowlee" (Graham); in which we recognize the "bakula" flowers of Bhavabhuti mal. ii., — Jayadeva, and the "vakula" tree and flowers of Kalidasa ragh. viii. 63 to ix. 33, Susrutas, and the Avadana purna: M. elengi was observed by Rheede i. pl. 20 in Malabar; by Graham, "in gardens Bombay," and "wild in the ravines at Kandalla," the "Mussulmen had the good taste to plant it round their mausoleums;" by Roxburgh, wild only "on the mountains of the Rajahmundry

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"soimida," in Tamil "shem-marum" or "woond-marum" (Drur.), in the environs of Bombay "rouen" or "ruhim" (Graham); in which we recognize the "rohin" of Bhavabhuti mal. 9, against whose hollow trunk an elephant is leaning: — S. febrifuga was observed by Gibson, Auld, and Nimmo, "in considerable abundance in various parts of Goozerat, also in the Adjunta jungles," at "the Sindwah ghaut," and the "Jowar jungles" (Graham); by Roxburgh cor. i. pl. 17, and Wight, in other parts of the peninsula, its wood remarkably hard and heavy, greatly used by the natives for wood-work in their temples (Drur.). The bark according to Duncan, Ainslie, and others, is a good tonic in intermittent fevers (Lindl.).

Dalbergia Oujeinensis of Eastern Hindustan. A tree called in Sanscrit "tinisha" (Pidd.); and the "tinisa" of Bhavabhuti mal. 9, — prescribed medicinally by Susrutas chik. 19 to kalp. 7, is referred here by Hessler: B. Oujeinensis was observed by Roxburgh, Wight pl. 391, and Beddome, from the Godavery forests and Nagpore to Oude and Dheyra Dhoon, its timber useful and valuable, employed for making furniture and for house-building, and a *kino* extracted from the bark (Drur.).

Pentaptera arjuna of Tropical Hindustan. A tree called in Sanscrit "arjuna" (J. F. Wats.), in Bengalee "arjoon," in Hindustanee "cahua" (Drur.), in the environs of Bombay "arjuna" or "urjoon sadra" (Graham); in which we recognize the "arjuna" of Bhavabhuti 9, — Kalidasa ragh. xvi. 51, and Susrutas: P. arjuna was observed by Law "common in the jungles to the southeast of Surat," and Gibson found its bark "in great repute among the natives as a tonic internally, and a vulnerary applied externally" (Graham); was observed by Roxburgh, Wight, and Powell, as far as the Punjaub and Bengal (Drur.). A species possessing similar medicinal properties and possibly not distinct, is known to grow in Burmah (Mason v. 533).

Jasminum auriculatum of Tropical Hindustan? A shrub called in Sanscrit "yoothika" (Pidd.), in the environs of Bombay "jai" (Graham); in which we recognize the "yuthika" of Bhavabhuti mal. 9, — and Susrutas sutr. 36 to chik. 8 and 17: J. auriculatum from the gardens of the Hindus of Malabar is described by Vahl symb. iii. 1; was observed by Graham in the environs of Bombay, "in gardens scarce;" by Roxburgh, and others, as far as Bengal.

Convolvulus (Argyreia) cuneata of Tropical Hindustan. A shrub, twining when near support (Graham); and the cloud spreading over the peak of the mountain, dark as the "tapincha" blossom when full grown and opening at top, mentioned by Bhavabhuti mah. 5, — may be compared: A. cuneata was observed by Graham "common in the Mawul districts above the Ghauts," the flowers "pretty large" and "exceedingly beautiful," of a "deep bright purple colour;" by Roxburgh, in other parts of Hindustan: Transported to Europe, is termed "ipomea atrosanguinea" in the Botanical magazine pl. 2170.

Salix tetrasperma of Hindustan. The *Indian willow* is a small elegant looking tree (Graham); and willows overhanging Godaveri river are mentioned in Bagabhuti uttar. 2 — (transl. H. H. Wils.): S. tetrasperma was observed by Law, and Graham, in "the vale of the Yena and other moist places, Mahableshwur," and "various parts of the Southern Mahratta country;" by Roxburgh cor. i. pl. 97, and Wight, as far as the Khasia hills and Oude (Drur.).

Gloriosa superba of Tropical Hindustan and Burmah. A gaudy and beautiful climber called in Malabar "mendoni," in Tamil "caateejan," in Hindustanee "cariari" (Drur.), in the environs of Bombay "karianag" or "indoli" or "kalawee" or "buchnag" (Graham), in Hindustanee "ulatchandul" (J. F. Wats.), in Burmah "hsee-mee-touk" (Mason); and the lily winding on its slender stalk, mentioned by Bhavabhuti — (transl. H. H. Wils.), may be compared: G. superba was observed by Rheede vii. pl. 57 in Malabar; by Murray, and Graham, "common in Guzerat and Concans, Mahableshwur," springing up "only during the rains," its root tuberous; by Roxburgh, Wight, and Drury, as far as Travancore and Bengal, its root said by the natives to possess nearly the same properties as that of *Aconitum ferox* and hence termed "wild aconite," applied in paste to the hands and feet in difficult parturition, and a salt procured from it by repeated washing and grinding; by Mason, indigenous in Burmah. Westward, was observed by Bojer on Mombas island, near the African coast; but by European colonists, was carried to the Mauritius Islands (Boj.). As transported to Europe, is described by Hermann lugd. pl. 689 Plukenet alm. pl. 116, and Darwin loves of plants.

district;" by him, and Wight, planted in other parts of Hindustan as far as Bengal and Silhet, its fruit edible, seeds yielding oil, and an odoriferous water distilled by the natives from the flowers; by Mason, "exotic" in Burmah, its "small delicate sweet-scented blossoms" strung by maidens for garlands. Westward, its dried fruit has been found in ancient tombs in Egypt (Champoll.-Fig. 157). By European colonists, was carried to the Mauritius Islands, where it continues in gardens (Boj.).

"722 A. D." (T. Wright early trav. Palest.), on reaching Palestine, Willebald found the inhabitants of Cyprus "not in arms, for there was great peace and friendship between the Greeks and" Muslims. A *lion* was seen by him on the farthest border of Samaria; illustrating the description in Jerem. xlix. 19, and l. 44.

"As early as this year" (according to the chronicle, Talvi iii. 1), a clerk or writer employed by Libussa, traditionary princess of Bohemia. *Bohemian poems* are extant that seem earlier than the conversion to Christianity.

"The same year" (Pauth. 315), by a census in China, the number of persons found to be "45,431,265; not including princes, nobles, mandarins, persons attached to their service, the army, literati, bonzes, nor slaves."

Illicium anisatum of Southwestern China. The fruit used as a spice in cookery by the Chinese as early probably as this date; — the living shrub seen and described by Loureiro p. 353; the whole plant, especially the fruit having a pleasant aromatic flavour of anise (Lindl.). Westward, the fruit brought from China and called "habb eloué," was found by Rouyer in the drug-shops of Egypt: farther West, the imported fruit is described by Gærtner i. pl. 69; and according to Lindley, is called *star anise*, "by distillation yields an oil which has most of the properties of oil of anise, for which it is often substituted; it is chiefly used in the fabrication of liqueurs." *

"Under the Thang dynasty" (topog. Cant., and Pauth. 473), a regular market opened at Canton, attended by an officer to receive the tax or *duties* belonging to government.

"723 A. D. (= 1st of the nengo ten-pe-foo-zi = cyclique kiatzu," inscript., and Klapr.), the city of Ta-ka-seki in Oziou, opposite to the island of Yeso, founded by O-no-no-Assa-yemi, general in charge of the forts.

"724 A. D." (ann. Jap., and art de verif.), Gensioo succeeded by her nephew Sioomu, now forty-fifth dairo of Japan.

"In this year" (Jap. centen. comm. 60 to 90), the *potter's wheel* introduced into Japan by the priest Giyoki; and "samples of earthenware made at that time" are extant. Giyoki proposed the erection of a colossal *bronze* statue of Budha: and the plan was carried out by Shomu.

"The same year = 12th year of the 'kai-youan' of Ming-hoang-ti" (Chinese chron. table), beginning of the Fifty-seventh cycle.

"During the khai-youan of Youan-tsoung or Ming-houng-ti (= 713 to 741," Rem. mel. iii. 85), Cambodia divided into two States, the Northern mountainous portion, and the Southern lowland.

"The same year" (T. Wright), by Yezid II. "instigated by the Jews," an edict issued "at the end of his reign" against the paintings in Christian churches within his dominions. The measure led to the re-commencement of hostilities between the Greeks and Muslims.

"Before the close of the year" (art de verif.), Yezid II. succeeded by Hescham, tenth Ommiad khalif. Coins issued by Hescham, are figured by Marcel p. 38.

"726 A. D." (Sm. b. d.), edict by Leo III. Isaurus abolishing image-symbols in Christian worship. — Followed by the refusal of Rome and Western Europe to acknowledge any longer the authority of the Byzantine emperors, in taxes or otherwise.

Rumex scutatus of Europe and the adjoining portion of Asia. Called in Italy "acetosa romana" or "tonda" (Lenz); and the πετρολαπαθου whose root is prescribed in the treatise Euporist. ii. 47 — (Spreng.), may be compared: R. scutatus was observed by D'Urville on the island of Milo (Bory). Westward, is described by Miller (Steud.); is known to grow wild in Switzerland "inter acervos lapidum" (Pers.) and as far North as Hesse Lat. 51° in Germany (Koch, and A. Dec.); occurs also "on walls" in Holland and the neighbouring portion of France (fl. Bat., and Breb.), and naturalized in Britain (Wats.); was once cultivated as far North as Sweden (Fries).

"727 A. D." (Blair), the tax called "Peter pence," instituted by Ina king of Wessex; to support a college in Rome.

"730 A. D." (Sm. b. d.), the revolt at Constantinople quelled by Leo III. Isaurus, who deposed and banished the patriarch Germanus, and appointed in his place the iconoclast Anastasius. In the course of the disturbances, the *library* of "thirty-six thousand" volumes in the church of St. Sophia was destroyed by fire.

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* *Illicium religiosum* of China and Japan. Called "skimi" in Japan, and chiefly employed as a perfume by the priests of Japan and China — (Kaempf., Siebold, and Lindl.).

The nigrogemmeus of Britain, described by Beda hist. eccles. i. 1 as when rubbed detaining light substances like amber, also inflammable, — is doubtless *jet*.

The musculæ of Britain, described by Beda as of various colours, reddish, purple, violet, greenish, but especially white, sometimes containing pearls, — are clearly fresh-water mussels, *Unio margaritaceus*.

The alca for cooking hanging against the wall, mentioned by Beda vit. Cuthb. 36, — may be compared with the *great auk*, Alca impennis. This bird formerly frequent along the Northern shores of the Atlantic from Denmark to Newfoundland and Massachusetts Bay on the American side, is at the present day nearly extinct.

"731, June 10th" (Bed. hist. eccl. v. 23), end of the chronicle of Beda; who (according to his own statement) was now "fifty-nine" years old. — He died in "735" (chron. contin. anon., Smith, and Pouchet).

"In this year" (Alst., and Nicol.), at Rome, Gregorius the younger succeeded by Gregorius the third, twenty-fifth archbishop.

"732 A. D." (art de verif.), the Muslims after overrunning a large portion of France, as far as the Loire, finally defeated at Tours by Charles Martel. Soon afterwards, they were compelled to retire into Spain.

One hundred and fifty-first generation. May 1st, 734, onward mostly beyond youth: the Chinese poets Thou-fou, and Li-tai-pe: the Arab writers, the traveller and botanist Abu Saher, Madain (dead 768, Gildem.), Ebn El-Ala the grammarian (Lane dict.): Isidorus Pacensis, Clemens Antisiodorensis, Joannes Mailrosius, the monk Antonius Melissa, Fredegaire (Blair); Joannes Damascenus who first composed a system of Divinity from the Greek fathers (Blair), Cosmas of Jerusalem, Joannes patriarch of Jerusalem; Rupertus bishop of Worms.

"In this year" (Sm. b. d.), unsuccessful attempt by Leo III. Isaurus to recover his authority at Ravenna. His expedition failed, and the city was captured by Lombards. Leo now detached Illyria, Greece, and Macedonia from the spiritual authority of Rome to that of the patriarchs of Constantinople, completing the separation of the Greek and Latin churches.

"736 A. D." (Mason ii. 21), in Burmah, Pungnareka anointed king of Pegu. He governed in accordance with the divine law, studied the Budhist scriptures, and attended constantly with his queens, concubines, and courtiers on the preaching of learned teachers and holy priests.

"741 A. D." (Alst.), Leo III. Isaurus succeeded by Constantinus VI. Copronymus, twenty-fourth Byzantine emperor.

"742 A. D." (Alst.), at Rome, Gregorius the third succeeded by Zacharias, twenty-sixth archbishop.

"The same year" (Alst., and Nicol.), the first synod dated by the Christian era: a computation now beginning to be used in history.

"743 A. D." (art de verif.), Hescham succeeded by Walid II., eleventh Ommiad khalif.

"In this year" (Jap. centen. comm. 90), commencement of a second *bronze* statue of Budha "about fifty feet in height." — The statue has been "greatly damaged by an earthquake" and by fire, but "still exists in Nara."

"744 A. D." (art de verif.), Walid II. succeeded by Yezid III.; shortly afterwards, by Ibrahim; and before the close of the year, by Merwan II., fourteenth Ommiad khalif.

"In this year" (Gildem. p. 11), Bukhara captured by the Muslims. — Held by them six years.

"745 A. D." (Mar Gabriel, Wisscher, and Coq.-Montbret in rec. voy. et mem. 33), the number of Christians in Southern Hindustan having been reduced to "sixty-four" families, a large accession from Jerusalem and the Euphrates sent out by the patriarch of Babylon under the charge of a merchant named Thomas. The new colonists of both sexes and all ages obtained permission of the king of Cranganor to settle there, and built several churches, their houses numbering "four hundred and seventy-two."

"In this year" (Pauth. auth. 79, and Yule cath. i. p. xcii), decree of the emperor Hiouan-tsoung stating, That as the religion of the sacred books known as "Persian" (Christianity) originally came from Tathsin (the Byzantine Empire), the name "Persian temples" should be changed to "Tathsin temples."

"746 A. D." (Blair), *pestilence* desolating Europe and Asia. — It continued three years.

"The same year" (Chron. and Cockayne iii. p. 453), Selred king of Essex slain.

"In this year (= 802 Vicram.," Vansav., and Wilf. as. res. ix. 185), Narwaleh built by Vana-raja, now "fifty years" old and head of the last dynasty of balharas or kings of Guzerat: or according to Elphinstone iv. 1, the Chauras dynasty of kings of Guzerat establishing their capital at Anhalwara, — now called Pattan.

"749 A. D. (in the seventh month of 1409th year of Synmu," art de verif.), Sioomu succeeded by his daughter Kooken, now dairo of Japan. In the first year of her reign, *gold*, hitherto imported from

Corea or China, discovered in the province of Osio in Japan (the event is placed two years earlier in Jap. centen. comm. 96).

"750 A. D." (art de verif.), Merwan II. succeeded by Abu'l Abbas, of the Abbas family and now khalif. The seat of government was removed from Damascus to a town on the Euphrates: a change accompanied with the loss of Spain, which became an independent Muslim kingdom.

"In this year also (= 132 A. H." of Ferisht., Elph.), the Muslims expelled from Sind, — which remained in the possession of the Hindus nearly "five hundred" years.

Janah-bin-Abbada, appointed by Abu'l Abbas governor of Oman, building the mosque of Janah or Jamah. He secretly countenanced the doctrines of the el-Ibadhiyah, — and this sect, taking the government into their own hands, established Julanda-bin-Mas'ud as the first rightful imam of Oman. He was slain in battle after maintaining a successful opposition against Abu'l Abbas "two years and one month."

"About this year" (Steinsch. ii. 8), origin of the Karaite sect among the Jews, and *Karaite literature* commenced by Anan ben David.

"751 A. D." (Alst., and Blair), through the influence of Zacharias archbishop of Rome, Childeric III. of France forced into a monastery; and succeeded by Pepin son of Charles Martel. The Merovingian or First French dynasty, giving place to the Carlovingian. In return, Pepin ceded the Exarchate of Ravenna with other territory to the archbishop of Rome.

Papyri of this date (= "133 hej." De Sacy chrest. ii. p. 531) written in a character nearly identical with the Neskhi Arabic, have been discovered in Egypt.

"752 A. D." (Alst., and Nicol.), at Rome, Zacharias succeeded by Stephanus the younger; and before the close of the year, by Stephanus the third, twenty-eighth archbishop.

"The same year" (Talvi. iii. 1), the Czekhs or Bohemians under duke Nezamysl, "said to have first distributed the lands in fee, and to have given to the whole community a constitutional form."

"754 A. D." (art de verif.), Abu'l Abbas succeeded by El-Mansur, second Abbassid khalif. Coins issued by El-Mansur, are figured by Marcel p. 44.

"The same year" (Pauth. 315), by a census, the population of China found to consist of "52,884,818 persons, not including princes, nobles, mandarins, nor those in their service, nor the military, literati, bonzes, nor slaves." *

"755 A. D." (Remusat, and Pauth. 382), end of the Thoung-tian; an encyclopedic statistical work by the Chinese archæologist Thou-yeou.

"The same year" (Alst.) a synod at Constantinople (by some ranked as a general Council), consisting of "three hundred and thirty-eight" bishops. The exclusion of images of saints from churches was sanctioned.

"756 A. D. = 'tchi-te,' 1st year of Sou-tsoung, of the Thang" or Fifteenth dynasty (Chinese chron. table). He continued to favour Christianity (inscript. Singanfu).

Not later than this year (= 701 an. jav. + "20 years" of Nata Kasuma, Raffles x), Kasuma Wichitra succeeded by his son Raden Aji Nirmala, fifth lineal descendant from Jaya Misana and now king of Java.

"In this year" (Sm. b. d.), the Lombard king Aistulph compelled by Pepin of France to cede the city and district of Ravenna to the Roman archbishop Stephanus the third. The beginning of the "temporal power" of the church of Rome.

Humulus lupulus of Northern climates. Called in Britain *hop*, in Anglo-Saxon "hymele," in mediæval Latin "hupa," in German "hopfe," in Dutch "hoppen," in Tartar "kumalak," in Hungarian "comlo," in Slavonian "chmel," in Esthonian and Finnish "humala," in Swedish "humle," in Danish "homle," and in French "houblon" (A. Dec., and Prior); and mentioned by king Pepin in a letter of dotation, — and by Adelard (Beckm.): H. lupulus is termed "lupulus mas et fœmina" by Tournefort inst. 535, and is known to grow wild throughout middle Europe (Pers., and A. Dec.). Eastward, was observed by Belon, Forskal, and Sibthorp, in hedges around Constantinople and in Asia Minor; and according to Clot-Bey, was introduced by Delile into Egypt; is known to grow wild around Caucasus, throughout Siberia to the Aldan branch of the Lena and Lat. 62° (Gmel.); and was seen by Thunberg on the mountains of Southern Japan, indigenous and nowhere cultivated. Farther East, was observed by E. James along the Rocky Mountains at the head waters of the Arkansas; lower down along the Arkansas, and along the Mississippi and Missouri, by Nuttall; at Lat. 49° on

* *Begonia sp.* of China. The autumnal "hai-tang" from sea rocks, celebrated by poets under the Thang dynasty, from its flowers having "two large and two small petals" — (Cibot in mem. Chin. iii. p. 443), would seem to be a species of Begonia. The "hai-tang" is further described by Cibot as of a fine red, fragrant, bearing peach-coloured flowers, and perennial in the South and more flourishing than at Pekin; not noticed by medical writers, but for the last two centuries planted in the grounds around the palace. *B. grandis* was seen in Japan by Kæmpfer pl. 20.

Red river of Lake Winnipeg, by Say; is known to grow wild along the Ohio and its tributaries; and along our Atlantic streams, appeared to me wild on tributaries of the Delaware. The cultivated hop was however brought from Europe by colonists.

"757 A. D." (Alst., and Nicol.), at Rome, Stephanus III. succeeded by his brother Paulus, twenty-ninth archbishop.

"758 A. D." (Pauth. 316), disturbances excited at Canton by the Arab and Persian traders; who after plundering the warehouses, retired by sea.

"759 A. D. (= 1419th of Symmu," art de verif.), Kooken succeeded by Fai-tai, great grandson of Tenmu, and now dairo of Japan.

"760 A. D." (Jap. c. c. 96), "a more elaborate money system" established in Japan, "consisting of gold, silver, and copper *coins*" (attributed however to "the emperor Sunnin").

"762 A. D." (Marcel), Bagdad, near ancient Babylon, founded by khalif El-Mansur for the new seat of government. — Also, Mansura on the west bank of the Indus for the seat of government of his prefect (Kaswini, and Gildem.).

"The same year = 6th of the nengo zin-ki = cyclique jin-yn," date of an inscription by Fousiwara-no Ye-mi-no, general in charge of the forts, placed by him before the gate of the city of Ta-ka-seki, not far from the island of Yeso. — A copy of the inscription is given in the San-kokf (transl. Klapr. p. 216).

"763 A. D. = 'kouang-te,' 1st year of Tai-tsoung II., of the Thang" or Fifteenth dynasty — (Chinese chron. table). He continued to favour Christianity (inscript. Singanfu).

"The same year = beginning of the Fourteenth manwantara" among the Hindus — (Graha Munjari tables, and Bentl.).

In ascending the Nile, the "barns of Joseph" (pyramids) described by Fidelis as looking in the "distance like mountains." On landing, he found near "the group of three" a *lion* and eight men and women all lying dead; "the lion had slain them by its strength," and they had slain the lion with their spears and swords. Fidelis afterwards sailed through the canal to the Red Sea, on his way to Palestine (T. Wright early trav. Palest.).

"765 A. D." (ann. Jap., and art de verif.), Fai-tai deposed, and the government resumed by Ko-ken, now under the name of Sio-tok as forty-eighth dairo of Japan.

"766 or 767 A. D." (Nicol.), a synod at Jerusalem. In favour of image-symbols in Christian worship.

One hundred and fifty-second generation. Sept. 1st, 767, onward mostly beyond youth: the Jewish writers, Ishak ben-Jaakub el Isfahani: the Arab writers, Sibawaih, El-Khaleel, Ebn Seiyar El-Khurasanee, Yoonus, El-Kisa-ee (Lane dict.): Paulinus Aquileiensis: the Greek writers, Tarasius, and Theognostus.

"In this year" (Dionys. of Telmahre, and Gildem.), the Byzantine territories invaded by Muslims, including Sindian troops.

"The same year" (T. Wright), Mohammed ben Abdallah having revolted at Medina (Leps.) the canal leading from the Nile to the Red Sea blocked up by khalif El-Mansur (see Ramessu II.).

"768 A. D." (Alst., and Nicol.), at Rome, Paulus succeeded by Stephanus IV., thirtieth archbishop.

"The same year" (Alst.), Pepin succeeded by his son Carolus Magnus (Charlemagne) as king of France. Where his preceptor Alcuinus of England, became the "restorer of learning" (Blair).

"770 A. D." (Blair), by the Byzantine emperor Constantinus VI., the monasteries in the East dissolved, and the monks and nuns compelled to marry.

"The same year" (ann. Jap., and art de verif.), Ko-ken or Sio-tok succeeded by Koonin or Kwonin, grandson of Tent-sii, and now forty-ninth dairo of Japan.

Of woods from early times used in Japan, specimens of "hiba" (*Thuyopsis dolabrata*),* nedzuko (*Thuyopsis laetevirens*), "wabyakudan (*Thuya*" . . . .), "larch tree" (*Larix* . . . .), "inugaya (*Cephalotaxus drupaceà*)," "tsuga (*Abies thuga*)," "tohi (*Abies alkokiana*), shirabe (*Abies Veitchii*)." "walnut tree" (*Juglans* . . . .), "sawa-kurumi (*Pterocarya sorbifolia*)," "evergreen oak in two

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* *Abies bifida* of Japan, as far as Yeso. A *spruce* called by the Ainos "sunk," in Japan "momi" (Sieb., and Jap. c. c. 30): known from early times, — and its wood enumerated by Siebold among the kinds especially fit for shipbuilding and supplying masts.

Quercus dentata of Japan, as far as Yeso. Called by the Ainos "gomuni" (Sieb.), in Japan "kashiwa" (Jap. c. c.); and its wood from early times used by the Ainos "for oars and other instruments" — (Sieb. 41 and 170).

Sophora Japonica of Japan, as far as Yeso. A tall tree called by the Ainos "tokbeni" or "tsikbe," in Japan "jendsju" (Sieb.) or "yenji" (Jap. c. c. 31); and its wood used from early times. — From transported specimens, described by Linnæus (Pers.).

kinds," "ubamegashi (*Quercus phillyroides*)," "nara (*Quercus crispula*)," "chestnut tree" (*Castanea* . . . .), "minebari (*Alnus firma*), alder" (*Alnus* . . . .), "midzume (*Betula ulmifolia*), shirakanba (*Betula alba*)," "kurokaba (*Rhamneæ*" . . . .), "beech" (*Fagus* . . . .), "keyaki (*Planera Japonica*)," "mukuno-ki (*Celtis aspera*), yenoki (*Celtis Sinensis*), harunire (*Ulmus campestris*), yamagiri (*Elaeococca cordata*)," "box tree" (*Buxus* . . . .), "inu-tsuge (*Ilex crenata*)," "katsura (*Cercidiphyllum Japonicum*)," "nurude, (*Rhus semialata*), utsugi (*Deutzia scabra*)," "sumomo, (kind of plum tree), pear tree" (*Pyrus* . . . .), "kwarin (*Pyrus Chinensis*)," "horse chestnut" (*Aesculus* . . . .), "mukurogi, (*Sapindus mukurosi*), momiji, (*Acer polymorphum*)," "shirakuchi (*Actinidia arguta*), kenponashi (*Hovenia dulcis*)," "toneriko (*Fraxinus longicusis*)," "chan-chin" (. . . .), "sendan (*Melia Japonica*)," "yego (*Styrax* . . . .)," "saru-suberi (*Lagers troemia* . . . .)," "isu (*Distylium racemosum*)," "mayumi (*Euonymus Sieboldianus*)," "soro (*Carpinus sp.* . . . .)," "aodako" (. . . .), "shio-ji (*Kaloponax ricinifolia*)," "koyosan (*Cunninghamia Sinensis*), yamanashi" (. . . .), "midzuki (*Cornus brachypoda*)," "shirotsuga" (. . . .), "sogeki (*Myrsine neriifolia*)," "midsukusa" (. . . .), "zumi (*Pyrus sp.*" . . . .), and "kuromoji (*Lindera sericea*)"—were exhibited at our Centennial exposition (Jap. c. c. 30). Also, wood of

Camellia Japonica of Japan. A large and lofty tree called "tsubaki" (Jap. c. c. 31), and known from early times:—observed by Kaempfer, and Thunberg, abounding in the forest, frequent also in gardens. Transported to Europe and North America is called *Camelia*, and has become a favourite in greenhouses, where numerous and much admired variations have been produced in the flower.

"771 A. D." (= 719 + cycle of 52 yrs., Clavig. ii.), accession of Huetzin, third Toltec king of Mexico.

Datura stramonium of Eastern Asia. The *thornapple* called in Mexico "tlapatl" (Hernand. 278), and known there from early times;*—attributed to Mexico by Columna phytob. pl. 12: in Northeast America is sometimes called *Jamestown-weed* from being found by the first English colonists on James river; is known to occur in waste places throughout our Atlantic States from Florida to Canada; was observed by Nuttall along the Missouri to its source; by Sloane i. 159, in the West Indies; by Humboldt, near Caraccas (Kunth); by Martius, and myself, in Brazil; by C. Gay, and myself, in Chili; by myself, in Peru, and perhaps aboriginally introduced on the Hawaiian Islands. Farther West, was observed by Thunberg near Nagasaki in Japan; is known to occur in Tartary and Southern Siberia from the Altaian to the Talysch mountains (Gmel., and Georgi), also in waste places along the Taurian mountains (Bieb.); is termed "tatula Turcorum" by Bauhin hist. iii. 624, and at this time was regularly cultivated in Europe (Zannichelli 253), but soon became a weed, as appears from Gerarde, Ray, and Zanoni; is termed "stramonium" by Alpinus 42, "stramonium fructu spinoso oblongo flore albo" by Tournefort inst. 119; was observed by Sibthorp, Chaubard, and Fraas, from Smyrna to the Peloponnesus, and called "tatoula;" but in Italy according to A. Decandolle "stramonio" or "strimonio." Clearly by European colonists, was carried to Madeira (Lemann); and to the Mauritius Islands (Boj.).

Datura ferox,—used in China by thieves to deprive their victims of the power of resistance (Crawf. ind. arch. i. and Graham), is regarded by A. Decandolle as possibly not distinct.

"772 A. D." (Alst., Blair, and Nicol), at Rome, Stephanus IV. succeeded by Hadrianus, thirty-first archbishop.

"774 A. D." (Leo Marsic. i. 15, and Fabric. bibl.), the kingdom of the Longobardi or Lombards overthrown by Charlemagne, and Paulus Diaconus, secretary to the last king Desiderius, taken prisoner.—After being exiled, Paulus Diaconus was received into favour and honoured by Charlemagne.

"775 A. D." (Alst.), Constantinus VI. succeeded by his son Leo IV., twenty-fifth Byzantine emperor.

"The same year" (art de verif.), El-Mansur succeeded by El-Mahadi, third Abbassid khalif. Coins issued by El-Mahadi, are figured by Marcel p. 45.

776 A. D. = "701 an. jav." (Nata Kasuma, and Raffles ix. and x.), the Javan poem of the Brata Yudha or war of the Pandus composed by the Pandita Puseda, or "by order of Dewa Batara Guru."

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* *Rhizophora mangle* of muddy Tropical shores, in the Atlantic and throughout the islands of the Pacific. A *mangrove* known from early times:—observed by Catesby ii. pl. 63 in the Bahamas; by Jacquin pl. 89 in the West Indies; and known to grow from Lat. 29° (twenty miles below St. Augustine according to N. A. Ware), and from the mouths of the Mississippi, throughout the islands and along the shore of the continent as far as Brazil (Kunth, and Dec.): also along the opposing shore of Equatorial Africa (fl. Nigr. p. 341). Westward, is known to grow from "Lat. 24° 38'" along the Pacific shore of America to the border of Peru (A. Dec.); also at the Galapagos Islands (J. D. Hook.); was observed by myself at the Samoan, Tongan, and Feejeean islands; by Rich, at the Tarawan coral-islands; and is known to grow as far as the New Hebrides and New Caledonia (Endl.).

Bisura Champaca (son of king Raden Aji Nirmala and father of Ang'ling Derma) leaving Milawa Pati proceeded to Mendang Kamulan possibly not earlier than this date. Mendang Kamulan became the new seat of government, — and its ruins continue to be pointed out, consisting of "heaps of stones and bricks" and "walls and excavations of an extensive tank" in an extensive forest in the district of Wirasaba.

"779 A. D. (= 14th year ta-li of Sou-tsoung," Remus. mel. iii. 86), Pho-mi viceroy of Cambodia, accompanied by his wife, visiting the court of China.

"780 A. D. = 'kien-tchoung,' 1st year of Te-tsoung, of the Thang" or Fifteenth dynasty (Chinese chron. table). He continued to favour Christianity (inscript. Singanfu).

At this time (= "980 — about two hundred years" of Velasco, Markh. edit. G. de la Vega ii. 347), the Caras tribe under the rule of a scyri dwelling on coast of the Pacific opposite Quito.

"The same year" (Alst.), Leo IV. succeeded by Constantinus VII., twenty-sixth Byzantine emperor. Ruling jointly with his mother Irene, — the succeeding "ten" years.

"781 A. D." (= "2d year Kienchung = 1092 of the Greeks"), date of the Singanfu inscription, "Hanan Ishu'a" being Nestorian patriarch (news of his death "in 778" not having reached this remote station).

"781 to 782 A. D." (De Wailly pl. iv. 10), a manuscript of this date, presenting the following form of the letter 8.

"782 A. D." (ann. Jap., and art de verif.), Koonin succeeded by his son Kouan-mu, now fiftieth dairo of Japan.

"784 A. D. = 1st year of the 'hing-youan' of Te-tsoung" (Chinese chron. table), beginning of the Fifty-eighth cycle.

A Tibetan work on medicine, derived like the whole of Tibetan Literature from Sanscrit in the Eighth century (Csoma de Koros, and Royle antiq. hind. med. 48).

"The same year" (art de verif.), El-Mahadi succeeded by El-Hadi, fourth Abbassid khalif.

"786 A. D." (art de verif.), El-Hadi succeeded by Harun-el-Rashid, fifth Abbassid khalif. Literature and science were protected and encouraged by Harun-el-Rashid; and his memory has also been cherished for benevolent acts. Coins issued by him are figured by Marcel p. 48.

A Sanscrit treatise on poisons translated into Persian by Manka, a Hindu at the court of Harun-el-Rashid (Royle antiq. hind. med. p. 184).

Sindbad after according to his own account visiting Kela (the river Calung in Malacca) where were "mines of *tin*, plantations of *sugar-cane* and excellent camphor," sent on his seventh and last voyage by Harun-el-Rashid as ambassador to Ceylon.

Dryobalanops? camphora of the Equatorial portion of Sumatra and Borneo. A large tree affording *precious camphor;* clearly the "excellent camphor" seen by Sindbad at Kela, — and "excellent sort of camphor" from the island of Ramni seen by Ebn Wahab: precious camphor is mentioned also by Ebn Amran, Edrisi, Abulfeda, and Bakui (see Spreng.); "canfara sold for its weight in gold" was seen by Marco Polo 169 on Java; and camphor, by Nicolo Conti on Sumatra: D. camphora is known to be rare and confined to a narrow belt of territory along the Equator only on Sumatra and Borneo (Houttuyn xxi pl. 8, Colebr. as. res. xii. pl. . . , and Jack comp. bot. mag. i. 264); the drug according to Blume is procured from fissures in the bark and wood, also by incisions, is much firmer than common camphor and is not volatilised by exposure to the air, does not find its way to Europe, but is chiefly exported to China and Japan where it is highly valued for its stimulant tonic properties (Lindl.).

787 A. D. (= "6th year of Kouan-mu," art de verif., see also San-kokí transl. Klapr. p. 218), Japan invaded by the Ainos, — who continued their ravages "nine" years until defeated by the Japanese general Tamamar or Tamoura-maro near the city of Ta-ka-seki. Tamoura-maro now pushed Northward, and extended the frontier beyond Oma and the districts of Nambou and Tsougar; being the "Second" establishment of a boundary between the Ainos and Japanese.

"Sept. 24th" (Nicol., see also Alst.), Seventh general ecclesiastical Council. Convened at Nice. In favour of image-symbols, and the intercession of saints. — The authority of this and the Six anterior general Councils, continues to be recognized by the Greek church (E. A. Soph.).

Under the direction of Charlemagne, a volume written against image-symbols and errors of the Romish church — (Alst. p. 370).

Hardly earlier than this date (Graha Munjari tables, Puranas, and Bentl.). Uru reigning in Hindustan.

"790 A. D." (Talvi i.). The Slavonian tribes subdued by Charlemagne, enumerated by his secretary and annalist Eginhard as the Veletabæ, Sorabæ, Obotrites, and Bohemians, all speaking not the same, but very similar languages.

Carlina vulgaris of Europe and the adjoining portion of Asia. Called in Britain *carline thistle*, in medieval Latin "carolina" (Prior), and named after Charlemagne — (according to a legend in

Tabernæmontan ii. p. 391): C. vulgaris is described by Fuchsius p. 121, and Tragus f. 322 (Spreng.); is termed "c. sylvestris vulgaris" by Tournefort inst. 500; and is known to grow in woods and mountainous situations throughout middle Europe as far as Denmark (fl. Dan. pl. 1174, Engl. bot. pl. 1144, and Pers.). Eastward, was observed by Sibthorp on mount Athos and around Constantinople; and is described by Pallas (Steud.). Its dried calyx according to Persoon is hygrometric, expanding in fine weather, and closing when the atmosphere becomes moist.*

"796 A. D." (Alst.), at Rome, Hadrianus succeeded by Leo III., thirty-second archbishop.

"797 A. D." (Alst.), Irene now sole ruler of the Byzantine empire.

"798 A. D." (Gaubil, and Pauth. p. 322), arrival in China of "three ambassadors" from Harun-el-Rashid to the emperor Te-tsoung. And the ceremony of "ko-teou" or prostration, regarded as a mere form, after some scruples complied with.

"At this time" (Talvi i.), the Slavonian inhabitants of Pannonia already converted to Christianity, through "German priests."

"At the end of the Eighth century" (Mem. de l'Instit. v. p. 430), an embassy from Harun-el-Rashid to Charlemagne, bearing the keys of Jerusalem. Charlemagne proceeded to erect in that city a large building for the use of pilgrims from his dominions.

"800, Dec. 25th" (Alst.), in opposition to the Byzantine Empire, Charlemagne declared "Emperor of the West" by archbishop Leo III. In return, Charlemagne confirmed the grant of his father Pepin, and added more territory to the church of Rome, conveying political authority or "temporal power."

At this time, "796 to 804 A. D." (Lubke and Lutrow), building by Charlemagne of the Kaiser kapelle at Aix-la-Chapelle.

One hundred and fifty-third generation. Jan. 1st, 801, onward mostly beyond youth: the Jewish writers, Isaac of France, Mashalla el-Andrusger, and Sahl et Thaberi? the Arab writers, El-Kindi, Asmai or Ben Coraib, El-Yezeedee, Ebn Shumeyl, Kutrub, El-Farra, Abu Obeydeh, Esch-Sheybanee, Abu Zeyd (Lane dict.), Jahia-Ebn-Serapion (Spreng. hist. med.): the Greek writers, Theodorus Studites, Joseph Studites, Isaacius Theophanes; the chronologer Georgius Syncellus, Dionysius of Telmahre: the theologians, the monk Usuardus, Ludgerus the first monastic bishop, Paschasius Ratbertus, Ansgarius, Claudius Scotus, Jonas Aurelianensis, and Halitgarius; Theodulphus, Leidrade: the Irish geographer Dicuil, the traveller Hetton (Voyag. Belg.).

"802 A. D." (Alst.), Irene dethroned; and the accession of Nicephorus, twenty-eighth Byzantine emperor.

"In the beginning of the Ninth century" (R. H. Major in soc. Hakl., see Ebn Wahab), arrival of Soliman the merchant at "Canfu" or Canton. He found there a Muslim judge, presiding over those of his own religion, under appointment from the Chinese emperor.

Ocymum basilicum of Tropical Asia. Called in Britain *basil* (Prior), in Yemen "hæbak" or usually as in Egypt "rihan;" in which we recognize the "rihan Soliman" — known "at Ispahan" according to Ebn Masawia, and Avicenna mentioned also by Ebn Baitar (the name in common with the Greek "ōriganōn" is derived from the Hebrew "ryh" meaning odour): O. basilicum is known to be cultivated in Persia (Pers.); was observed by Forskal under cultivation in Yemen; by him, and Belon, in the gardens of Egypt; again by Forskal in gardens at Constantinople; and is well known in the gardens of Europe (Bauh., and Blackwell pl. 104). Eastward, has been long cultivated in Hindustan, is called in Bengalee "babooitulsee," in Hindustanee "kala-tulsee" or "pashana

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* *Gossypium religiosum* of Tropical America? A shrub, small-flowered, and called in the environs of Bombay "deo kapoos" or "ek sheng kapoos" (Graham), on the Feejee Islands "ngalingali" (Hale); and possibly the "plant yielding fibre resembling cotton" that was "introduced by a native of India" in "799 A. D.," — and cultivated for "some thirty years" in Southern Japan (Jap. c. c. 74): cotton according to Schouw 149 has been cultivated in China only from the Ninth century (A. Dec.), referring perhaps to *nankin cotton*, yielded according to Royle by this species; a variety bearing nankin-coloured wool was observed by Forster on Taheiti (Royle him. 99), and cotton-wool of this colour was seen by Peale on the Feejee Islands: cotton was seen on the Marquesas in 1793 by capt. J. Roberts (hist. coll. Mass. iv. 245): G. religiosum, frequent about the dwellings of the natives on the Hawaiian, Taheitian, Samoan, Tongan, and Feejeean Islands, so far as observed by myself had uniformly white wool, and the only use made of it was for lamp-wicks among the Taheitians. Westward, G. religiosum according to Roxburgh has only recently been introduced into Hindustan; was observed by Graham "at a temple in Giergaum road Bombay," and by Elphinstone at Rutnagiree. Transported to Europe, is described by Linnæus, and Cavanilles vi. pl. 164. "G. Barbadense," by some writers regarded as not distinct, is described by Plukenet alm. pl. 188 (Pers.), and was observed by Swartz under cultivation in the West Indies (A. Dec.).

cheddee," in Tamil "tirnoot-patchie," in Telinga "vepoodipatsa" (Drur.); was observed by Rheede x. pl. 87 in Malabar, and called "soladi tirtava;" by Graham, "in gardens" at Bombay, "used in seasoning dishes;" by Roxburgh, Wight, and Drury, from Travancore to Oude and Bengal; and according to Ainslee, the pilose variety is employed to assuage the pains of childbirth. Farther East, is enumerated by Mason as "exotic" in Burmah. By European colonists, was carried to Northeast America, where it continues to be abundantly cultivated.

"804 A. D." (mel. Remusat iii. 278), arrival in China of a Japanese ambassador accompanied by Kobou-daisi. Who now made the acquaintance of Hindu priests, and obtained from them books on religious subjects, especially one that had been translated from the Sanscrit. — Returning "in 806," and having invented the Dosia powder, Kobou-daisi contributed largely to the extension of Budhism in Japan.

"805 A. D. = 'young-tching,' 1st year of Chun-tsoung, of the Thang" or Fifteenth dynasty — (Chinese chron. table).

One of the capitularia by Charlemagne respecting villas or country-seats is dated in this year (Spreng. p. 223).

Sium angustifolium of Northern climates. Called in Greece "nĕrŏsĕlinŏn" (Sibth.): the SILUM of the capitularia of Charlemagne — is referred here by Antony, and Sprengel: S. angustifolium is known to make good fodder for cattle: is termed "s. sive apium palustre foliis oblongis" by Tournefort inst. 308; and is known to grow in watery places throughout middle Europe as far as Denmark (fl. Dan. pl. 247, Gouan, Jacq. austr. pl. 67, and Pers.). Eastward, was observed by Sibthorp in watery places in the Peloponnesus; is known to be widely extended (A. Dec.); as far East according to A. Gray as "Michigan" in America.

Tragopogon porrifolius of the Uralian plains. Called in English gardens *salsify*, in France "salsifis," in medieval Latin "solsequium" (Prior), in Germany "haberwurzel" (Grieb), in Greece "trihōura" (Fraas); in which we recognize the SOLSEQUIA of the capitularia of Charlemagne: — T. porrifolius is regarded by A. Decandolle as introduced into Britain after the departure of the Romans, but escaping from cultivation had become naturalized before the days of Gerarde; is naturalized also on the neighbouring portion of the continent (Koch, Wats., and Lecl.); was observed by Forskal in cultivated ground near Marseilles; and is termed "t. purpuro-cæruleum porri folio quod artifi vulgo" by Tournefort inst. 477. Eastward, was observed by Sestini (Sibth.), Chaubard, and Fraas, from Constantinople to the Peloponnesus; is regarded as indigenous in Dalmatia (Vis. fl. ii. 108, and A. Dec.); and was seen by Soujef clearly indigenous on the Lower Yaik (Pall. trav. iv.). By European colonists, was carried to Northeast America, where it continues abundantly cultivated. (See T. crocifolius.)

Arctium tomentosum of Western Europe. The PARDUNA of the capitularia of Charlemagne — may be compared with the medieval "bardana," referred here by Willdenow: A. tomentosum was observed by Allioni in Southern France (Steud.), and is known to grow as far as Denmark (fl. Dan. pl. 642, and Pers.).

Rumex acutus of Western Europe. The "parduna" of the capitularia of Charlemagne — is however referred here by Antony, and Sprengel: R. acutus is described by Linnæus; and is known to grow in Italy and France (Pollin. veron.; Lenz, Lam. fl. fr., and Pers.).

"806 A. D. (= 1466th of Synmu," art de verif.), Kouan-mu succeeded by his son Fei-dsio, now "fifty-first" dairo of Japan.

"This year = 'youan-ho,' 1st year of Hien-tsoung, of the Thang" or Fifteenth dynasty — (Chinese chron. table).

"During the youan-ho of Hien-tsoung (= 806 to 820," Remus. mel. iii. 86), tribute sent by the Lower or watery portion of Cambodia to China.

"807, Jan. 31st, three hours after midnight" (Blair), *occultation* of Jupiter by the moon "in 2° 27′ of Libra." Observed in France by the monk Aimoin.

Oxalis acetosella of Northern Europe and Asia. Called in Britain *gowk-meat* or *wood-sowr* or *wood-sorrel*, also in English, German, French, Spanish, and Italian *alleluia* (from flowering between Easter and Whitsuntide when Psalms 113 to 117 ending with this word are sung, Prior): the ALLELULIA is enumerated among the ingredients of a compound medicine used in the time of Charlemagne — (Eckhard, and Spreng.): the "geaces sure" is mentioned in the Anglo-Saxon Leechbook i. 2. 13, and the "panis cuculi" in the Ortus Sanitatis 16: O. acetosella is termed "oxys flore albo" by Tournefort inst. 88; was observed by Desfontaines on mount Atlas; by Savi, in Etruria; and is known to grow throughout middle Europe as far as Denmark (fl. Dan. pl. 980, Lam. fl. fr., and Pers.). Eastward, was observed by Sibthorp in the Peloponnesus, also near Constantinople; by Bieberstein, on Caucasus; by Thunberg, on mount Fakon in Japan, and called "katabami." The plant according to Pereira is "refrigerant," a "good scorbutic," and infused in milk or water "forms a grateful drink in fevers and inflammatory cases" (Lindl.).

Geum rivale of Northern climates. Called in Britain *water-avens* (Prior): the benedictum of the same compound medicine — is referred here by Sprengel: G. rivale is described by . . . . ; is termed "caryophyllata aquatica nutante flore" by Tournefort inst. 295: was observed on the Appenines by Savi; and is known to grow throughout middle and Northern Europe as far as Lapland and Iceland (fl. Dan. pl. 722, Hook, and Wats.). Eastward, was observed by Sibthorp, and Chaubard, in wet places in the Peloponnesus and Asia Minor; by Bieberstein, on Caucasus; and by Gmelin, throughout Siberia. Farther East, is known to grow on the Rocky mountains and throughout Canada and Newfoundland (Mx., and Hook.); and along the Atlantic, as observed by myself, to about Lat. 41°. The plant according to Lindley is "stomachic, and said to be useful" in diarrhœa.

Pimpinella saxifraga of Europe and the adjoining portion of Asia. Called in Britain *pimpinell* (Lyte) or *burnet saxifrage*, in mediæval Latin "bipenella" (Prior), in France "boucage saxifrage" (Fée), in Germany "bibernell," in Greece with seven other potherbs "kaukalithra" (Fraas); in which we recognize the pipinellam of a medical formula of the time of Charlemagne, — "pimpinella" of a proverb quoted by Matthæus Sylvaticus pand. 573, and of Ortus Sanitatis 364: P. saxifraga is described by Brunfels i. 188, Tragus f. 177, Dodoens, and Cæsalpinus (Spreng.); was observed by Lenz in Italy; and is known to grow along roadsides in rocky places as far as Denmark (fl. Dan. pl. 669, Lam. fl. fr., and Pers.). Eastward, was observed by Fraas frequent on the hills of Attica and Bœotia, the young leaves eaten as greens; is known to grow also in the Crimea and Persia (Lindl.); and "pimpinella" is enumerated by Forskal mat. med. as sold in the drug-shops of Egypt. Its root is "astringent," used according to Burnett as a masticatory to release toothache, and in decoction to remove freckles (Lindl.).

"809 A. D." (art de verif.), Harun-el-Raschid succeeded by El-Amin, sixth Abbassid khalif.

"810 A. D." (Alst. p. 370), Claudius bishop of Turin writing against image-symbols, relics, invocation of saints, and precedence of the archbishop of Rome.

The same year = "735 an. jav." (Raffles ix.), date of an inscription in the Kawi or ancient Javan character "very beautifully executed" on copper.

"The same year" (art de verif.), Fei-dsio succeeded by his brother Sa-ga, now "fifty-second" dairo of Japan. — In his reign, magnificent temples were erected in various parts of Japan.

"811 A. D." (Alst.), Nicephorus succeeded by Michael Curopalata, twenty-ninth Byzantine emperor.

"In this year" (palm-leaf ann. Jag., and W. W. Hunter), Kamal Kesari succeeded by Kundal Kesari, now king of Orissa. — He built the temple of Markandeswar in Puri, and reigned "eighteen years."

"812 A. D." = "2d year of Michael" (Clint. iv. p. 327), end of the chronicle of Theophanes.

"Nov. 1st" (Nicol.), a synod at Constantinople. "Concerning overtures of peace made by the Bulgarians to the emperor Michael."

"813 A. D." (Alst.), Michael Curopalata succeeded by Leo V. Armenius, thirtieth Byzantine emperor.

"The same year" (art de verif.), El-Amin succeeded by El-Mamun, seventh Abbassid khalif. El-Mamun was an astronomer; and protected and encouraged literature and science. Coins issued by him are figured by Marcel p. 51.

"814 A. D." (Alst., and Nicol.), Charlemagne succeeded by his son Louis (Ludovicus Pius) as emperor of France and Germany.

Hardly earlier than this date (Graha Munjari tables, Puranas, and Bentl.), Gambhira reigning in Hindustan.

"816 A. D." (Alst., and Nicol), at Rome, Leo III. succeeded by Stephanus V., thirty-third archbishop.

"In or about this year" (Blair), the sun's greatest declination observed by khalif El-Mamun to be "23° 34′."

"817 A. D." (Alst., and Nicol), at Rome, Stephanus V. succeeded by Paschalis, thirty-fourth archbishop.

"In the reign of Hien-tsoung" (. . . .), a map of China and the countries around constructed by the geographer Kia-tan.

"819 A. D." (Blair), under the direction of khalif El-Mamun, a degree of latitude measured in the district around Babylon; and found to be "56⅔ Arabian miles."

Triclilia emetica of Tropical Africa and Arabia. A large tree called in Yemen "roka," in which we recognize the "jawz elruka" of Ebn Elhaitham, — Abd Elrahman, Abu Hanifa, Rhazes, Ebn Samhun, and Ebn Baitar: T. emetica was observed by Forskal p. 127 frequent on the mountains of Yemen, the fruit sold in market and mixed with odoriferous substances by women for washing the head, the ripe seeds with sesamum oil made into an ointment against psora. Westward, is known to grow in Senegal (A. de Juss., and Lindl.). The "djouz elkai" of the Scharh elmoudjiz is referred here by

Forskal; and the "jawz elkai" of Ebn Elhatm, Hobaish, Rhazes, and Ebn Baitar, described by Edrisi as a tree growing throughout middle Yemen, may therefore be compared.

"820 A. D." (Alst. p. 370), the haughtiness of the clergy opposed by the emperor Ludovicus Pius; and by his direction, the Scriptures translated into German.

Erica (*Calluna*) *vulgaris* of middle Europe and the adjoining portion of Asia. Called in Britain *ling* or *heath* or *heather* or *hather*, in Anglo-Saxon "hæth," in German "heide" in Danish "lyng" (Prior), in French "bruyère" (Nugent), by the Turks "funda" (Sibth.), and mentioned in the Niebelungen-Lied, — also by Braunsweig distill. f. 68 (Spreng.), and termed "e. vulgaris glabra" by Tournefort inst. 602: known to grow from Denmark throughout middle Europe (fl. dan. pl. 627, and Pers.); was observed by Sibthorp around Constantinople. By European colonists was carried to Northeast America, where it has been found in certain limited spots, in Newfoundland, and in Tewksbury on the Merrimac.

In this year (= 543 B. C. — "year 1362" in Mahavams. liv.), accession of Matwalesen, a poet, and now king of Ceylon.

"821 A. D. = 'tchang-tsing' 1st year of Mou-tsoung, of the Thang" or Fifteenth dynasty (Chinese chron: table). A treaty of peace between Mou-tsoung and the king of Thibet is extant, inscribed on marble at Lassa — (Pauth. p. 325).

"The same year" (Alst.), Leo V. succeeded by Michael II. Balbus, thirty-first Byzantine emperor.

"822 A. D." (rec. voy. et mem. iv. 15), founding of the city of Colam or Coylang on the coast of Southern Hindustan; marking an *Era* which continues in use among the inhabitants of Malabar.

"823 A. D." (Blair), Crete captured by the Muslims of Spain, and by them called "Candia."

"The same year" (= 771 + cycle of 52 yrs., Clavig. ii.), accession of Totépeub, fourth Toltec king of Mexico.

Psidium guayava of Mexico and Central America. The *guava* tree indigenous in Mexico — according to Hernandez thes 85; was observed by Cieza de Leon xxvii to lxvi from the Cauca to Lower Peru; by myself, exotic in Peru. The "guayaba" is mentioned by Oviedo nat. hyst. 64, and according to J. Acosta was introduced into Hayti "after the arrival of the Spaniards," and became naturalized there; according to Monardes iii. 5, was "brought from Tierra Firme;" and is regarded by Marcgraf 104 as introduced by Europeans into Brazil, a point confirmed by my own observation. By European colonists also, was carried Westward across the Pacific to the Philippines, where it has become abundant throughout, and is called in Tagalo "guyabas" or "bayabas" (Blanco); to the Moluccas, termed "cujavus" and "gujavus agrestis" by Rumphius i. pl. 40, observed both cultivated and springing up spontaneously; to China before 1636, observed by Boymius fl. sin. (Spreng.); to Anam (Lour.); to Java (Blume); to Burmah (Mason); to Hindustan, observed by Rheede iii. pl. 35 in Malabar, according to Drury called there "malacka pela," in Bengalee "lal-peyara," in Hindustanee "lal sufrian," and var. pyriferum, in Malabar "pela," in Bengalee "peyara," in Hindustanee "soopæriam;" by Graham, "in gardens every where" in the environs of Bombay, by myself under cultivation there, and naturalized on Zanzibar; to the Mauritius Islands, cultivated and nearly naturalized (Boj., and A. Dec.); to Western Equatorial Africa (Benth. fl. nigr.); and subsequent to the visit of Forster to Taheiti, where it has overrun the more fertile portion of the island, to the Hawaiian and Feejeean Islands, found under cultivation by our Expedition. According to Clot-Bey, P. guayava has been recently introduced and successfully cultivated in Egypt.

In this year (= 820 + "3 years reign" of the Mahavams. liv.), Matwalesen succeeded by Mahayensan, now king of Ceylon.

"824 A. D." (Alst., and Nicol), at Rome, Paschalis succeeded by Eugenius II., thirty-fifth archbishop.

"The same year (= 1484th of Synmu," art de verif.), Sa-ga succeeded by his younger brother Siunwa, now dairo of Japan.

"825 A. D. = 'pao-li,' 1st year of King-tsoung, of the Thang" or Fifteenth dynasty — (Chinese chron. table).

"The same year" (Paul. a St. Barthol., Vischer, and Gildem.), eras of Calicut and "Kaulam" (Coolau). Said to mark the date of privileges granted to those cities by Charuman Perumal, the last of the Keralian kings and a convert to Mohammedanism.

Cucumis chate of Equatorial Africa. "In or about this year" the "abdallawi" introduced into Egypt — (Abu'lkasem Magrebi, quoted by Ebn Khilcan, and Ebn Ayyas), and a well-known fact: the unripe fruit is called "adjur;" in which we recognize the "aggouria" of Simeon Sethus, and Agap. Cretensis; but the cultivation seems chiefly confined to Egypt, and is mentioned by Abd-allatif, Alpinus pl. 116, Forskal p. 168, Delile, and Lane. The fruit is like a cucumber, but is pointed at each end, and might be termed *cucumber-melon*.

"826, June 1st" (Nicol.), a synod at Ingelheim. Ambassadors were received from the archbishop of Rome, "announcing the conversion of Harold prince of Denmark."

"827 A. D. = 'tai-ho,' 1st year of Wen-tsoung; of the Thang" or Fifteenth dynasty — (Chinese chron. table).

"The same year" (Alst., and Nicol.), at Rome, Eugenius II. succeeded by Valentinus, thirty-sixth archbishop.

"The same year" (Nicol.), the Heptarchy or seven Anglo-Saxon kingdoms united and conquered by the king of Wessex, Ecgbryht or Egbert; now sole monarch of England.

"828 A. D." (Alst., and Nicol.), at Rome, Valentinus succeeded by Gregorius IV., thirty-seventh archbishop.

"829 A. D." (Alst.), Michael Balbus succeeded by his son Theophilus, thirty-second Byzantine emperor.

"The same year" (Nicol.), a synod at Lyons. Against the Jews

"In or about 830 A. D. (Lubke and Lutrow), building of the convent church at S. Gallen in France; the plan furnished "by an architect at the court of Louis the Pious."

831 A. D. = "756 an. jav." (Nata Kasuma, and Raffles x.), Aji Jaya Baya after a reign celebrated for its prosperity succeeded by his son Salapar Wata, now king of Java.

Iahia Ben Masawia physician to khalif El-Mamun. — He died 857–8 (Greenh.).

Cassia tora of Tropical Eastern Asia. Called in Yemen "didjer el akbar" or "kolkol," in which we recognize the "kilkil" of Ebn Masawia, — Maserjawia, Abu Hanifa, Abu Nasr, Rhazes, Avicenna, Mosih, and Ebn Baitar: C. tora was observed in Yemen by Forskal. Eastward, is called in Sanscrit "prusni-purni," in Bengalee "chakunda," in Telinga "tantim" (Lindl.); was observed in Hindustan by Rheede ii. pl. 53, Roxburgh, Graham, and by myself, naturalized in the environs of Bombay; the seeds are described by Ainslie as used medicinally by the natives, and according to Lindley, the leaves are intermingled to adulterate the blunt-leaved senna. Farther East, C. tora is described by Mason v. 490 as "one of the most abundant weeds" in Burmah, called "dan-kywai," and the leaves "used to adulterate" senna; according to Blanco, is common in the Philippines, and called "manimanihan" or "mongomongohan" in Tagalo; and was observed by Thunberg around Nagasaki in Southern Japan. By European colonists, was unintentionally carried to Tropical America (Plum. xviii. pl. 72, Lam., and Pers.); and to Taheiti, as observed by myself.

Crotalaria retusa of Equatorial Africa. Called in Yemen "kalakel" or "kolkol" (Forsk.), and possibly the plant in question: — C. retusa was observed by Forskal p. 134 at Mor and Hadie, along the base and on the lower portion of the mountains of Yemen; and by Bojer p. 86, seemingly indigenous on the mountains of the Mauritius Islands. Eastward, was observed by Rheede ix. pl. 25 in Malabar; by Graham, common on the "Bombay esplanade during the cold season;" by Roxburgh, in other parts of Hindustan, but having no Sanscrit name; by Mason, in Burmah; and by Rumphius v. pl. 96, in the Malayan archipelago. By European colonists, was carried to the West Indies, where it has become naturalized on Dominica, Jamaica, Barbadoes, and Saint-Thomas (A. Dec.).

Cratægus azarolus of the Mediterranean countries. Called in Italy "azzarolo" or "lazzerolo" (Lenz), in Greece "mémétzuléa" (Fraas): the "zurur" of Ebn Masawia, — I. Ben Amran, Avicenna, Serapion, and Ebn Baitar, is referred here by Sprengel, and Sontheimer: bushes of a species of "hawthorn" were seen by Pococke, Shaw, and Bové (Kitt. bibl. cycl.) on the Sinai mountains, and the "zarur" was observed there by Robinson. Farther North, C. azarolus was observed by Sibthorp, and Fraas, from Crete to Constantinople. Westward, is described by Matthioli i. pl. 229, and Cæsalpinus iii. 14; is termed "m. apii folio laciniato" by Tournefort inst. 641; and is known to grow in Carniolia, Italy, and Southern France (Scop., Pers., and Spreng.).

Ipomoea (*Pharbitis*) *nil* of Hindustan and Burmah. The blue-flowered *morning-glory* is called in Italy "campana azurea" (Graham), in Egypt "senbak" (Forsk.), in Bengalee "neel kalmee" (Drur.); and the "habb-el-nil" of Ebn Masawia, — Hobaisch, Ishak ben Amran, Ebn Baitar, or "granum indicum," is referred here by Royle antiq. hind. med. 9, seeds being sold at Calcutta as purgative under the name of "kala dana" black seed (Lindl., and Drur.): P. nil was observed by Graham "common in Bombay and throughout the Concans, flowers towards the close of the rains;" by myself, to all appearance wild on the Deccan; by Roxburgh, in Bengal; and is given by Mason with a mark of doubt as growing in Burmah. Transported to the Mediterranean countries, was observed by Forskal in gardens at Cairo; is described by Gesner hort. f. 255 (Spreng.), Lobel hist. 340, and Jacquin rar. pl. 36. Clearly by European colonists, was carried to the Philippines, observed by Blanco in Manila; to the "South Sea Islands" (Lindl.); to Australia (Choisy); to the Mauritius Islands where it has become naturalized, and to Austral Africa (Boj.); to Western Equatorial Africa (fl. nigr. 445); to Northeast America, planted for ornament and occurs besides on "banks and near dwellings from Maryland southward" (A. Gray), in "cultivated ground Florida" (Chapm.), was observed by Nuttall even on the Arkansas. "P. hederacea" observed in Tropical America is regarded as not distinct.

Piper cubeba of Java and Prince of Wales Island. The "kababat" of Ebn Masawia — (Haller), Honain, Elbathrik, I. E. Amran, Rhazes, Gafeki, M. E. Elkakam, and Ebn Baitar, and the "hhobeba" of Avicenna, and Serapion, are referred here by writers; "cubeba" is enumerated by Forskal mat. med. as used medicinally in Egypt; and farther North, *cubebs* is mentioned by Leonicenus, Föesius, Stapel, Cæsalpinus, and dried specimens of the plant are described by the younger Linnæus suppl. 90. Eastward, cubebs is imported into Hindustan, and is called in both Bengalee and Hindustanee "kabab chini" or "sital chini" (D'rozar.). Farther East, "cubebe" of the Greater Java is mentioned by Marco Polo 163, and cubebs was seen by Jordanus on Sumatra; but is regarded by Crawfurd as exotic there, and according to H. Yule, is the "only one of the spices" produced in Java. The specimens sent by Wallich 6646 from Singapur and Penang, were therefore probably cultivated: Lindley was unable to distinguish the dried fruit from the cubebs of druggists; but according to Blume, the fruit of P. cubeba although of good quality is not sent to Europe.

Piper caninum of Java and Prince of Wales Island. — Observed in the East Indies by Rumphius v. pl. 28; and (from transported specimens) described by Roxburgh i. 161 (Lindl.). According to Blume act. bat. xi. pl. 26, the *cubebs* of commerce is probably furnished chiefly by this species, having the fruit smaller and shorter stalked, with a distinct anise flavour and less pungent than in the preceding.

"832 A. D." (Blair), by the emperor Theophilus, painters and sculptors banished from the Byzantine Empire, "from his hatred against images." He however built the Hebdomon; a saloon or palace extant at Constantinople (Salzenberg, and Lubke and Lutrow).

"The same year" (Marcel), arrival in Egypt of khalif El-Mamun. He opened the Great pyramid (according to Alhokm, see Greaves pyramidogr.).

By his order, the nilometer at Rhoda repaired, and *Kufic inscriptions* sculptured on the walls; — noticed by Marcel. Among the Kufic inscriptions at Assuan, some (according to Wilkinson theb. and eg. 455) are very nearly as ancient.

"833 A. D." (art de verif.), El-Mamun succeeded by Motassem, eighth Abbassid khalif. Coins issued by Motassem are figured in Marcel 53.

"In or about this year" (. . . .), Sicily conquered by the Muslims. — Who held possession more than two centuries.

"834 A. D." (ann. Jap. transl. Tits., and art de verif.), Siunwa or Zioun-wa succeeded by his nephew Nin-mio, son of Sa-ga and now fifty-fourth dairo of Japan.*

One hundred and fifty-fourth generation. May 1st, 834, onward mostly beyond youth: the Jewish writers, the Karaites Ismael el Okbari, and Al-Tiflisi: the Arab writers, Abraham ben Aun, Thaleba the grammarian, Thabet, the astronomer Albumasar (Blair): the Greek writers, Theophanes ō graptōs d. 842, Joannes of Sicily, Antonius Rhetor; the biographer Anastasius: Strabus Fuldensis, Bertramus, Eulogius, Angelomus, Christianus Druthmarus, Nithardus, Freculphus, Hilduinus: the botanists, Plinius Valerianus, and Placidus Actor.

"836 A. D." (Nicol.), Egbert succeeded by Ethelwulf, second Anglo-Saxon king of England.

"837 A. D." (J. R. Hind, and Humb. cosm. i. 1), a *comet* whose *orbit* is known from Chinese observations. Passing within "two millions of miles" of the Earth, and terrifying Louis emperor of France and Germany into building churches and founding monastic establishments.

Hardly earlier than this date (Graha Munjari tables, Puranas, and Bentl.), Bradhna reigning in Hindustan.

"Towards the middle of the Ninth century" (Pouchet), weight substituted for the action of water and *clocks* first made with wheels by Pacificus. — "Clocks with weights" were found by Ebn Wahab in use in China.

"838 A. D." (Blair), the Picts defeated and extirpated by Kenneth II. king of Scotland.

"Sept. 6th" (Nicol.), a synod at Quiercy on Oise. The liturgical writings of Amalarius were condemned.

"839 A. D." (Sm. b. d.), Amorium in Phrygia captured and destroyed by khalif Motassem. From a Greek captive Motassem heard of the varied acquirements of Leo of Thessalonica, and by letter invited him to Bagdad. The invitation was not accepted, but proved the means of making Leo known to the Greek emperor Theophilus. — Leo was living "in 869," and is generally designated as "philosophus" by Byzantine writers.

The medical compendium by "Leo philosophus" is dedicated to Georgius (compare "Georgius praefectus militarium tabularum" under Theophilus).

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* *Volkameria Japonica* of Corea. A large and lofty tree introduced thence into Japan, where it is called "fi giri" or "go too" (Thunb.); in which we recognize the "go to" or tree of the phoenix, representations of which were visited by Nin-mio at the commencement of his reign: — V. Japonica was also seen in Japan by Kæmpfer v. p. 861.

Senecio jacobæa of Europe and the adjoining portion of Asia. The IAKWBIA commended as a cooling application by Leo philosophus med. v. 1 and vii. 1, — is referred here by writers: S. jacobæa was observed by Forskal, and Sibthorp, on mounts Athos and Sipylus, and around Constantinople. Westward, is termed "jacobæa vulgaris laciniata" by Tournefort inst. 485; and is known to grow in moist places in France and middle Europe (Engl. bot. pl. 1130, Pers., fl. Wett., and Steud.).

In this year (= 823 + "16 years reign" of the Mahayams. liv.), Mahayensan succeeded by Salamewan, now king of Ceylon. — He collected an army of Malabars.

"841 A. D. = 'hoei-tchang,' 1st year of Wou-tsoung, of the Thang" or Fifteenth dynasty — (Chinese chron. table).

"842 A. D." (Alst.), Theophilus succeeded by his son Michael III., thirty-third Byzantine emperor. Ruling jointly with his mother Theodora — for thirteen years.

"The same year" (art de verif.), Motassem succeeded by Wathek, ninth Abbassid khalif.

"The same year" (Alst.), end of the chronicle of Nicephorus of Constantinople.

"843, March 16th" (Blair, and Nicol.), by the French peers assembled at Thionville, "a new partition of the French dominions among the three brothers:" France being assigned to Charles II. le Chauve, and Germany to Louis II.

In or about this year (see Renaudot), arrival of Ebn Wahab at Canfu (Canton), "the port for all ships and goods of Arabs who trade to China." A *duty* of "thirty per cent" was exacted on merchandise imported by sea. The houses were "built of nothing but wood and split cane" (*bamboo*). He found the Chinese "fond of gaming and all manner of diversions," dressing in *silk*; possessing *gold*, *silver*, *pearls*, and "rich stuffs in great abundance;" receiving from foreign parts *ivory*, *frankincense*, *copper* in pigs, *tortoise-shell*, unicorn's (*rhinoceros*) horns; making "ware of equal fineness with glass" (*porcelain*); knowing no other kind of wine except that "made of rice" (*arrack*); subject to a poll tax only, there being "no impost on lands;" and in times of dearth, the emperor's storehouses were opened. Theft, as in India, was always punished with death; and "both poor and rich learn to read and write." Proceeding a long distance inland to the seat of government, he found the emperor regarding himself as one of the "four" great kings: the others being, the king of the Arabs, the king of the Greeks, and the balhara (Indian king). The emperor also held, "That principalities cannot subsist but by force, and that the people know not what justice is."

Sagus laevis of the Eastern portion of the Malayan Archipelago. Frequent in Sumatra and Malacca, and called in Malay "rambiya" (Lindl.): Ebn Wahab found the Chinese acquainted with "trees which bear meal;" — large trees full of meal beneath the bark, were found by Marco Polo 170 on Java; and Mandeville 18 learned that on a large isle near "grow trees that bear meal, of which men make good bread:" according to Jack, and Lindley, some of the finest *sago* of Malacca is prepared from the soft cellular substance of the trunk of S. laevis, and it forms the principal part of the food of the natives of the Poggy Islands, along the West coast of Sumatra. A lofty *sago palm*, the trunk smooth, was observed by myself planted near Singapore.*

"844 A. D. = 4th year of the 'hoei-tchang' of Wou-tsoung" (Chinese chron. table), beginning of the Fifty-ninth cycle.

"The same year" (Alst., and Nicol.), at Rome, Gregorius IV. succeeded by Sergius II., thirty-eighth archbishop. Against whom, Drogo son of Charlemagne and bishop of Metz was sent by Louis II. with an army, to recall him to obeying the empire.

"845 A. D." (Pauth. 327), in China, the number of priests and priestesses of Fo (Budha) ascertained to be "260,000;" and those of the Ta-thsin (Christian and Magian religions) to be about "three thousand." The destruction of the temples of all foreign religions and dispersion of the priesthood among the people, now ordered by the emperor Wou-tsoung.

"The same year" (Talvi iii. 1), at Ratisbon on the Danube, baptism of fourteen Bohemian princes. — Forty-nine years afterwards, the head of the nation duke Borzivog received baptism; but Christianity did not become "firmly established in these regions until the second half of the Tenth century."

Walafridus Strabo at this time writing. — He died in 849 (Sprengel).

Salvia pratensis of Europe and the adjoining portion of Asia. Called in Britain *meadow clary* (Prior), in Germany "wild salbey" or by some "ambrosiam" (Trag.); in which we recognize the "wild salbeyen" ambrosiam of Walafridus Strabo, — and "salvia agrestis" of Hieronymus apodix. (Braunsweig): S. pratensis was observed by Tragus i. pl. 4 and litt. Brunf. in Germany, fragrant and used medicinally; is termed "sclarea pratensis foliis serratis flore cæruleo" by Tournefort inst. 179; is known to grow from Britain throughout middle Europe (Engl. bot. pl. 153, Bull.

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* *Sagus farinifera* of the Malayan Archipelago. — Also found to yield *sago*, but of a very indifferent quality (Roxb., and Lindl).

herb. pl. 357, and Vill.); was observed by Sibthorp, and Chaubard, from the Peloponnesus throughout the Greek islands to Smyrna in Asia Minor.

"In this year (= 231 A. H. comm. Sept. 6th," Gildem. p. 124), the Arab traveller Salam journeying in Northern Asia (Ebn Khordabah).

"847 A. D. = 'ta-tchoung,' 1st year of Hiouan-tsoung" or Siouan-tsoung, of the Thang or Fifteenth dynasty (Chinese chron. table, and Pauth.). He permitted the rebuilding of temples and monasteries.

"The same year" (Alst., and Nicol.), at Rome, Sergius II. succeeded by Leo IV., thirty-ninth archbishop.

"The same year" (art de verif.), Wathek succeeded by Motawakkel, tenth Abbassid khalif. Coins issued by Motawakkel, are figured in Marcel p. 56.

Honain-ebn-Izhak, a pupil of Ebn Masawia, received the appointment of physician to Motawakkel — (Abulfarag., Spreng. hist. med., and Greenh.). He died in 873 (Ebn Kallikan).

Croton tiglium of Ceylon and Southern Hindustan. The "dend" of Honain, — A. C. Elrahib, Hobaisch, Rhazes, Serapion, I. B. Ali, and Ebn Baitar, is referred by Sontheimer, and Royle, to its imported seeds: "abelmeluk," or "hab el-molouk" Molucca seeds, are enumerated by Alpinus i. p. 178 to 181, and Delile, as used medicinally in Egypt; and according to Lindley, much of the *croton oil* sold in Europe is made from seeds of C. tiglium. Eastward, this plant is called in Sanscrit "jayapala," in Hindustanee "jamalgata" (Lindl.); was observed in Hindustan by Rheede ii. pl. 33, Roxburgh iii. p. 682, and is described by Graham as "a small tree" growing in the Southern Concan "not common," but "in abundance in Travancore;" was observed in Ceylon by Burmann pl. 90, and specimens were received from Ceylon by Lindley. Farther East, is described by Mason v. p. 492 as "exotic" in Burmah, called "khan-na-kho," and "frequently seen under cultivation," the seeds being used medicinally by the natives.

Croton pavana of Ava and the Eastern border of Hindustan. An allied species, — regarded by Hamilton linn. trans. xiv. 259 as having probably furnished the original "grana tilli" or "grana dilla." According to Lindley, "in all probability others equally allied to it will yield an oil of similar quality."

"848 A. D." (Blair), the Venetian fleet in the Bay of Crotona totally defeated by the Muslims.

"October" (Alst., and Nicol.), a synod at Mayence. The opinions of Godescalcus (Gotheschalc) on predestination and free-will, opposed by Rabanus Maurus and condemned.

"The same year" (Irish annals, quoted by Wilde journ. Ulst. 27 for July 1859, Troyon p. 219), the crannoge of Lagore in Meath county sacked and burned by mercenaries under Cinaedh: — and "in 933," the islet demolished by Aulaiv O'Hivair during the incursions of the Scandinavians. "In 1246, Turlough escaped from the crannoge of Lough-Leisi. "In 1368," Teige was made prisoner by treachery in his crannoge of Ard-an-choillin. "In 1436," the crannoge of Loch-Laoghaire was captured by the sons of Brian O'Neill: and similar notices occur from 1455 to 1560. In Monaghan county "in 1591," as shown by a map made by Francis Jobson, the dwellings of the chiefs are all on islets. "In 1603," mention is made of the crannoge of Nan-Duini. The last notice of a crannoge is "in 1610," of one in Galway county.

Greek inscriptions of about this date (Sylvestre), present the following form of the letter ρ.

"851 A. D. (= 1511th of Synmu," art de verif.), Ninmio succeeded by his eldest son Montoku or Bontoku, now dairo of Japan. The *gardens* of his imperial palace were laid out by his prime minister — (hist., and Jap. c. c. 116).

The following plants cultivated in Japanese gardens as early perhaps as this year: of "evergreen trees and shrubs," * the "sawara" (*Chamaecyparis pisifera*), "ibuki (*Juniperus Japonica*),

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* *Citrus Japonica* of Japan. A shrub called in Japan "kinkan," and from early times cultivated in gardens — (Jap. c. c. 35): observed in Japan by Thunberg 292, its fruit not larger than a cherry (Pers.).

Pittosporum tobira of Southern Japan. An ornamental shrub called "tobera," from early times planted in gardens — (Jap. c. c. 35): observed in Japan by Cleyer ii. 9. f. 22 (Spreng.), Kaempfer, and Thunberg. Transported to Europe and to North America, has become a favorite in our greenhouses.

Ilex integra of Japan. Called there "moji-no-ki," and from early times planted in gardens — (Jap. c. c. 35): observed in Japan by Thunberg (Pers.).

Ilex latifolia of Japan. Called there "tarayo," and from early times planted in gardens — (Jap. c. c. 35): observed in Japan by Thunberg (Pers.).

Podocarpus maki of Japan, as far as Yeso. Called by the Ainos "tsikuni," in Japan "maki" (Sieb.), and from early times planted there in gardens — (Jap. c. c. 35): known to grow on Yeso (Sieb.).

koyamatsu (*Sciadopitys verticillata*)," "nagi (*Podocarpus nageia*), species of sugi (*Cryptomeria Japonica*)," "yudzuriha (*Daphniphyllum Roxburgii*), kaya (*Torreya nucifera*)," "saka-ki (*Cleyera Japonica*)," "hiragi (*Olea aquifolia*), masaki (*Euonymus Japonica*), yatzude (*Fatia Japonica*)," "shuro-chiku (*Rhamnis flabelliformis*) various species of," "shuro (*Chamaerops excelsa*)" "mokkoku (*Ternstroemia Japonica*)," "zuiko (*Daphne odorata*)," "sazanka (*Camelia sasanqua*), mube (*Stauntonia hexaphylla*), binan-kadzura (*Kadsura Japonica*), nanten (*Nandina domestica*) two species of, hiraginanten (*Berberis Japonica*), shiromoji (*Lindera triloba*)," and "teikakadzura (*Parechites Thunbergii*)."

Of plants with "ornamental foliage," the "kiri (*Paulownia imperialis*), aogiri (*Firmiana platanifolia*), mokuran (*Talauma Sieboldii*), oyama-renge (*Magnolia pariflora*)," "ajisai (*Hydrangea ajisai*), momiji (*Acer sp.*), mansaku (*Hamamelis Japonica*), ro-bai (*Chimonanthus fragrans*), mume (*Prunus mume*), nishiki-gi (*Euonymus alatus*)," and "tzuru-mume-modoki (*Celastrus articulata*):

Of "herbaceous perennial plants," the "hana-shobu (*Iris tectorum*),* shaku-yaku (*Paeonia officinalis*)." And of ferns, shinobu (*Davallia sp.*): — all enumerated in Jap. centen. comm. 35.

"The same year (= 237 Hej." of Abu Zaid, Yule cath. i. p. cii.), date of the first part of the compilation of Arab Voyages to Hindustan, Ceylon, and China.

"852 A. D." (Nicol), a synod at Cordova. Against voluntary martyrs, and worshipping them.

"853 A. D." (Blair), some cities in France acquired by the Normans.

"855 A. D." (Alst. p. 282 and 450), at Rome, Leo IV. succeeded by Joannes VIII. (Joanna). — Mention is made of Joanna by Marianus Scotus, Sigebertus, and Martinus Polus.

"November" (Nicol.), a synod at Winchester, three of the provincial kings being present. A tenth-part of the kingdom of Wessex was granted to the church as "compensation for the ravages of the Normans."

"The same year" (Assem. iii. 2. 440, and Gildem. 51 to 53), era of the Christians of Malabar. Who also had received privileges from king Charuman Perumal.

"About the Ninth century" (John as. res. vii. p. 345), the Tamil female philosopher Aviyar living in the time of three famous kings, Sholen, Sheron, and Pandien.

Poinciana pulcherrima of Tropical Eastern Asia. A flowering shrub called in the environs of Bombay "gool mohur" (Graham), in Bengalee and Sanscrit "krishna-choora," in Tamul "komri" (Lindl.): the "konnei" flower of Aviyar — is referred here by John: P. pulcherrima is described by Rumphius iv. pl. 20; was observed in Hindustan by Rheede vi. pl. 1, sometimes growing spontaneously (A. Dec.), but by Roxburgh, Graham, and myself, only under cultivation; was observed by Moon cat. p. 34, on Ceylon. Farther East, is enumerated by Mason v. 412 as "exotic" in Burmah, "much cultivated" by the natives, and called "doung-souk;" was observed by Zoll. verz. p. 2 on Java; is called "hoa phung" in Cochinchina (Taberd dict.); is known to occur in China (Hook., and Arn.); was observed by Blanco frequent throughout the Philippines, called by the natives "rosas caballero" or "flores," the flowers inducing abortion; was not met with by myself on the Feejeean Islands, but introduced by Polynesian tribes throughout the Tongan, Samoan, and Taheitian groups By European colonists, was carried to the Hawaiian Islands, where I found it only in the gardens of resident Whites; to the Mauritius Islands (Aublet); to the Cape Verd Islands, and thence according to Ligon to the West Indies, where it was found by Sloane ii. p. 49 seemingly naturalized, by Browne, and Descourtilz, clearly exotic; to Brazil, where it was observed under cultivation by myself; and recently to Egypt, where according to Clot-Bey it is now successfully cultivated.

Bauhinia tomentosa of Tropical Arabia and Hindustan. Called in Malabar "chanscheha," in Tamil "triviat-putrum" or "caat-attie" (Drur.); and the "ati" flower of Aviyar — is referred here by John: B. tomentosa was observed in Hindustan by Rheede i. pl. 35, Roxburgh, Wight; by Graham, "a shrub" in "gardens," and found by Nimmo "wild in the Concans;" is known to grow on the "Coromandel mountains," the "dried buds and young flowers, prescribed in dysentery" (Lindl.); and was observed by Burman pl. 18 on Ceylon. Farther East, is enumerated by Mason as "exotic" in Burmah and cultivated for its "large sulphur-coloured flowers;" was observed by Blanco on the Philippines, called in Tagalo and Pampango "alibanban," in Bisaya "alibanban" or "balibanban" or "alibihil" or "alambihor" or "ahihiro" or "diis" or "livas," and the leaves eaten by the natives as a substitute for vinegar. Westward from Hindustan, was observed by Forskal p. 85 frequent near mount Melhan in Yemen and called "athbir" or "tummar" or "henn el bagar" or "henn embas."

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* *Azalea Indica* of Eastern Asia. Possibly the "azaleas" cultivated in Japan for its flowers, — mentioned in Jap. c. c. 115: A. Indica is described by Kaempfer reliq. pl. 55. And as transported to Europe, by Hermann lugd. pl. 163 (Pers.).

"857 A. D." (Alst.), at Rome, Benedictus III. elected fortieth archbishop.

"The same year" (Nicol.), Ethelwulf succeeded by Ethelbald II., third Anglo-Saxon king of England.

Oxa and Dun, whose prescriptions are quoted in the Anglo-Saxon leechbook i. 47 and ii. 65 (Cockayne), as early possibly as this date.

"858 A. D." (Alst., and Nicol.), at Rome, Benedictus III. succeeded by Nicolaus, forty-first archbishop.

Conium maculatum of Northern Asia. Called in Britain *hemlock*, by Gerarde "homlock" (Prior), in France "ciguë" (Nugent), in Germany "gefleckter schierling," in Italy "cicuta" (Lenz), in Albanian "kirkōuta," in Wallachian "maggōutha" (Fraas), in Greece "vrōmōhōrtōn" (Sibth.); and probably the CICUTAE of Macer Floridus 65, — and "hemlice" or "hymlican" of the Anglo-Saxon leechbook i. 1 to 58, and Lacnunga; C. maculatum is termed "conium maculatum" by Hildegarde ii. 85, "cicuta major" by Tournefort inst. 306; was observed by Gussone near Naples, by Lenz frequent in Italy; and is known to occur in waste places throughout middle Europe as far as Britain (Jacq. austr. pl. 156, Curt. lond. i. pl. 17, and Pers.). Eastward, was observed by Sibthorp, Chaubard, and Fraas, frequent among rubbish from the Peloponnesus to Constantinople; by Pallas trav. . . . , wild in East Siberia. Farther East, possibly carried from Asia to America, as it was found by R. Brown the younger used medicinally by the tribes of Northwest America, the infusion in diarrhœa: continues springing up around dwellings, in Northeast America, and in Austral America was observed by A. Saint-Hilaire in the streets of Porto Alegre (A. Dec.). Clearly by European colonists was carried to the Mauritius Islands, observed under cultivation by Bojer. The plant seems to have been retained in medicinal use partly on account of its supposed identity with the Greek "kŏnĕiŏn." (See Oenanthe prolifera.)

Sedum acre of Europe and the adjoining portion of Asia. Called in Britain *stone-crop* or *wall-pepper* (Prior), in Germany "mauerpfeffer," in Italy "borracino" or "semprevivo minimo" (Lenz); and the lesser ACIDULAM called SEMPERVIVAM of Macer Floridus 18 — may be compared: S. acre is termed "s. parvum acre flore luteo" by Tournefort inst. 263; was observed by Sibthorp on rocks in Crete; by Lenz, frequent in Italy; is known to grow also in France and throughout middle Europe as far as Britain (Pers., Lam. fl. fr., and Curt. lond. i. pl. 32). By European colonists, was carried to Northeast America, where it is "cultivated for edgings," and "has become spontaneous in a few places near Boston" (A. Gray). Is enumerated by Lindley among plants in medicinal use, the "leaves acrid."

Veronica chamædrys of Europe and the adjoining portion of Asia. Called in Britain *speedwell* from its blossoms flying away as soon as it is gathered, or originally *forget-me-not*, in Denmark "forglemn-mig-icke," mentioned by Macer . . . , — and in the Ortus Sanitatis . . . , and a flower called "soveigne vous de moy" woven in collars of knights was the subject of a famous joust between France and England "in 1465" (Prior): V. chamædrys is described also by Brunfels i. 125, Gesner, and C. Bauhin pin. . . . (Spreng.); is termed "v. minor foliis imis rotundioribus" by Tournefort inst. 144; is known to grow from Denmark throughout middle Europe (fl. Dan. 448, and Pers.); and was observed by Sibthorp from the Peloponnesus to Constantinople.

Hyssopus officinalis of middle Asia. Called in Britain *hyssop* (Lindl.), in Italy "isopo" (Lenz), in which we recognize the HYSSOPUM of Macer Floridus 45, — referred here by Baudet, and the "ysopum" whose leaves and flowers are prescribed in the Anglo-Saxon leechbook i. 1. 17: H. officinalis is described by Tragus pl. 18, Cæsalpinus xi. 50 (Spreng.), Stapel pl. 727, and Tournefort; is known to occur under cultivation in Italy (Lenz), also cultivated and naturalized throughout middle Europe (Jacq. austr. pl. 254, and Pers.), and naturalized in a single long-known locality in Britain (Bromf., and A. Dec.). Eastward, is known to grow in the Tauro-Caspian countries (Bieb.), and as far as Central Asia (Lindl.); but according to Clot-Bey, has only recently been introduced into Egypt. By European colonists, was carried to Northeast America, where it continues under cultivation, and according to A. Gray has "escaped from gardens" to "roadsides, Michigan etc.;" was also carried to the Mauritius Islands, where it rarely flowers (Boj.). The plant according to Lindley is "a stimulating stomachic."

Costus speciosus of Tropical Hindustan and Burmah. A very elegant Scitamineous plant with velvety leaves and large pure-white flowers, in Hindustanee and Bengalee called "keeo," in Telinga "bomma kachica" (Drur.), in the environs of Bombay "keoo" or "koot" or "kemooka" or "vang-chowrah" (Graham); and one of the two kinds of imported COSTUS enumerated by Macer Floridus 74 — is referred here by Baudet. Eastward, the "kemuka" or "kushṭha" is prescribed medicinally by Susrutas sutr. 46 and nid. 13 to chik. 25; and the conspicuous "bhasouras" of Harivansa 220 is referred here by Langlois: C. speciosus is termed "herba spiralis hirsuta" by Rumphius vi. pl. 64; was observed by Rheede xi. pl 8 in Malabar; by Graham, common "throughout the hilly wooded parts of the Concan;" by Ainslie, Retz, Roxburgh, and Drury, as far as Coromandel and Bengal, the

roots "insipid," but a kind of preserve made from them deemed by the natives "very wholesome:" was observed by Mason indigenous in Burmah. Transported to Europe, is termed "costus arabicus" by Linnæus, "amomum hirsutum" by Lamarck. (See Aucklandia costus.)

"859 A. D." (ann. Jap., and art de verif.), Montoku or Bon-toku succeeded by his fourth son Seiwa, now fifty-sixth dairo of Japan.

Rhus vernicifera of Japan. The *lacquer tree:* "the art of lacquering is already more than a thousand years old, and pieces made in those ancient times — are still extant:" "very fine specimens of lacquer over two hundred years old may be seen in the temple" in Tokio, "also in the Philadelphia Exhibition" (Jap. centen. comm. 72): R. vernicifera is known to grow in Japan (Pers.).

"860 A. D. = 'hian-thoung,' 1st year of Y-tsoung, of the Thang" or Fifteenth dynasty — (Chinese chron. table).

"The same year" (Nicol.), Ethelbald II. succeeded by Ethelbryht II. or Ethelbert II., fourth Anglo-Saxon king of England.

Lepidium ruderale of Europe and the adjoining portion of Asia. Called in Britain *Bowyer's mustard*, and cultivated species *town-cress* (Prior); the ᛏᚢᚾᚳᛖᚱᛋᚪᚾ growing of itself and not sown of the Anglo-Saxon leechbook i. 1. 14 — may be compared: L. ruderale is described by Linnæus; was observed by Scopoli in Carniolia; and is known to occur in waste places in France and throughout middle Europe as far as Denmark (fl. Dan. pl. 184, Crantz, Lam. fl. fr., Engl. bot. pl. 1595, and Pers.). Eastward, was observed by Sibthorp around Constantinople. By European colonists, was carried to Northeast America, where in our Northern and Middle States, according to A. Gray, it continues along "roadsides, near towns, sparingly."

Erysimum alliaria of Europe and the adjoining portion of Asia. Called in Britain *sauce-alone*, by Turner "garlic-wort," being eaten with meat and having a strong odour of garlic, in Germany "sasskraut" (W. Coles, and Prior): the ᛚᛖᚪᚳ ᚳᛖᚱᛋᛖ of the Anglo-Saxon leechbook iii. 15 — is referred here by Cockayne: E. alliaria is described by Gerarde; is termed "hesperis allium redolens" by Tournefort inst. 222; was observed by Brotero 578 in Portugal; and is known to grow in France and throughout middle Europe as far as Denmark (fl. Dan. pl. 435, and Pers.). Eastward, was observed by Sibthorp on mount Athos.*

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* *Cardamine pratensis* of Arctic and Subarctic climates. Called in Britain *cuckoo flower* or *lady's smock* (Prior): and the ᛚᚢᛋᛏᛗᚩᚳᛖ of the Anglo-Saxon leechbook i. 30 to 38 — is referred here by Cockayne: the "lady-smocke" is mentioned by Drayton ecl. 4, and "lady-smocks all silver white" by Shakspeare l. l. l. 2 (Prior p. 103): C. pratensis is described by Gerarde p. 203; was observed by Brotero in Portugal; by Savi, in Italy; and is known to grow in wet grassy meads throughout middle and Northern Europe as far as Lapland and Iceland (fl. Dan. pl. 1039, Pers., Hook., and Wats.). Eastward, was observed by Gmelin throughout Siberia; by Chamisso, on St. Lawrence Island towards Behring Straits; is known to grow throughout Arctic America (Hook.), as far even as Igloolik (Parry), and Southward from Hudson's Bay (Pursh) to Wisconsin and Vermont (A. Gray). The flowers according to Lindley are "pale lilac or almost white," and when dried "have been a popular remedy for epilepsy in children."

Drosera longifolia of Northern climates. With other species called in Britain *sundew*, in Germany "sindau" (Prior): the ᛋᛗᚪᛚᚪᚾ ᛗᚩᚱᚹᚣᚱᛏ of the Anglo-Saxon leechbook i. 58. 1 — may be compared: D. longifolia is described by Morison xv. pl. 4 f. 2; was observed by Brotero in Portugal; by Allioni, in Piedmont; and is known to grow throughout middle and Northern Europe as far as Lapland and Iceland (Pers., Hook., and Wats.). Eastward, was observed by Gmelin throughout Siberia; is known to grow in Kamtschatka (Ledeb., and A. Dec.). Farther East, in Canada (Torr. and Gray); was observed by Short in Kentucky; by myself, along the Atlantic from Lat. 45° to 38° in the Delaware Peninsula; and by Elliott, and Chapman, as far as Florida.

Drosera Anglica of Northern climates. The Anglo-Saxon ᛗᚩᚱᚹᚣᚱᛏ — is referred here by Gerard, Somner, and Cotgrave (Cockayne): D. Anglica is described by Morison xv. pl. 4, f. 1; and is known to grow throughout middle Europe from Switzerland to Sweden and Russia (Hayne, Pers., and Wats.). Eastward, was observed by Menzies along the Pacific in North America, and is known to grow in the central portion of the Continent at Cumberland House in Lat. 54° (Hook., and A. Dec. geogr. b. p. 566).

Rubus corylifolius of Northern Europe. Possibly the ᚦᛖᚠᚪᚾ ᚦᚩᚱᚾ of the Anglo-Saxon leechbook iii. 8, — or "thefe-thorn" of Wycliffe's translation of Judg. ix. 14, the context implying a humble and worthless brier (see Prior): R. corylifolius is described by Villars, and Smith brit. ii. p. 542; and is known to grow in woods and hedges throughout Northern Europe (Pers., Hayne, and Steud.).

Spiræa ulmaria of Northern Europe and Asia. Called in Britain *medewort* or *meadwort* or

Ulex Europæus of middle Europe. Called in Britain *furze* or *gorse* (Prior), in which we recognize the ȝorST of the Anglo-Saxon leechbook i. 31. 3, — and transl. Diosc. 142: "gorassorum non portantium fructus comestibiles" are mentioned in Stat. Montis reg. p. 236 (Prior): U. Europæus, occurring at Gibraltar (Boj.) and rare in Italy (Daub.), is known to grow throughout middle Europe,

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mead-sweet or *meadow-sweet*, in Denmark "miöd-urt," in Sweden "miöd-ort" (Prior), in Germany "wiesenkonigen" giving rise to the mediæval "regina prati" (Cockayne); in all which we recognize the meðowVyrT of the Anglo-Saxon leechbook i. 30 and 38. 10, — or "regina medwurt" of gloss. Harl. in 1240: the older names according to Hill p. 23 derived from mixing the flowers "with mead to give it the flavour of the Greek wines," an account confirmed by Nemnich (Prior): S. ulmaria is described by Linnæus; and is known to grow on the Pyrenees (Brot.) and mountains of Switzerland, and throughout middle and Northern Europe as far as Lapland and Iceland (fl. Dan. pl. 547, Pers., and Hook.). Eastward, is known to grow on Caucasus (Bieb.), and in Siberia (Wats.). By European colonists, was carried to Northeast America, where it continues in gardens. According to Lindley, "a fragrant water, forming an agreeable aromatic beverage, may be distilled from the flowers."

Sedum villosum of middle and Northern Europe. Included in the VVyrmVVyrT of the Anglo-Saxon leechbook i. 39 and 57 — according to Lyte, and Cockayne: S. villosum is described by C. Bauhin pin. p. 283; and is known to grow in marshy meads throughout middle Europe as far as Denmark (fl. Dan. pl. 24, Engl. bot. pl. 394, and Pers.).

Hieracium pulmonarium of Britain. Called there *golden lungwort*, and the LvnȝenVVyrT yellow upwards of the Anglo-Saxon leechbook i. 38. 4 — is referred here by Cockayne: H. pulmonarium is described by Smith (Steud.).

Gentiana pneumonanthe of Northern Europe and Asia. Called in Germany "lungen blume" (Val. Cord.), in Britain *lung-flower* or *calathian violet* (Prior) having been mistaken by Ruel ii. 129 for the "calathiana" of Pliny (Dod.): the merȿc mear ȝeallan of the Anglo-Saxon leechbook i. 39. 2 and ii. 50. 2, — and Lacnunga, is referred here by Cockayne; G. pneumonanthe is termed "pneumonanthe" by Valerius Cordus (Dod. pempt. ii. 1. pl. 12); is described by Linnæus; and is known to grow from Switzerland and France as far as Sweden (fl. Dan. pl. 209, Lam. fl. fr., and Wats.). Eastward, is known to grow on Caucasus (Bieb.); and in Siberia as far as the Yenisei (Pall.).

Primula elatior of middle and Northern Europe. Called in Britain *oxlip* (Prior), in which we recognize the oxan slyppan of the Anglo-Saxon leechbook i. 2. 15: — P. elatior is termed "p. Columnae" by Tenore; is described by Miller, and Linnæus; is known to grow in France and throughout middle and Northern Europe (fl. Dan. pl. 434, and Pers.), its leaves according to Lindley not so "finely downy and soft" as in P. veris.

Lamium album of middle Europe. Called in Britain *blind nettle* or *white dead-nettle* (Prior), in which we recognize the blinde neTle of the Anglo-Saxon leechbook i. 23: — L. album is described by Linnæus; and is known as a weed in cultivated ground throughout middle Europe (Crantz, and Pers.).

Melampyrum vulgatum of Northern Europe. Called in Britain *horse flower*, in Flemish "peertsbloem" (Prior); and the ferd VVyrT of the Anglo-Saxon leechbook i. 87 — may be compared: M. vulgatum is mentioned by Lyte ii. 14; is described by Lobel adv. p. 11, Dalechamp, and Gerard (Spreng.); and is known to abound in woods in France and Britain (Ray, Engl. bot. pl. 113, and Pers.).

Rumex palustris of Northern Europe. Included in the "fealwan doccan" of the Anglo-Saxon leechbook — by Cockayne: R. palustris is described by Petiver pl. 2. f. 7, and Boccone mus. pl. 104; and is known to grow in wet places in France and Britain (Thuil., Dec. fl. fr., Curt. lond. iii. pl. 23, Pers., and Steud.).

Myrica gale of Northern climates. A shrub called in Britain *bog myrtle* or *gale* or *sweet gale*, by Turner "gall" and in his time in Somersetshire "goul" or "golle," by Galfridus pr. pm. "gawl" or "gavl" or "gawyl," in Dutch "gagel" (Prior); in which we recognize the ȝagel of the Anglo-Saxon leechbook i. 36, — and Lacnunga, referred here by Cockayne: M. gale is described by Gerarde; was observed by Brotero at S. Martinho in Portugal; is known to grow from Switzerland throughout middle and Northern Europe as far as Lapland (fl. Dan. pl. 327, Lam. fl. fr., Dec., and Wats.). Eastward, is known to grow in Northern Asia (Wats.). Westward from Europe, was observed by Lapilaye in Newfoundland; by Michaux, in northern Canada; by myself, throughout New England, ceasing at about Lat. 41° (Eat.) except on the mountains of Pennsylvania and Virginia, and continuing inland as far as Wisconsin (Pursh, and A. Gray). An infusion according to Lindley has been employed medicinally, and "the leaves are used in Sweden as a substitute for hops in brewing."

abounding especially in Britain (Linn., fl. Dan. pl. 608, and Pers.). Eastward, was observed by Chaubard around Calamata in the Peloponnesus. By European colonists, was carried to St. Helena and the Mauritius Islands, and in both localities has become naturalized (A. Dec., and Boj.).

Potentilla argentea of Europe and the adjoining portion of Asia. One or more species is called in Iceland "mara" (Olaf Olafsens urtag.); and the mare of the Anglo-Saxon leechbook i. 31. 7— is referred here in part by Cockayne: P. argentea is termed "pentaphyllum exiguum" by Tragus (Spreng.), "quinquefolium folio argenteo" by Tournefort inst. 297; and is known to occur in waste places throughout middle and Northern Europe (Crantz, Pers., Genersich, and Wahl.). Eastward, was observed by Sibthorp around Constantinople and on the Bithynian Olympus. By European colonists, was carried to Northeast America, where it has become naturalized, occurring not only in waste ground but in wild sunny situations.

Potentilla anserina of cool Climates. Called in Britain *goose-grass* or *goose-tansy* or *silver-weed*, in mediæval Latin "argentina" (Prior), in France "argentine" (Nugent): the gelodvyrt of the Anglo-Saxon leechbook i. 32. 3, and the "mare" in part, — are referred here by Cockayne: P. anserina is described by Brunfels (Spreng.); was observed by Bertoloni in Italy; is known to grow on the Azores (Wats.), and throughout middle and Northern Europe as far as Lapland and Iceland (Lam. fl. fr., fl. Dan. pl. 544, Fries, and Hook.). Eastward, is known to grow throughout Northern Asia as far as Armenia, Talusch, Cashmere (Thomson, and A. Dec.), Pekin (Bunge), Daouria, and Kamtschatka (Ledeb.). Farther East, on the seashore of Unalascha and at Norfolk Sound and Kotzebue Sound (Mert., and Hook.); was observed by myself around the interior salines of Oregon; is known to grow as far as Cumberland house in Lat. 54° (Drumm.), lake Huron (Hook.), lake Champlain (Mx.), Pennsylvania (A. Gray), Labrador (Pursh), Greenland (Dec.), Newfoundland (Lapil.), along the Atlantic so far as observed by myself, exclusively maritime and ceasing at about Lat. 42°. In the Southern Hemisphere, was observed by R. Brown p. 60 in Australia; by J. D. Hooker p. 54, in New Zealand; and by C. Gay ii. p. 303, in Chili.

Circæa lutetiana of Northern Climates. Called in Britain *enchanter's nightshade* (Prior), in Old Dutch "alfrancke," and the ælfthone of the Anglo-Saxon leechbook i. 32. 4— is referred here conjecturally by Cockayne: C. lutetiana is described by Lobel obs. p. 137, F. Columna ecphr. ii. p. 80 (Spreng), and Tournefort inst. 301; was observed by Savi on the Appenines; and is known to grow throughout middle and Northern Europe as far as Sweden and Finland (Ledeb., Wats., and A. Dec.). Eastward, was observed by Forskal, and Sibthorp, in cultivated ground around Constantinople and in woods on the Bithynian Olympus, rarely in Greece; is known to grow on Caucasus (Bieb.), and throughout Siberia as far as the Yenisei (Pall.). Farther East, was observed by Beck on the Mississippi at St. Louis; and is known to grow from lake Huron and Montreal (Hook.) throughout our Northern and middle States, and along the Alleghanies as far as Georgia (Ell., and Chapm.); observed by myself, sometimes in waste ground, but more frequently in the forest and to all appearance indigenous.

Callitriche aquatica of Temperate Climates. Called in Britain *water-starwort* (Prior): the ealfer of the Anglo-Saxon leechbook i. 22. 2 and ii. 24— is referred here in gloss. Dun., and the "wæterwyrt" of transl. Apul. 48, is referred here by Lyte and Nemnich (Cockayne): C. aquatica is described by Vaillant pl. 32, Linnæus, and Smith; was observed by Gussone in Sicily; by Desfontaines, in Algeria; and is known to grow on the Azores and throughout middle and Northern Europe as far as Lapland and Iceland (Hook., and Wats.). Eastward, was observed by Sibthorp in pools on the Bithynian Olympus; is known to grow on Caucasus (Ledeb.), in Abyssinia (Rich.), in Hindustan even to within the Tropic (J. D. Hook.), throughout Siberia to the Yenisei (Pall.), Daouria (Ledeb.), and Japan (Thunberg). Farther East, was observed by Chamisso on Unalascha; and is known to grow from the mouth of the Columbia and Eschscholtz Bay to Bear Lake and Lat. 66°, and throughout Canada (Wats., and Hook.) to Arkansas (Nutt.), Kentucky (Short), and our Atlantic States as far as Carolina and Florida (Ell., and Chapm.). In the Southern Hemisphere, is known to grow in Chili (C. Gay), on the Falkland Islands (D'urv.), Terra del Fuego, New Zealand, Campbell's Isle, Auckland's Isle, Tasmannia, and Kerguelen (J. D. Hook., and A. Dec.).

Sanicula Europæa of Europe and the adjoining portion of Asia. Called in Britain *selfheal* or *sanicle* (Prior), in France "sanicle" (Nugent), in Germany "sanikel" (Grieb); the vvvdv merce of the Anglo-Saxon leechbook i. 15 and 39. 2— is identified with the "sanicula" in a gloss in Lacnunga (Cockayne): the "sanicle" is mentioned as curative in old proverbs, French and English; and the "diapensiam" of Ortus Sanitatis (edit. Lubec) is referred here by Sprengel: S. Europæa is described by F. Columna phyt. pl. 16; is termed "s. officinarum" by Tournefort inst. 326, "astrantia diapensia" by Scopoli; is known to grow in woods in Carniolia, France, and throughout middle Europe as far as Denmark (fl. Dan. pl. 283, Crantz, Lam. fl fr., and Pers.). Eastward, was observed by Sibthorp on mount Athos.

Galium mollugo of Europe and the adjoining portion of Asia. Called in Britain *whip-tongue*,

and an allied species in Cotgrave *harrewort* (Prior); the little hærre vvyrt that according to the Anglo-Saxon leechbook i. 61 oftenest groweth in gardens and hath white flowers, — may be compared: G. mollugo is described by Brunfels (Spreng.); is termed "g. album vulgare" by Tournefort inst. 115; is known to grow in France and throughout middle Europe as far as Denmark (fl. Dan. pl. 455, Schrad, Lam. fl. fr., and Pers.). Eastward, was observed by Sibthorp around Constantinople.

Galium cruciatum of Europe and the adjoining portion of Asia. Called in Britain *cross-wort* (Prior); the vvræte of the Anglo-Saxon leechbook iii. 1. 8, — and "crosswort" of ms. Bodl. 536, are referred here by Cockayne: G. cruciatum is termed "crucialis" by Hermolaus Barbarus (Spreng.), "cruciata hirsuta" by Tournefort inst. 115; was observed by Scopoli in Carniolia; and is known to grow in France and throughout middle Europe (fl. Wett., Engl. bot. pl. 143, and Pers.). Eastward, was observed by Sibthorp in the Peloponnesus.

Campanula trachelium of Europe and the adjoining portion of Asia. Called in Britain *throat-wort* (Prior), in Holland "halskruid," in Germany "halskraut" or "halswurz," in Denmark "halsurt" (Cockayne), in which we recognize the hals vvyrt of the Anglo-Saxon leechbook: — C. trachelium is termed "uvularia major" by Tragus (Spreng.), "c. vulgatior foliis urticæ vel major et asperior" by Tournefort inst. 109; is known to grow in France and throughout middle Europe (fl. Dan. pl. 1026, Engl. bot. pl. 12, and Pers.). Eastward, was observed by Sibthorp on mount Athos.

Primula veris of Europe and the adjoining portion of Asia. Called in Britain *cowslip* or *cowslop*, in Old English "*petty mullein*," in medieval Latin "verbasculum" (Prior), in Turkish "tauschian kulaghe" (Sibth.), in which we recognize the cvslyppan of the Anglo-Saxon leechbook iii. 30, — Lacnunga, and the "cusloppe" of Ælfric's glossary: the "herbam paralysis" is mentioned by Hermolaus Barbarus, Brunschwygk ii. 8, and Brunfels p. 190; P. veris is described by Matthioli p. 883, and Gerarde; is termed "p. veris odorata flore luteo simplici" by Tournefort inst. 124; is known to grow in France and throughout middle and Northern Europe (fl. Dan. pl. 433, Jacq., and Pers.). Eastward, was observed by Sibthorp around Constantinople and on the Bithynian Olympus. Its flowers according to Lindley "make a pleasant soporific wine."

Scrophularia nodosa of Northern Climates. Called in Britain *figwort* or *brownwort*, in Germany "braunwurz," but by Brunfels and old writers "brunnwurz" apparently from growing around "brunnen" or public fountains (Prior), in which we recognize the brune vvyrt of the Anglo-Saxon leechbook i. 38. 4, — and transl. Apul. 57: S. nodosa is described by Gesner hort. germ. f 254 (Spreng.); is termed "s. nodosa fœtida" by Tournefort inst. 166; is known to grow in moist situations from Italy and Spain throughout middle and Northern Europe as far as Lapland (Pers., Colm., Bertol., and Fries). Eastward, was observed by Sibthorp in the Peloponnesus; and is known to grow about Caucasus and in Siberia (A. Dec.). Farther East, is known to grow in Oregon (Dougl., Scouler, and Hook. fl.), and California (A. Dec.); was observed by E. James at the sources of the Platte in the Rocky mountains; by Nuttall, and Pitcher, along the Arkansas; by Short, in Kentucky; by Percival, in Canada; by Clayton 71 in Virginia (Linn. sp. pl.); is known to occur throughout our Atlantic States (Pursh, Ell., and A. Gray) and "from Florida to Mississippi" (Chapm.), but so far as observed by myself having the aspect of an introduced plant, chiefly met with where roads cross streams. According to Burnett, and Lindley, the leaves and roots are "said to be purgative and emetic," and "a decoction of the leaves is used by farmers to cure the scab in swine." "S. Marylandica" observed by Banister in Virginia (Ray suppl. 396), is regarded as not distinct.

Scrophularia aquatica of Europe and the adjoining portion of Asia. Included in Britain under the name *brownwort*, called besides *water-betony* or *bishop's leaves*, in France "herbe du siège" understood as of a bishop's see (Prior), but according to Burnett, from its roots eaten by the garrison of Rochelle during the siege in 1628 by cardinal Richelieu: possibly included in the above Anglo-Saxon "brune wyrt:" — S. aquatica is termed "s. aquatica major" by Tournefort inst. 166; and is known to grow in watery places from Switzerland throughout middle Europe as far as Denmark (fl. Dan. pl. 507, and Pers.). Farther East, was observed by Sibthorp at the lake of Nicæa in Greece. Its properties according to Lindley "much as in the last species."

Euphrasia officinalis of Northern Climates. Called in Britain *eyebright* (Prior), in France "eufraise" (Nugent): the eagvvyrt of the Anglo-Saxon leechbook iii. 30 — is referred here by Cockayne: E. officinalis is mentioned by Brunschwygk, and W. Coles (Prior); is termed "e. officinarum" by Tournefort inst. 174; is known to grow on the mountains of the Azores and Southern Spain, and from France throughout Northern Europe as far as North Cape in Lapland, the Feroe Islands, and Iceland (Hook., Wats., Wahl, Boiss., and Trevel.). Eastward, was observed by Sibthorp on the mountains of the Peloponnesus and the Bithynian Olympus: is known to grow also on Taurus (Bieb.), in Cabul, Cashmere, and on the Himalaya mountains (A. Dec., and Lindl.), and in

Siberia (Gmel.). Farther East, was observed by Chamisso on Unalascha; is known to grow on the Rocky mountains (Drummond), in Canada from "Lat. 64°?" (Hook.), at York factory (Rich.), in Labrador from Lat. 57° (E. Meyer), in Greenland (Gieseck), Newfoundland (Lapil.); was observed by Michaux, and myself, on the Lower St. Lawrence; and ceases at about Lat. 45° in New England (Muhl., and A. Gray). The plant according to Lindley is "slightly bitter and aromatic," and "has had much reputation in diseases of the eye."

Rumex sanguineus of Europe and the adjoining portion of Asia. Called in Britain *blood-wort* or *bloody dock* (Prior), and the ꝛeaδan docca of the Anglo-Saxon leechbook i. 49 — is referred here by Cockayne: R. sanguineus is described by Valerius Cordus (Spreng. præf.); is termed "lapathum folio acuto rubente" by Tournefort inst. 504; was observed by Schrader in Germany; and is known to occur in other parts of middle Europe as far as Britain (Blackw. pl. 492, Engl. bot. pl. 1533, and Kit.). Eastward, was observed by Sibthorp, and Chaubard, in the Peloponnesus. By European colonists, was carried to Northeast America, where it continues in Virginia and around Newbern and Charleston (Pers., Ell., Croom, and Chapm.).

Rumex maritimus of the seashore of the Mediterranean and North Atlantic. The fealpan docca *fallow dock* of the Anglo-Saxon leechbook i. 49 — is referred here in part by Cockayne: R. maritimus is described by Petiver brit. pl. 2. f. 8; was observed by Pollini veron. (Lenz) along the Adriatic; and is known to grow along the Atlantic in the salt marshes of France and Britain (Smith brit. i. 253, Lam. fl. fr., and Pers.). Farther West, across the Atlantic, is enumerated by A. Gray as growing on the "sea-shore, Virginia to Massachusetts, and in saline soil in the interior;" by Chapman, on the seashore of North Carolina. "R. persicarioides" regarded as not distinct, was observed by Pursh, and Elliott, from Virginia to Carolina; by Short, in Kentucky; and by Nuttall, on the Arkansas.

Cynosurus cristatus of Europe and the adjoining portion of Asia. Called in Britain *dog's-tail grass* from its spike fringed on one side only, or *windle-straw* from its stem used for platting (Prior); and the micle greate vvindel stream two-edged and growing in highways according to the Anglo-Saxon leechbook i. 4. 3, — is referred here by Cockayne: C. cristatus is described by Barrelier pl. 27; is termed "gramen spicatum glumis cristatis" by Tournefort inst. 519; and is known to grow in grassy places throughout middle Europe (Engl. bot. pl. 316, and Pers.). Eastward, the "kunōsūra" of Eustathius may be compared: C. cristatus was observed by Sibthorp, and Gittard, from the Peloponnesus to Constantinople.

Agrostis spica-venti of Europe and the adjoining portion of Asia. Also called in Britain *windle-straw* (Prior, Mylne, and Cockayne), and agreeing with the implied smaller "windel streaw:" — A. spica-venti is described by Lobel pl. i. 3 (Spreng.), and Parkinson; is known to occur in cultivated ground throughout middle Europe (Leers pl. 4, and Pers.). Eastward, was observed by Chaubard in the Peloponnesus.

Aira cæspitosa of Northern Climates. A grass growing in tufts that in Britain are called *hassocks* (Nemnich, and Prior); the cassuc of the Anglo-Saxon leechbook i. 63 and iii. 62 — is referred here by Cockayne, confirmation being found in Lacnunga: A. cæspitosa is termed "gramen pratense paniculatum altissimum locustis parvis splendentibus non aristatis" by Tournefort inst. 524; and is known to grow throughout middle and Northern Europe as far as Lapland and Iceland (Hook., Pers., and Wats.). Eastward, was observed by Sibthorp frequent in grassy tracts on the Greek islands; is known to grow on Caucasus (Bieb.), and in Siberia (Wats., and Kunth). Farther East, across the Pacific, is known to grow on Unalascha (Kunth); in Canada, and as far South as Lat. 40° in central Pennsylvania (Muhl., Darl., Wats., and A. Gray).

Avena pratensis of middle and Northern Europe. The selate of the Anglo-Saxon leechbook iii. 8, referred by Cockayne to the *wild oat*, may be compared: A. pratensis is termed "gramen avenaceum panicula purpuro-argentea splendente" by Tournefort inst. 525; and is known to grow in meads throughout middle Europe as far as Scotland (Engl. bot. pl. 1204, Pers., and A. Dec.). Eastward, was observed by Sibthorp near Constantinople.

"The same year" (Alst. p. 371), Otfridus Wissenburgensis writing on religious subjects in the *vernacular language* of Franconia.

"860 to 863 A. D." (Rafn), rediscovery of Iceland by the Scandinavian navigator Gardar.

The nilometer at Rhoda having been accidentally injured, was rebuilt by khalif Motawakkel (Kufic inscript., Marcel. and Wilk. Theb. and eg. p. 312). Its "*pointed arches*" may therefore prove the earliest instances of this style of art (see below, Tooloon).

"861 A. D." (art de verif.), Motawakkel succeeded by Montaser, eleventh Abbassid khalif.

Strychnos nux-vomica of Tropical Hindustan and Burmah. The imported seeds are mentioned by Abram — (Serap. 164, F. Adams), and Haly Abbas. The tree is called in Telinga "musadi," in Bengalee "kuchila" (Lindl.), in the environs of Bombay "kajra" (Graham); is mentioned by a commentator on the Amara-cosha (W. Jones in as. res. iv. p. 128); was observed in Hindustan by

Rheede i. pl. 37, Roxburgh, and Royle; by Graham, in the "hilly parts of the Concans," the bitter wood of the roots "used by the natives in the cure of intermittent fevers;" is known to grow also on Ceylon (Linn. fl. zeyl. 91). Farther East, is enumerated by Mason v. 488 as indigenous in Burmah and called "kha-boung," growing "as far South as Maulmain," the pulp of the fruit "a favourite repast with native children," and the bark "used by the Karens in fevers;" the *lignum colubrinum* of commerce is regarded by Blume as consisting in great part of wood of this species, more than of any other (Lindl.). Westward from Hindustan, the imported seeds are called in Egypt "kydjle" or "chobz el ghorab" or "æjseh el ghorab" (Forsk. mat. med., and Del.), and according to Clot-Bey the living tree has recently been introduced; "nucis vomice" is mentioned by Nicolaus Præpositus 122, and continues well known in Europe as exceedingly poisonous seeds affording as in other species the principle called *strychnia;* the bark is besides imported under the name of *false Angustura* (Lindl.).

"862 A. D." (art de verif.), Montaser succeeded by Mostain, twelfth Abbassid khalif.

"The same year" (Talvi, and others), at Novogorod, dissensions among the Slavonians in electing their "posadnik" (mayor), the choice falling upon Rurik chief of the Varegians; an encroaching Scandinavian tribe (by the Finns called "Ruotzi" or "strangers"). The election leading to a more warlike policy, is regarded as the *beginning of the Russian empire.* The encroaching Scandinavians being comparatively few, soon becoming amalgamated and merged in the general Slavonian population.

"863 A. D." (Talvi). Some Slavonian tribes (according to Kopitar) already in possession of the *Glagolitic alphabet.* But "about this time," the *Greek* alphabet with some additional letters applied to the Slavonic language by Constantine usually called Cyril; sent to Moravia with his brother Methodius as missionaries; and the Gospels translated by them into Slavonic.

The same year (= "5th year of Seiwa," art de verif.), the writings of Confucius brought to the court of Japan, and read with approval.

"865 A. D." (Alst. p. 371), Huldericus bishop of Augsburg writing against the celibacy of the clergy: and against encroachment on the religious liberty enjoyed by the German priesthood.

"The same year" (Nicol.), Ethelbert II. succeeded by Ethelred or Ethered, fifth Anglo-Saxon king of England.

"866 A. D." (art de verif.), Mostain succeeded by Motaz, thirteenth Abbassid khalif.

Hardly earlier than this date (Graha Munjari tables, Puranas, and Bentl.), Agnivahu reigning in Hindustan.

"867 A. D." (Blair), the Danes under Ivar brought into England by Earl Bruern, and Northumberland conquered by them.

"The same year" (Alst.), Michael III. succeeded by Basilius Macedo, thirty-fourth Byzantine emperor. Writings by the emperor Basilius are extant; and in his reign, Christianity was finally adopted by the Greeks of Maina in the Peloponnesus (Porphyrog. adm. 224, and E. A. Soph.).

One hundred and fifty-fifth generation. Sept. 1st, 867, onward mostly beyond youth: the Jewish writer Nachshon: the Arab writers, Ebn Kotaiba, Alfragamus, Kostha ben Luca, Beladsor d. 892 (Gildem.): Nicetas Paphlago, Joannes diaconus and rhetor, Simeon Metaphrastes, Joseph the hymnographer d. 883, Metrophanes of Smyrna: Hincmarus; John Scotus; Ambrosius Ansbertus, Remigius Antisiodorensis.

"The same year" (T. Wright early trav. Palest.), sailing of Bernard from Tarentum, provided with letters of safe conduct from the Muslim prince of Southern Italy, and in company with three thousand Christian captives in two ships. Landing at Alexandria and proceeding up the Nile, Bernard describes "such a peace" between Christians and Muslims that a traveller's baggage might be safely left on the road: but any one found journeying "without a letter or some mark of a king or prince of that land" is imprisoned, until he can give an account of himself, "whether he be a spy or not." After reaching the village of Babylon, Bernard returned Northward, proceeding to Damietta, thence to Faramea and across the Desert by the nearest route to Palestine.

"868 A. D." (Alst., and Nicol.), at Rome, Nicolaus succeeded by Hadrianus II., forty-second archbishop.

"869 A. D." (art de verif.), Motaz succeeded by Mohtadi, fourteenth Abbassid khalif.

Hobaisch, a nephew of Honain (Spreng. hist. med. vi. 5), may have been at this time writing.

Liquidambar altingia of mountainous districts in the East Indies. The "mjat" described by Hobaisch as flowing from the bark of a lofty tree in the East Indies, — mentioned also by Ishak Ebn Amran, Rhazes, Serapion 46, Avicenna, Abu Khoraij, and Ebn Baitar, is referred here by Sprengel: the "storacis liquide" is mentioned by Franciscus de Pedemontium f. 133; and *liquid storax* continues to be largely imported into Europe. Eastward, L. altingia growing at the elevation of from two to three thousand feet on Java, was ascertained by Noronha, and Blume fl. jav. pl., to yield the "ras-sama-la" of the Malays or true liquid storax: and farther North, according to Mason v. p. 486 (and

journ. asiat. for 1848), the tree is "indigenous on the Tenasserim coast, and in some sections is quite abundant." According to Lindley, liquid storax is "a fragrant honey-like balsam," a "stimulating expectorant substance acting in the same way as solid storax, that is to say influencing the mucous membranes, especially that which lines the air passages."

Aconitum ferox of the Himalaya mountains. The acrid root of an Aconitum found by Belon imported into Egypt and called "bish;" in which we recognize the "bish" of Hobaisch, — Rhazes, Ebn Samhum, Avicenna, I. ben-Ali, and Ebn Baitar, referred by Royle (in Kitt. bibl. cycl.) to A. ferox, the name derived from the Sanscrit "visha" signifying poison, and the drug long celebrated among the Hindus; the plant is also attributed to Hindustan by Kaswini (De Sacy chrest., and Gildem.), and may prove the source of genuine *aconite*.

Cucumis sativus of Tropical Eastern Asia. Called in Egypt "khyar," in which we recognize the "khiar" of — Hobaisch, I. ben Masah, Amineddulat, I. ben Soliman, Rhazes, Avicenna, Elgafaki, Abd-allatif, and Ebn Baitar: C. sativus was observed in Egypt by Forskal, Delile, and myself; and farther North, is called in Persian "kyar" (Roxb. iii. p. 720); was observed by Forskal in gardens at Constantinople; and according to Chaubard, is abundantly cultivated in Greece. Westward, is called in Esthonian "ukkuritz" or "uritz," in Polish "ogorek," in Bohemian "agurka," in German "gurke" or "kukummer" (A. Dec.), in Italian "cocomero," in Spanish "cogombro," in French "concombre," and in English *cucumber* or the young fruit for pickling *gherkin;* is described by Matthioli p. 367, Dalechamp p. 620, and Lobel pl. 638, and is cultivated throughout Middle Europe. Southward from Egypt, is known to be cultivated in Abyssinia (A. Rich.); and was observed by myself at Muscat. Eastward, is called in Sanscrit "sookasa" (Pidd.), in Bengalee "sasha" or "khyira" or "kankur," in Hindustanee "khira" or "kakri" (D'rozar.); was observed in Hindustan by Rheede viii. pl. 6, Roxburgh, Wight, myself, and according to Graham is "cultivated to a considerable extent as an article of food among the natives." Farther East, is enumerated by Mason v. p. 471 as "exotic" in Burmah, the Burmans and Karens seeming to prefer the fruit "when large and yellow;" was observed by Blume p. 930 under cultivation in Java; in Cochinchina and China, by Loureiro p. 726; and by Kæmpfer, and Thunberg, cultivated in Japan and called "akwa," or usually "karas uri" or "ki uri." From Europe, was carried by Columbus to the West Indies (F. Columb. 53); and at the present day, is abundantly cultivated throughout Northeast America.

"Oct. 5th" (Nicol., see also Alst.), "Eighth" general ecclesiastical Council. Convened at Constantinople by the emperor Basilius: who "for parricide" had been excluded from the church. The patriarch Photius was deposed, and Ignatius reinstated; and on an appeal being made to Rome, some writings of Photius against the encroachments of the Roman archbishop, subscribed by many provincial bishops, were publicly burned by Hadrianus II.

"870 A. D." (art de verif.), Mohtadi succeeded by Motamed, fifteenth Abbassid khalif.

The authority of Motamed was acknowledged by Tooloon; who, under the appointment of governor of Egypt, had rendered himself really independent. Coins issued in Egypt by Tooloon, are figured in Marcel p. 66.

Fagara Avicennæ of China. Called in Arabic "faghara" (Mowafik); and the "fagirat" of Ebn Masah, — Ishak ben Amran, Mesue, Serapion 200, Ebn Baitar, supposed by Avicenna to come "from Sofala," is referred here by Jussieu: F. Avicennæ is described from imported specimens by Lobel ic. ii. pl. 133. Eastward, was observed in China by Incarville (who sent specimens to Jussieu, Spreng.); and according to Lindley, is "used in China as an antidote against all poisons; undoubtedly a powerful stimulant."

"In or about this year" (Nicol), by a synod at Spalatro, the use of the Slavonian language in religious services prohibited.

"872 A. D." (Nicol.), Ethelred succeeded by Alfred, sixth Anglo-Saxon king of England. Alfred's coins are of inferior workmanship: his jewel, "a beautiful work of art" bearing an inscription in Anglo-Saxon capital letters, — is now in the museum at Oxford (Pauli vi).

"873 A. D." (Alst., and Nicol.), at Rome, Hadrianus II. succeeded by Joannes IX., forty-third archbishop.

"874 A. D. = 'kian-fou,' 1st year of Hi-tsoung, of the Thang" or Fifteenth dynasty — (Chinese chron. table).

Hardly later than this date (Yule cath. i. p. cvii), Ebn Wahab, an acquaintance of Abu Zaid, visiting Khumdan (Singanfu) in China.

"The same year" (Rafn), colonization of Iceland by Scandinavians under Ingolf.

"875 A. D." (Pauth. 329), in China, beginning of the revolt led by Hoang-tchao (called "Banchoa" by Abu Zaid).

"The same year" (= 823 + cycle of 52 yrs., Clavig. ii), accession of Nacaxoc, fifth Toltec king of Mexico.

Acer (Negundo) Americanum of the Mississippi and its tributaries. A pinnate-leaved maple

called *ash-leaved maple* or *box-elder*, and sugar procured from it by the Crees,* perhaps from early times — (R. Brown jun.): grows according to A. Gray on "river-banks, Pennsylvania to Wisconsin, and southward," a "small but handsome tree;" was observed by F. A. Michaux in the Southern and Western States; by Elliot, in the upper district of Carolina and Georgia; by Chapman, "Florida and northward;" by Darby, near New Orleans; by E. James, from the Missouri to within the Rocky mountains; by Nuttall, along the Missouri to the mountains; and by Richardson, as far as 53° on the Saskatchewan (see also Hook.). Transported to Europe, is described by Plukenet pl. 123 (Spreng.), Linnæus, and Duhamel i. pl. 11; was observed by Clot-Bey in the gardens of Egypt.

"876 to 877 A. D." (Rafn), beyond Iceland, "islands" discovered by Gunbjorn: the coast of Greenland, — as subsequently ascertained.

"877 A. D." (Abu Zeid, see also Pauth.), the city of Kan-fou (Canton) captured by Hoang-tchao, and all the inhabitants put to death; including "twenty-six thousand Muslims, Jews, Christians, and Parsees, residing there for the purposes of commerce."

"The same year" (ann. Jap., and art de verif.), abdication of Seiwa, in favour of his eldest son Josei or Yo-zei, now fifty-seventh dairo of Japan.

"The same year" (Nicol.), Charles II. le Chauve succeeded by his son Louis II., as king of France.

"878, Aug. 11th" (Nicol.), a synod at Troyes. An ordinance was adopted, that the bodies of excommunicated persons, instead of being buried, "should be exposed to beasts of prey."

"Under the administration of Tooloon" (Marcel p. 61 and 68), construction of the *subterranean aqueducts* that supply the city of Alexandria with water. Tradition among the Copts ascribes the work to Sanutious or Shenouda, at this time Coptic patriarch.

"879 A. D." (according to two Kufic inscriptions), and on the site selected ninety years afterwards for the city of Cairo, the mosque of Tooloon completed. With the possible exception of the nilometer of Motawakkel, it presents the earliest *pointed arches* (Wilk. theb. and eg. p. 302 and 457, and Marcel p. 75, see also Leps. eg. and sin. p. 73). — The new style soon became universal in Egypt; and very little change has since taken place in *Muslim architecture;* recognized throughout the East by the dome and pointed arch. In the West also, the origin and extension of the so-called "Gothic" architecture, is clearly connected with the Muslim occupancy of Sicily and Spain.

Serratula behen of Syria and Cyprus. The "bahman" of Ishak ben Amran, — Rhazes, Avicenna 141, Mosih, Serapion, and Ebn Baitar, is referred here by writers: "bahman" roots from Greece, are enumerated by Forskal mat. med. as used medicinally in Egypt. Farther North, S.

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* *Phaca aboriginorum* of the Saskatchewan and Mackenzie river. From early times, eaten by the Crees and Stone indians East of the Rocky mountains — (R. Brown jun.): described by Hooker, and as growing from Lake Winnipeg to the Rocky mountains, and Bear Lake at 66°.

Heracleum lanatum of Subarctic America. The *American cow-parsnip*, from early times used as a potherb by the Crees, and its roots and young stems eaten by the tribes along the Pacific — (R. Brown jun.): observed by Michaux in Canada; by Lapilaye, in Newfoundland; by myself, from the Subalpine portion of the White mountains to 40° along the Atlantic; by Muhlenberg, and Chapman, "mountains of North Carolina;" by Short, in Kentucky; and according to Hooker, grows throughout Canada to 58° on the Mackenzie river, also in Northwest America as far as Unalascha.

Urtica gracilis of North America. A tall *nettle*, very slightly stinging; and from early times, fibre obtained from its stem by the Northwestern tribes — (R. Brown jun.): received from Hudson Bay by Aiton (Pers.); termed "u. procera" by Muhlenberg (Steud.); observed by Pursh from Canada to Pennsylvania; by A. Gray, "common, especially northward" from Central New York; by myself, from 43° to 40° along the Atlantic; by Schweinitz, at 36° in Upper Carolina; by Elliot, in the Upper district of Carolina and Georgia; by Short, in Kentucky; by Nuttall, on the Arkansas; and by Long's Expedition ii., on the Upper Mississippi.

Lilium Canadense of Northeast America. The *Canadian yellow lily*, its root from early times eaten by the natives of Northwest America — (R. Brown jun.): "mountain-lilies bearing many yellow flowers, turning up their leaves like the martigon, or Turk's-cap, spotted with small spots as deep as saffron," were seen by Josselyn rav. 54 in New England: L. Canadense was observed by Michaux in Canada and on the Alleghanies of Virginia and Carolina; by myself, on the border of marshes from 47° 30′ on the Lower St Lawrence to 42° along the Atlantic; by Torrey, to 41° on the Hudson; by Schweinitz, at 36° in Upper Carolina; by Catesby pl. 11 (Pers.), and Elliot, on the Alleghanies of Carolina; by Chapman, in "mountain-meadows, Georgia, and northward;" by Beck, as far as the Mississippi near St Louis. Transported to Europe, is described by Io Robin (Spreng.), Morison iv. pl. 20, and Barrelier.

behen was observed by Rauwolf pl. 288 in Syria; is termed "jacea orientalis patula carthami facie flore luteo magno" by Tournefort cor. 32; and was observed by Sibthorp on Cyprus.

Rheum ribes of the mountains of Syria and Persia. The "ribas" of Ishâk ben Amran, — Elbasri, Avicenna, Edrisi, Sandhasar, Mesue electuar., and Abd-allatif, mentioned by Ebn Baitar as growing in Syria, is referred here by Sontheimer, and Royle: "rob ribas from Greece and Syria," is enumerated by Forskal mat. med. as imported into Egypt. R. ribes is described from imported specimens by Gronovius, Dillenius elth. pl. 158, and Desfontaines ann. mus. i. pl. 49; but according to Lindley, is not medicinal (see Ribes uva-crispa).

Nauclea ovalifolia of Eastern Hindustan. Called in Bengalee "shal" or "shala;" in which we recognize the "schal" of Ishak ben Amran, — Elminhadsch, Ebn Dschezla, and Avicenna, described as an Indian quince by Ebn Baitar: N. ovalifolia is described in the Hortus Bengalensis 14, and by Roxburgh ii. 125, and Piddington 206 (J. F. Wats. index).

Garcinia mangostana of the Equatorial portion of the Malayan archipelago. The "jawz jandum" of Ishak ben Amran, — Rhazes, Ebn Joljol, Avicenna, Ali ben Razn, and Ebn Baitar, is referred here by Sontheimer. Eastward, G. mangostana is enumerated by Mason v. p. 447 as "exotic" in Burmah, called "men-gu," and "cultivated to a considerable extent in Mergui" or to N. Lat. 13°: *mangosteen* fruit was seen by myself only under the Equator at Singapore. G. mangostana was observed in the wild state by Rumphius i. p. 133 on Saleya. By European colonists, was carried to Hindustan, where Roxburgh was unable to obtain fruit beyond N. Lat. 23° 30′; to the environs of Bombay more recently (Graham, and Nimmo); and to Jamaica, where the fruit is decidedly inferior (Macfad., and A. Dec.).

"The same year" (Nicol.), Louis II. succeeded by his two sons, Louis III. and Carloman, as kings of France.

"The same year" (Alst.), end of the chronicle of Ado Viennensis.

"880 A. D." (Pauth. 329, see also Abu Zeid), the title of "emperor" assumed by Hoang-tchao, now in possession of the greater portion of China. He was soon afterwards defeated, through the "aid of the king of Tagazgaz," and put himself to death.

About this time ("a little after 264 A. H. comm. Sept. 12th 877," Gildem. 75), compilation of Arab voyages to India and China by Abu Zaid Alhakim of Siraf. He speaks of a "great multitude of Jews" in Sarandib (Ceylon), and many other sects, even Tanwis or Manichees, the king permitting the free exercise of every religion. Gaming was the most usual occupation of the inhabitants, as draughts, and the fighting of *cocks*, whose spurs they armed with iron. The favourite drink was "of *palm-honey* boiled and prepared with the 'tari' or juice which runs from the tree" (clearly *toddy*, the crude sap procured from different kinds of palms). — "Vin" obtained in Java from growing trees, is mentioned by Marco Polo 167.

The island of Socotra chiefly inhabited by Christians: derived (according to Abu Zeid) from a Greek colony founded "by Alexander," and subsequently converted to Christianity; in which faith they have persevered, "as well as all the inhabitants of other isles." — Marco Polo 189 describes the population of "Scotra" and some islands halfway between it and Hindustan, as Christian, recognizing as their head the "arcevesqe" of Bagdad. On the arrival of the Portuguese, the Socotrans exhibited crosses, but according to Barbosa, there was nothing left but the name. By other Portuguese, they are termed "Jacobites subject to Alexandria."

The "lead called al-qala'i" (*tin* of Banca) is enumerated by Abu Zaid as sold at Kalah — in or near the Malay Peninsula (Yule cath. i. p. cxci).

Cæsalpinia sappan of the Siamese countries. An arborescent shrub furnishing the *sappan wood* of commerce, called in Tagalo "sapang" or "sibucao" (Blanco), in Burmah "teing-nyet" (Mason), in Tamil "patungha," in Telinga "bukkapu," in Bengali and Hindustanee "bukkum," in Malabar "tsiapangum" (Drury), and enumerated by Abu Zaid as sold at Kalah; — by Musir ben Muhalhil, as growing at Kulam (on the Indian Sea); mentioned also by Abu'fadli (Cels. i. 176), Edrisi, Abulfeda, and according to Bakui imported "from the Malayan archipelago and from Zingitana:" the wood called "presillum" was known in Europe to Matthæus Sylvaticus; "brazilium" is mentioned by Rabbinical writers of the Twelfth century (Spreng.); and the "berzi" shrub was seen by Marco Polo 169 under cultivation on Java. C. sappan was observed by Blanco abundant on the Philippines; by myself, naturalized there and on Zanzibar, and under cultivation at Bombay; by Mason v. 511, indigenous and confined to Tavoy, but according to the Karens having "a much wider range" on "the Meinan side of the mountains in Siam;" by Roxburgh, Wight, and Drury, cultivated and growing freely without care from Bengal to Ceylon, its wood used by Telinga dyers for a cheap red; was observed by Rheede vi. pl. 2 in Malabar; by Graham, "in gardens Bombay and the Deccan."

"882, Sept. 19th, one hour and fifteen minutes after midnight" (Blair, and Clint. iii. p. 369), the *Autumnal equinox* observed by Albategni at Aractus.

"The same year" (F. Mason ii. 23), in Burmah, offerings made by the governor of Thatung to the pagoda at Rangoon. — One of the largest in the country, as appears from the ruins.

"883 A. D." (Alst., and Nicol.), at Rome, Joannes IX. succeeded by Marinus or Martinus, forty-fourth archbishop.

"In or about this year" (Blair), the first star of Aries observed by Albategni to be "18° 2′ from the Equinoctial point."

"884 A. D." (Alst., and Nicol.), at Rome, Marinus succeeded by Hadrianus III., forty-fifth archbishop.

"Under khalif Motamed" (Yule cath. i. p. cix), the Arab geographer Ebn Khordadbah director of the posts in Jibal or ancient Media. — He died about 912 (= "300 Hej," comm. Aug. 17th, Gildem. 75).

"Ghorraib" (a kind of plant) enumerated by Ebn Khordadbah among the exports of China — (Yule).

Pterocarpus marsupium of Tropical Hindustan, as far as Assam. The *red sanders* is a very large Leguminous tree called in Bengalee "peet-sal," in Telinga "yeanga-sha" (Lindl.) or "yegi," in Hindustanee "peet-shola," in Tamil "vengay" (Drur.), in the environs of Bombay "bia" or "bewba" or "beebla" (Graham); its timber used from early times, and its gum-resin *kino* mentioned by Ebn Khordadbah + (Yule): P. marsupium was observed by Rheede vi. pl. 25 in Malabar, whence according to Gibson kino continues to be exported in considerable quantities; by Graham, "common in some parts of Concans" as far as Bombay, and found by Lush in the "Rajpeepla jungles;" by Ainslie, Roxburgh, Wight, and Cleghorn, from the Neilgherries and Travancore to the Eastern ghauts and Circar mountains, but plentiful only in the forests of Cuddapah and North Arcot (Drur.); is known to grow also in Assam (Mason v. 485). Kino according to Roxburgh is strongly but simply astringent. (See P. erinaceus, and Butea frondôsa).

Pterocarpus Wallichii of Burmah. Possibly affording the *kino* enumerated by Ebn Khordadbah among the exports of China. Its wood has been long valued in Burmah, — being according to Roxburgh "not unlike mahogany, but more heavy, red, coarse in grain;" only within a few years, has its gum-resin kino been exported (Mason v. 485, and Journ. as. 1848).

"The same year" (Nicol.), Charles le Simple being a minor, the government of France assumed by the German emperor Charles le Gros.

"In this year," the Welsh monk Asser, according to his own account, guided by some of the Saxon nation through many wide-intervening ways in the country of "Suthseaxum" (Sussex) to the royal vill called Dene (Dean), to meet by invitation king Alfred.

"885 A. D. (= 1545th of Synmu," art de verif.), Josei succeeded by Kooko, younger son of Ninmio and brother of Montoku, and now dairo of Japan.

"The same year" (Alst., and Nicol), at Rome, Hadrianus III. succeeded by Stephanus VI., forty-sixth archbishop.

"Nov. 11th (= St. Martin's day" of Asser), king Alfred commencing his literary pursuits, assisted by the monk Asser.

As early perhaps as this year, voyage of Ohthere around the Northern cape and thence "four days" eastward into the White Sea, up which he sailed "five days" due south, meeting with the inhabitants: "Finnas" who were all fishermen, fowlers, and hunters, and "Beormas" speaking nearly the same language but who had well cultivated their country. Ohthere further informed king Alfred that he dwelt in "Halgoland" northmost of all the Northmen, had not more than twenty horned cattle, twenty sheep, and twenty swine, and the little that he ploughed he ploughed with horses; had however six hundred "hranas" *rein-deer*, including six "stæl-hranas" decoy deer, highly valued among the Finns for catching wild rein-deer; but wealth in that country consists chiefly of rent paid by the Finns in skins of animals, birds' feathers, whalebone, and ship-ropes of whale or seal hide.

He with five assistants had killed *whales* fifty ells long; but his voyage North, besides seeing the country, was chiefly on account of "hors-hwælum" *walrus*, a kind of whale not more than seven ells long having noble tusks or teeth and a hide good for ship-ropes; some of the tusks were brought to the king. (Walrus tusks from their costliness were at this time employed for the handle of the sword of the kings of Norway, Schöning p. 37, Noel, and Pouchet p. 289).

Wulfstan, another navigator, had sailed to the mouth of the Vistula among the "Estum" Esthonians: who have many towns and in every town a king; drink mares' milk, or the poor and slaves "medo" mead; burn their dead, after keeping the corpse a month or more, feasting and expending all the property (Alfr. transl. oros.).

"886 A. D." (Alst.), Basilius Macedo succeeded by his son Leo VI. Sapiens, thirty-fifth Byzantine emperor. Orations and a letter on the truth of Christianity, were written by Leo VI.

"887 A. D." (Blair), Paris besieged by the Normans.

"888, Jan. 13th" (Blair), death of the emperor Charles le Gros. As guardian of Charles le

Simple and regent of France, he was succeeded by count Odo. The Charlemagne dominions now, forming five kingdoms, France, Burgundy, Germany, Italy, and . . . .

Hardly earlier than this date. (Graha Munjari tables, Puranas, and Bentl.), Suchi reigning in Hindustan.

"The same year" (ann. Jap. and art de verif.), Kooko succeeded by his third son Uda or Ouda, now fifty-ninth dairo of Japan. In whose reign, the princess Isse distinguished herself for her knowledge, and composed a book which continues to be highly esteemed in Japan.

"889 A. D. = 'loung-ki,' 1st year of Tchao-tsoung, of the Thang" or Fifteenth dynasty — (Chinese chron. table).

"In or about 890 A. D." (Blair), a "Body of Laws" composed by king Alfred of England.

"891 A. D." (Alst., and Nicol.), at Rome, Stephanus VI. succeeded by Formosus, forty-seventh archbishop.

"892 A. D." (art de verif.), Motamed succeeded by Motadhed, sixteenth Abbassid khalif.

894 A. D., the Arab botanist Abu Hanifah writing. — He died in the following year (= "282 Hej." of Abulfed., Casiri giving "290").

Oxalis corniculata of Subtropical Eastern Asia. Called in Yemen "homadmad" or "hæmæmdah" or "hæmda," in which we recognize the "hamdhidh" mentioned as a sour vegetable by Abu Hanifa — (Ebn Bait.): O. corniculata was observed by Forskal among the mountains of Yemen; is known to grow in Abyssinia (A. Rich.); and was observed by Forskal, and Delile, occurring as a weed at Cairo. Farther North, was observed by Forskal, Sibthorp, and Chaubard, in shaded situations in Crete and the Peloponnesus and in cultivated ground around Constantinople and called "mōshōphilō;" is known to occur also around Caucasus and in the adjoining portion of Siberia (Ledeb., and Bieb.). Westward, is described by Ruel ii. 144, Matthioli, and Lobel; was observed in 1576 by Clusius pl. 476 in Spain and in a garden at Montpellier; is termed "oxys lutea" by Tournefort inst. 88; and is known to occur in waste and cultivated ground in Algeria and throughout middle Europe as far as Britain (Munby, Wats., Bromf., and A. Dec.). Eastward from Arabia, has Sanscrit names (Pidd.); was observed by Graham in the environs of Bombay "in gardens and pasture grounds during the rains;" by Roxburgh, in other parts of Hindustan; by Mason, in Burmah; by Zoll. p. 14, in Java; by Kaempfer, and Thunberg, in Japan, called there "sunsjo" or "sasjo," or usually "sikambo" or "katabami" or "simmoguso;" and is known to occur on the Loo Choo Islands (Hook., and Arn.). By European colonists, was carried to Madeira, the Azores, West Indies, Chili, and Austral Africa (Dec., C. Gay, Wats., and Wight and Arn.).

Melilotus coerulea of Central or Eastern Asia? The "dsark elthair" of Abu Hanifa, — growing in Irak and identified by Ebn Baitar with the "handakuka" of the Nabatheans, or the "handakuka" of Serapion, is referred here by Sontheimer and others: M. coerulea or *blue melilot* is said to grow in Lybia (Pers.), but according to Clot-Bey has only recently been introduced into Egypt. Farther North, was observed by Forskal at Smyrna: and Westward, has been long cultivated in middle Europe; is described in the Ortus Sanitatis? by Cordus, Gesner, Fuchsius 815, Turner, Anguillara, Matthioli, Dodoens, and C. Bauhin; and according to Sprengel, an oil prepared from it is used in Belgium and Spain for removing spots on the face.

Citrus acida of Hindustan. Called in Britain *lemon*, in Egypt and Yemen "lim" or "limun" (Forsk.), in Hindustanee "limu" or "nibu," in Bengalee "lebu" or "jamir" or "jambir" (D'roz.), in Sanscrit "nimbooka" (Royle), in which we recognize the "limun" frequent in Arabia according to Abu Hanifa but only in the cultivated state — (Ebn Bait., and De Sacy), mentioned also by Ebn Djami, and Ebn Ayas: C. acida in the days of Forskal had become sparingly naturalized in Yemen, fruit was seen there by Barthema in 1503, by myself in market at Mocha, and by Alvarez in 1520 in Abyssinia; C. acida was observed by Makrizi under cultivation in Nubia; by Abd-allatif, Forskal, and Delile, in Egypt; by Jacques de Vitry in the "thirteenth century" in Palestine; is mentioned by Persian medical writers; was observed by Bory cultivated abundantly on the Greek islands, especially on Naxos; is known also under cultivation throughout the Mediterranean countries. Eastward from Arabia, the "jambiru" is mentioned by the Sanscrit writer Susrutas (Hessl.); C. acida seems known under cultivation in Hindustan (Royle, and D'roz.), and a tree called "biharee" observed by Royle apparently wild along the base of the Himalayas may prove its original state. Farther East, the "large lime" is enumerated by Mason v. p. 453 and 760 as "exotic" in Burmah and in different varieties "diffused all over the country;" and C. acida was observed by Loureiro p. 568 in Cochinchina. By European colonists, was carried to the West Indies, where it has become naturalized (Macfad., and A. Dec.); to the Taheitian and Samoan groups in the Pacific, verified by myself; and to the Feejeean group, its introduction claimed by Capt. Vanderford of our Expedition, in accordance with the absence of a native name ("moli" including the shaddock, Hale).

Santolina fragrantissima of the Egyptian and Syrian Desert. Called in Egypt "keisum gebeli" or "babouneg" or "ba'yteran," in which we recognize the "abitheran" of Abu Hanifa, — Avicenna,

A. H. Ellahabali, Elkara, and Ebn Baitar: S. fragrantissima was observed by Lippi, Forskal, and Delile pl. 42, in the Desert from Cairo to Suez, the juice applied in affections of the eyes, and the dried flowers also used medicinally, having the odour of chamomile but much more powerful. According to Lindley, the plant occurs also in Palestine and between Aleppo and Bagdad.

Lavandula vera of the West Mediterranean countries. The flowers imported from Venice into Egypt and called "chozame" (Forsk.), in which we recognize the "chuzama" of Abu Hanifa, — Elzaharawi, Elgafaki, and Ebn Baitar: "spiritus lavandulæ" is also enumerated by Forskal mat. med. as well known in Egypt. Northward and Westward, L. vera is called in medieval Latin "lavendula," in Italian "lavandola," in Dutch and German "lavendel," and in English *lavender*, names derived from "being used to scent newly washed linen, or according to Diez, in washing the body" (Prior); is known to grow wild in Southern France (Villars, and A. Dec.) and across the Mediterranean (Lindl.), and is besides cultivated in gardens throughout middle Europe. By European colonists, was carried prior to 1670 (Jossel.) to Northeast America, where it continues frequent in gardens. According to Lindley, the flowers are chiefly employed in perfumery, but with the leaves and oil are sometimes administered medicinally. (See L. spica.)

Rumex nervosus of the mountains of Yemen. A shrubby species called there "öthrob," in which we recognize the "uthrub" of Abu Hanifa, — Elgafaki, and Ebn Baitar: R. nervosus was observed by Forskal p. 76 on the mountains around Hadie.

Sœda monoica of the seashore and inland salines of Egypt and Arabia. A shrub called in Yemen "asal" (Forsk.); and the "asal" of Abu Hanifa, — and Ebn Baitar, may be compared: S. monoica was observed by Forskal p. 70 at Alexandria, also on the plains inland and along the sea in Yemen, where "hötam" or "doluk" (barilla) is obtained from its ashes and used in washing clothes. *S. fruticosa*, observed by Forskal at Djidda, by Delile near Rosetta, by Sibthorp, and Bory, on the seashore of Greece, and known to grow from Persia to the shores of Spain and Portugal (Brot. 403, and Pers.), is by some writers regarded as not distinct.

Commelyna communis of Tropical Africa and Asia. Called in Yemen "djalif" (Forsk.), in which we recognize the "jalif" of Abu Hanifa, — and Ebn Baitar: C. communis was observed by Forskal among the mountains of Yemen: and Westward, is known to grow in Guinea (A. Dec.). Eastward from Arabia, was observed by Roxburgh, and Graham, in Hindustan; and by Kaempfer v. pl. 889, in Japan.

"895 A. D." (Alst.), at Rome, Formosus succeeded by Bonifacius VI.; soon afterwards by Stephanus VII.; and before the close of the year, by Theodorus II., fiftieth archbishop.

"898 A. D." (Nicol.), in France, the government assumed by Charles III. le Simple.

"The same year" (ann. Jap., and art de verif.), Uda succeeded by his eldest son Dai-go, now sixtieth dairo of Japan.

"899 A. D." (Csomadekeros, and F. Mason ii. 23), the Buddhist religion abolished in Thibet.

"900 A. D." (Pauth. 330), in China, the emperor Tchao-tsoung confined to prison limits by the eunuchs; who were now numerous, and during a long series of years had acquired official positions and great political influence.

One hundred and fifty-sixth generation. Jan. 1st, 901, onward mostly beyond youth: the Jewish writers, Chiwi al Balki, Joseph ben Jacob (abu J.) el Kirkissani el Bassir, Saadja, Salman ben Jerucham, Menahem, Jehudah Ibn Koreish, and Eldad Hadani: the Arab writers, Ebn-al djezzar, Ebn Wahshiyyeh, Ebn el Batrik, Ishak ebn Honain d. 916: the Greek writers, Arethas of Cæsarea, Joannes Cameniates d. 904: the theologians, Marcus eremita, and Radulphus Flaviacensis; the optician Vitello.

"The same year" (Alst.), at Rome, Theodorus II. succeeded by Joannes X., fifty-first archbishop.

"Oct. 28th" (Nicol. p. 355), Alfred succeeded by Edward, seventh Anglo-Saxon king of England.

Leucanthemum vulgare of Europe and the adjoining portion of Asia. Called in Britain *great daisy* or *moon daisy* or *maudlin wort* (Prior), in ms. Laud. 553 f. 9 "bow wort" or "bris wort;" in which we recognize the bryse vvyrte of an Anglo-Saxon leechdom, — referred here by Cockayne i. 375: the "white bothen" is also identified with the "great daisie" by Gerarde: L. vulgare is described by Fuchsius 148 (Spreng.), and Matthioli p. 653; is termed "l. vulgare" by Tournefort inst. 492; was observed by Scopoli in Carniolia; and is known to grow in woods and cultivated ground in France and throughout middle Europe as far as Denmark (fl. Dan. pl. 994, Lam. fl. fr., and Pers.). Eastward, was observed by Sibthorp in mountain pastures on the Greek islands; but is unknown in Eastern Asia (Ledeb., and A. Dec.). By European colonists, was carried to Northeast America, where it has become naturalized throughout our Northern, Middle, and even in our Southern States (Chapm.), multiplying in old clearings, and in New England termed *whiteweed*, in the distance whitening fields with its flowers.

"902 A. D." (art de verif.), Motadhed succeeded by Moktafi, seventeenth Abbassid khalif.

As early perhaps as this date (. . . .), Geber writing on Chemistry, mentioning among other preparations *corrosive sublimate* — (Pouchet).

Salsola sativa of the seashore of Southern Spain. Carbonate of soda, effloresced on the soil of Northwestern Hindustan and procured besides from ashes of Salsolaceous plants, is called in Sanscrit "sajika," in Hindee "sajji muttee" or "sajji loon;" in which we recognize the "sagimen vitri" of Geber, — so named from its use in glass-making (Royle ant. hind. 41), the barilla in question being possibly manufactured in the Mediterranean countries: S. sativa, annual and herbaceous, was observed by Löfling trav. 132, and Cavanilles iii. pl. 291, in Spain, and is enumerated by Guibourt among the four species yielding the best *barilla* or soda of commerce, containing twenty-five to forty per cent of Carbonate of soda (Lindl.). The plant from transported specimens is described by Linnæus.

Salsola soda of the shores of the Mediterranean as far as the Crimea. Annual and herbaceous: — enumerated by Guibourt among the four species furnishing the best soda of commerce. S. soda is known to grow on the seashore of Southern Europe (Linn., and Jacq. hort. pl. 68); was observed by Forskal near Marseilles; by Desfontaines i. 216, in Barbary; by Bory, in the Peloponnesus; by Forskal, near Smyrna; and is known to grow on the "salt-plains" of the Crimea (Lindl.).

Salsola tragus of the shores of the Mediterranean, Black, and Caspian seas. Annual and herbaceous, with spinescent leaves: — enumerated by Guibourt among the four species furnishing the best soda of commerce. Described by Matthioli p. 731, and Lobel pl. 797; termed "kali spinosum foliis longioribus et angustioribus" by Tournefort inst. 247; and known to grow on the seashore of Southern Europe (Linn., and Pers.). Eastward, observed by Sibthorp frequent in the maritime sands of the Greek islands; by Delile, on the Mediterranean border of Egypt; and known to grow on the shores of the Black Sea and Caspian (Pall. ii. pl. 29, and Lindl.).

Salsola kali of the shores of the North Atlantic and Mediterranean, as far as the Caspian and salines of Selenga. Annual with rigid spinescent leaves: — enumerated by Guibourt as the fourth species furnishing the best soda of commerce (Lindl.). S. kali is called in Britain *prickly glasswort* (Prior); is described by Morison v. pl. 33; is termed "kali spinosum foliis crassioribus et brevioribus" by Tournefort inst. 247; is known to grow on the sandy portions of the seashore from Sweden to the Mediterranean (fl. Dan. pl. 313, and Wats.); and was observed by Desfontaines in Barbary. Eastward, observed by Forskal, and Sibthorp, frequent on the seashore of Greece and Asia Minor; by Forskal, and Delile, on the Mediterranean border of Egypt; by Bieberstein, on salines around Taurus and Caucasus; and by Pallas, along the Volga, the Caspian, and as far as the salines of Selenga. Westward from Europe, known to grow along the Atlantic shore of North America from Lat. 43° to 31° in Florida (Pursh, Walt., Ell., Baldw., and myself).

As early probably as this year, by Abulkasim of Balkh and Hasan ben Musa of Naubakht, accounts of the Hindu sects and ordinances, and of the tortures self-imposed by devotees (extract Masudi edit. Gildem.).

"903 A. D." (Pauth. 331), decree of the emperor Tchao-tsoung depriving the eunuchs of official position; followed by a general massacre of them throughout China.

"904 A. D. = 1st year of the 'thian-yeou' of Tchao-tsoung" (Chinese chron. table), beginning of the Sixtieth cycle.

"The same year" (Marcel), Egypt recovered from the descendants of Tooloon, by the army of khalif Moktafi.

Corchorus olitorius of the Southern border of the Sahara. Called in Yemen and Egypt "melochia" or "meloukhyeh," in which we recognize the "meloukhia" of the Blacks seen in Egypt by Ishak Israeli, and identified by him with the "schouschandibé" of Irak — (Abd-allat. i. 2), mentioned also in the treatise Elrudschlat, and by Ebn Baitar: C. olitorius is enumerated by Alpinus, Forskal, and Clot-Bey, as a favourite esculent in Egypt; was observed by Forskal in Yemen both wild and cultivated; and is known to be cultivated by the Negro tribes of West Africa (J. D. Hook. and Benth. fl. nigr.). Eastward from Arabia and Persia, is called in Sanscrit "putta," in Bengalee "put" (Royle fibr. plant.); was observed in Hindustan by Roxburgh, Wight, and by Graham "common in Bombay, springing up in gardens and cultivated ground;" is described by Royle as a potherb, and one of the species yielding *jute* fibre; and by Mason v. p. 521, as manufactured by the Bengalees into "coarse paper," occurring also as a weed throughout Burmah "though not very abundant." As transported to European gardens, is termed by old writers "olus judaicum" (Royle) equivalent to the English *Jew's mallow;* and is described by Commelyn hort. pl. 12, and Plukenet v. pl. 127. By European colonists, was carried to the Mauritius Islands, where it occurs only in the cultivated state (Boj.); and to the West Indies (Macfad., and A. Dec.).

"The same year" (Blair), Italy ravaged by the Hungarians.

"905 A. D. = 2d year of the 'thian-yeou,' accession of Tchao-hiouan-ti" or Tchao-siouan-tï, of the Thang or Fifteenth dynasty — (Chinese chron. table, and Pauth. p. 331).

"In this year" (ann. Jap., and Klapr.), the Ko-kin, a Japanese poem, composed: — followed by

the Go-sen in 950, Sif-i in 986, Go-sif-i in 1086, Kin-yo in 1128, Zi-kwa in 1144, Zin-zai in 1187, Sin-ko-kin in 1205, all ancient; and after these, the Sin-tsokf-sen in 1223, Zokf-go-sen in 1250, Zokf-ko-kin in 1267, Zokf-sif-i in 1280, Sin-go-sen in 1304, Giokf-ye-ziou in 1313, Zokf-zen-zai in 1318, Zokf-go-sif-i in 1327, Fo-ga-ziou in 1346, Sin-zen-zai in 1360, Sin-sif-i in 1364, Sin-go-sif-i in 1382, and Sin-zokf-ko-kin in 1438; in all "twenty-one" collections.

"The same year" (Alst.), at Rome, Joannes X. succeeded by Benedictus IV., fifty-second archbishop.

"The same year" (Alst.), end of the chronicle of Rhegino Abbas.

Aspidium (*Cibotium*) *baromez* of the country between Caucasus and the Volga. A fern from its mode of growth called *lamb-plant* or *Tartar lamb;* and in the annals of the Thang dynasty "vegetative lambs" are mentioned as growing in the country formerly called Tathsin but in later days Fulin — ("pōlin" or Constantinople, Yule i. p. lvii): The Tartar lamb is also mentioned by Odoric 43, and J. C. Scaliger exot. 1537 f. 248; and is identified with C. baromez in the English cycl. nat. hist.

"907 A. D. = 'kai-ping,' 1st year of Tai-tsou" or Tchou-san, head of the new dynasty of the "later Liang" (Chinese chron. table, and Pauth.). The beginning of the Ou-tai or Five short dynasties.

"The same year" (Alst.), at Rome, Benedictus IV. succeeded by Leo V., fifty-third archbishop.

"908 A. D." (Alst.), at Rome, Leo V. succeeded by Christophorus; and before the close of the year, by Sergius III., fifty-fifth archbishop.

"The same year" (art de vérif.), Moktafi succeeded by Moktader, eighteenth Abbassid khalif. A coin issued by Moktader, is figured in Marcel p. 90.

"910 A. D." (Alst., and Nicol.), at Rome, Sergius III. succeeded by Anastasius III., fifty-sixth archbishop.

"911 A. D. = 1st year of the 'kian-hoa' of Tai-tsou" — (Chinese chron. table).

"The same year" (Alst.), Leo VI. succeeded by his son Constantinus VIII. or Alexander Constantinus, thirty-sixth Byzantine emperor.

Hardly earlier than this date (Graha Munjari tables, Puranas, and Bentl.), Sucra reigning in Hindustan.

"912 A. D." (Alst., and Nicol.), at Rome, Anastasius III. succeeded by Lando; and before the close of the year, by Joannes XI., fifty-eighth archbishop.

"913 A. D. = 'kian-hoa,' 1st year of Tchou-tching, of the later Liang" or Sixteenth dynasty — (Chinese chron. table).

About this time ("900 to 925," Gildem. p. 76), Isthakhri writing his geographical work. He mentions Moultan (situated near the confluence of the five branches of the Indus) and an idol there venerated by the Hindus and receiving costly gifts from pilgrims (suffered to remain, notwithstanding that the city had been long held by Muslims). He describes the "Rous" or Russians as burning their dead, and having a rule not to shave one another's beards.

Abutilon Indicum of Tropical Africa and Arabia. Called in Yemen "ren," and the crude flowers eaten (Forsk. p. xciii): a flower in Persia, eaten green like leaves of "chukender" beet, is mentioned by Isthakhri: — A. Indicum was observed by Forskal p. 124 in moist places in Tropical Arabia; and is known to occur in Tropical Africa as far as the Atlantic (Benth. fl. Nigr., and A. Dec.). Eastward, is described by Rumphius iv. pl. 11; was observed in Hindustan by Rheede vi. pl. 45, Roxburgh, Wight; by Graham, "a tall herbaceous plant three or four feet" high, "common in waste places about villages;" and according to Lindley, with "other allied species" is substituted for "marsh-mallow as an emollient." Farther East, is enumerated by Mason v. p. 503 as called in Burmah "tha-ma-khyoke," cultivated by the natives, and "considered all over India a very good substitute for marsh-mallows:" was observed by Blanco on the Philippines, used by the natives medicinally, and called in Tagalo "cuacuacohan" or "guilig-guiligan," in Bisaya "malis" or "palis" or "tabing" or "dalupang." As transported to Europe, is termed "abutilon" by Camerarius hort. pl. 1 (Linn., and Spreng.).

Pancratium Illyricum of Southern Persia. Called in Egypt "susann," in which we recognize the "susen nergus" lily-narcissus growing in the territory around Shiraz, according to Isthakhri: — P. Illyricum was observed by Forskal in gardens at Alexandria, the flower in whiteness surpassing the lily and all artificial dyes.

"915 A. D. = 'tching-ming,' 1st year of Tching, of the later Liang" or Sixteenth dynasty — (Chinese chron. table).

"In or about this year" (Gildem. p. 73), China visited by Abu Yazid Muhammed ben Yazid of Siraf. — Masudi obtained information from him at Basra.

As early at least as this date (Colebrooke as. res. viii. p. 467), Suca expounding the Vedas. — He is described in the Sancara vijeya as the instructor of Gaudapada.

920 A. D. = "845 an. jav." (Raffles ix. and x.), date of an inscription in the Kawi or ancient

Javan character on a stone discovered near the site of Jang'gala. The founding of Jang'gala on the accession of king Dewa Kasuma son of Kandiawan, is assigned (by Adi Mang'gala) to "about 846 an. jav." — The country around the site in the division of Surabaya "is strewed with antiquities."

"923 A. D. = 'thoung-kouang,' 1st year of Tchouang-tsoung, of the later Thang" (Chinese chron. table): the new name arising from the desire of this emperor to continue the Thang dynasty (Pauth.).

"The same year" (Blair), in France, *fiefs* or manor-jurisdictions begin to be established.

"The same year" (Cockayne note to Leechb. i. 40), date of the treatise by Rhazes on the *small pox*.

Cleome pentaphylla of Equatorial Africa. Called in Nubia "ararеg" (Del.), in Dongola "tamalak" (Cailliaud), in which we recognize the "tumluk" or "kunnabari" of Rhazes, — and Avicenna, described by Ebn Elawam as a sort of wild greens growing in gardens and on the strand of rivers, and identified by Ebn Baitar with the "elbargascht" of the Persians: C. pentaphylla was observed by Alpinus, and Delile, as far North as Cairo; is enumerated by Clot-Bey among the plants employed in Egypt for feeding cattle; and is a well-known esculent on the Upper Nile and throughout Equatorial Africa as far as Congo (Oudney, R. Brown, and A. Dec.). Eastward, the "karavella" or "suryyavalli" of Susrutas sutr. 19 to 46 is referred here by Hessler; C. pentaphylla has Sanscrit names (Pidd.); was observed in Hindustan by Rheede ix. pl. 24, and Wight; by Graham, in the environs of Bombay "common in gardens and cultivated grounds." Farther East, is enumerated by Blanco as called "araña" at Manila. By European colonists, was carried prior to 1707 (Sloane i. 94) to Tropical America, where the names "sambo" at Jamaica, "mosambe" or "acaia" at Cayenne, and "coyers" at Barbadoes, imply African origin; was also carried to Taheiti, as verified by myself.

Glaucium citrinum of Northern Hindustan. Called at Lahore "mameeran" (Honigb. 280), in which we recognize the "mamiran" of Rhazes. The "ma-mee-ran" is however defined in the Ulfaz Udwiyeh 1351 as a species of yellow wood (J. F. Wats. index).

Suæda vera of Arabia and Egypt. Called in Egypt "suæd" or "soud," in which we recognize the "suad" of Rhazes, — Ebn Redhwan, Mosih ben Elhakam, Avicenna, and Ebn Baitar: S. vera was observed by Forskal, and Delile, on the Mediterranean border of Egypt near Alexandria: and farther South, by Forskal in the maritime portion of Yemen.

Spinacia oleracea of Central Asia. Called in Egypt "esbanach," in which we recognize the "isfanaj" of Rhazes, — Avicenna, Serapion, Edrisi, and Ebn Baitar: S. oleracea was observed in Egypt by Alpinus, Forskal, Delile, and Clot-Bey. Farther North, is called in Persian "ispanaj" or "ispanj" (Roxb.); seeds were collected in the plains of Persia by Olivier (Bosc. dict. agr.); and the plant was found by C. Koch apparently indigenous around Caucasus (A. Dec.). Westward, is described by Brunfels p. 16, Fuchs p. 668, Tragus, Matthioli, Cotgrave, Dodoens v. 1, and C. Bauhin; continues to be cultivated throughout Europe, and is called in Italian "spinace," in English *spinach* (Prior). Eastward from Persia, has no Sanscrit name (A. Dec.); but is called in Hindustanee "isfanaj" or "palak" or "bathua" (D'rozar), was observed in Hindustan by Roxburgh, and by Graham "cultivated in gardens." Farther East, was observed by Loureiro cultivated around Canton. By European colonists, was carried to Northeast America, where it continues to be abundantly cultivated.

Zygophyllum fabago of the Northern portion of the Desert, from Barbary to Syria and the border of Siberia. The "andarian" of Rhazes 24 — is referred here by Sprengel: Z. fabago was observed by Rauwolf p. 113 in Syria; and according to Lindley, is esteemed there "as a vermifuge:" is known to grow also on the border of Siberia, in the Crimea, and in Barbary (Lam. ill. pl. 345, Pers., and Lindl.).

Acacia tortilis of Yemen. Called there "hares;" the "yellow and red yars" described by Rhazes as "brought from Yemen and collected upon trees like pounded saffron," — may be compared: Forskal is silent respecting any use made of A. tortilis; but the tree is enumerated by Lindley among the species of Acacia "yielding a gum like gum arabic."

Guilandina bonduc of Tropical shores, from the West Indies and Brazil to the Eastward to the Malayan Archipelago and the Samoan and Hawaiian islands. The "bunduk hindi" of Rhazes, — Masudi, Avicenna, and Ebn Baitar, may be compared: G. bonduc was observed by Forskal p. 135 in the interior towns of Yemen, brought from Hindustan and planted by the Banians under the name of "sirs," but unknown to the Arabs around. Eastward, has Sanscrit names (Pidd.); is called in Bengalee "nata," in Hindustanee "katkarunja" or "katkulija" (Lindl.); was observed by Rheede ii. pl. 22 in Malabar; by Graham, "a scandent well armed shrub" called "sagur-gota," common "in hedges and jungly tracts;" was observed by myself near Bombay; and according to Roxburgh, Wight, and Lindley p. 156 and 263, the seeds in powder are a powerful bitter and tonic, and an excellent febrifuge. Farther East, is enumerated by Mason as indigenous in Burmah and called "ka-leing;" was observed by Wallich 5806 on Penang; is known to grow on Timor (Decsne fl. p. 134); was observed

by Rumphius v. pl. 48 on Amboyna and called "sehit;" by Blanco, on the Philippines, called in Tagalo "bayag cambing" or "calambibit," in Bisaya "dalugdug," and the seeds used medicinally by the natives; observed by myself on Mindanao, and on the Feejeean and Samoan Islands; and by Beechey (Hook.), and Mann, on the Hawaiian Islands. Westward from Ceylon, was carried according to Bojer p. 116 to the Comoro Islands and to Madagascar, where it has become naturalized; was observed by Drège at the Cape of Good Hope (E. Mey.); is known to grow along the West African coast in Congo, Guinea, and Senegambia (R. Brown, Thoning, and Perr.); was observed by myself in Southern Brazil; by Aublet, in Guyana; by Sloane, Plumier, and others, in the West Indies as far as the point of Florida, and seeds drifted by the Gulf stream have preserved their vitality after reaching the Irish coast (J. Banks, and A. Dec.),

Cucumis djyzar hendi of Scind and the adjoining portion of Hindustan. Called in Yemen "djyzar hendi" Indian carrot, and the "bathikh elhindi" of Rhazes, — Eltamimi, and Ebn Baitar, is referred here by Sontheimer: C. djyzar hendi was observed by Forskal in a few gardens in Yemen, brought from India and called by the Indians (Banians) "gadjer" or "schekarkand," the root edible. (See C. pseudo-colocynthis).

"925 A. D." (Nicol.), Edward succeeded by Athelstan or Ethestan, eighth Anglo-Saxon king of England.

In this year (= 839 + "10th + 48 + 12th + 3 + 1 + 4 + 2d + 6 = 86 years" of Malabar domination, Mahavams. liv to lix), the Malabars defeated by Mahaloo Wijayaba, who now became king of Ceylon. — He reinstated the Budhist religion by sending to his friend king Anoorudda, and importing "twenty priests" together with "several books" (from Aramaradeese on the coast of Coromandel, note by transl.).

"926 A. D. = 'thian-tching,' 1st year of Ming-tsoung, of the later Thang" or Seventeenth dynasty — (Chinese chron. table).

"In the reign of Ming-tsoung" (Pauth. 333), the art of *printing* from wooden blocks, invented in China. The printing of the first four books of Confucius is referred by Humboldt cosm. ii. to "890–925."

Toltecs under their "fifth" chief Nimaquiché retiring to Guatemala, founded the city of Quiché on lake Atitan; and Nimaquiché dying on the route, his son Acxopil became in effect the first king of Guatemala (art de verif. contin.).

Agave Americana of the Western slope of the Peruvian Andes. The *century plant*, called in Peru "chuchau," and its fibre "chahuar," and this fibre twisted into mantles by the wild tribes of the cold portion of the Andes — (G. de la Vega i. 14 to viii. 13); also gave the name "Chahuarhuay" (June) to the second month established by Yupanqui; and furnished the slings given to youths of Inca descent in the seventh month Ccapac Raymi (C. de Molin. 38). Numerous uses of the plant are mentioned by G. de la Vega, and Ruiz and Pavon iii. 66; and the plant itself was observed by myself clearly indigenous and a striking feature in the vegetation on the basal portion of the Peruvian Andes. In Mexico, the "maguey" or "metl" was cultivated as far South as the Aztec language extended for making cordage and the kind of paper on which hieroglyphics were painted, and its sap fermented into "pulké;" a beverage not used by the Otomite, Totonac, nor Mistec tribes (Humb. iv. 9): A. Americana is described by Lopez de Gomara (Spreng.). By European colonists was carried Westward across the Pacific to the Philippines, where it is used by the natives medicinally and for making fine cloth, and is called "magui" (Blanco); to the neighbouring islands, termed "aloe americana" by Rumphius v. pl. 94; to Hindustan, called in Bengalee "bilatipat" or "jungli-ananash," in Tamil "anaik-katrazhai," in Telinga "rakashi-mattalu," in Hindustanee "bakas-pattah" or "halhi-sengar" or "bara-kanvar" or "jungli-kanvar" (Drur.), and "now common" throughout (Royle, Wight, and Drur.). Transported to Europe "in 1586" (Camer. hort. 11, and Clus. hisp. 444), continues to be cultivated, especially for hedges, in Southern Spain, Algeria, Sicily, Italy, and Dalmatia, has become seemingly naturalized but does not ripen seed (A. Dec.); was observed by Siebold, and Chaubard, in Greece, a few stocks derived apparently from former cultivation: by European colonists also, was carried to Northeast America, where it continues in greenhouses. Its roots according to Lindley are diuretic, and are brought to Europe mixed with sarsaparilla.

"927 A. D." (= 875 + cycle of 52 years, Clavig. ii.), accession of Mitl, sixth Toltec king of Mexico.

Ipomaea jalapa of the Mexican table-land. Called by the Spanish colonists "jalapa macho" or "purga macho" (Schiede), and the "mechoacan" of the ancient Mexicans * — (Humb. iv. 10) may

* *Inga unguiscati* of Mexico and the West Indies. A large shrub called in Mexico "quamochitl" (Hernand. 94), and known from early times: — observed by Plumier pl. 4, Descourtilz i. pl. 11, and Macfadyen, frequent in the West Indies. By European colonists, was carried Westward

be compared: I. jalapa is attributed to Mexico by Linnæus (Pers., and Steud.); was observed by Orbegozo in the temperate parts of Oaxaca, its root considered by the traders extremely similar in quality to jalap, and being "the more abundant and larger of the two, at least in some districts," is regarded by Lindley as probably furnishing a portion of the imported drug.

Ipomaea purga of the mountains of Eastern Mexico. Called at Jalapa "purga," but in Mexican "laschachne" or "tetonpactle" — (Lindl.), and furnishing the true jalap of commerce: observed by Schiede, and Orbegozo, on the mountains near Orizaba, on Coffre de Perote at the elevation of "six thousand" feet, and on the Eastern declivity of the mountains near Chiconquiaco. "Sufsub jalaba" was found by Forskal mat. med. imported by the way of Greece into Egypt.

"928 A. D." (Alst., and Nicol.), at Rome, Joannes XI. succeeded by Leo VI., fifty-ninth archbishop.

"929 A. D." (Alst., and Nicol.), at Rome, Leo VI. succeeded by Stephanus VIII., sixtieth archbishop.

"The same year" (Munk), the pilgrimage to Mecca interrupted by the sect of Karmatians. Lines of impending partition now beginning in the Khalifate or Muslim Empire.

"931 A. D." (Alst., and Nicol.), at Rome, Stephanus VIII. succeeded by Joannes XII., sixty-first archbishop.

"The same year" (ann. Jap., and art de verif.), Dai-go succeeded by his son Siusaku or Zusiak, now sixty-first dairo of Japan.

"In this year" (Elph. iv. 1), the king of Guzerat, dying without male issue, succeeded by his son-in-law as head of a new dynasty, the Salonka or Chalukya dynasty.

"932 A. D." (art de verif.), Moktader succeeded by Kaher, nineteenth Abbassid khalif.

"934 A. D. = 'yng-chun,' 1st year of Min-ti; and after a brief interval, 'tching-tai,' 1st year of Lou-wang:" emperors "of the later Thang" or Seventeenth dynasty — (Chinese chron. table, and Pauth.).

One hundred and fifty-seventh generation. May 1st, 934, onward mostly beyond youth: the Jewish writers, Japhet (Abu Ali Hassan el Basri) Halevi, Sabbatai Donolo ben Abraham: the Syrian bishop Moses Barkepha: the Arab writers, the astronomers Azophi and Alfarabi d. 950 (Pouchet), the grammarian Faresi, Ebn Said, Said ben Batrik (Eutychius) wr. 932 to 953 (Leps.): the Greek writers, Georgius Monachus d. 948, Theodosius acroaseis d. 961, Pollux the chronographer: Oecumenius d. about 956, Genesius d. about 95; the theologians, Hadamarius, and Giselbertus: Luitprand, Witichind, Frodoard, Eudes de Cluni.

"The same year" (art de verif.), Kaher deposed, and the accession of Radi, twentieth Abbassid khalif. A coin issued by Radi, is figured in Marcel p. 93.

"936 A. D. = 'thian-fou,' 1st year of Kao-tsou III.," head of the new dynasty of the later Tsin — (Chinese chron. table).

"The same year" (Alst., and Nicol.), at Rome, Joannes XII. succeeded by Leo VII., sixty-second archbishop.

"The same year" (Nicol, see Alst.), Henricus Auceps succeeded by his son Otto or Otho, as

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across the Pacific to the Philippines, where it is called in Tagalo "camochiles" or "camachiles" or "camonsiles," and the pulp around its seeds eaten by the natives (Blanco). Its bark in decoction is "very astringent," and is employed medicinally (Lindl.).

Inga saman of Central America. An immense tree, the "genisaro" of Mexico (Drur.), and probably long known there: — described by Jacquin (Steud.); and observed by Squier in Central America, "ninety feet high," with branches "five feet in diameter" extending quite horizontal "ninety-two feet." By European colonists was recently introduced into Ceylon, and thence to the Cuddapah and Codoor plantations in Hindustan, supposed "to be a tree of great value for railway fuel" (Beddome, and Drur.).

Inga dulcis of Mexico. A large tree probably known to the natives of Mexico and Central America as early as this date. — By European colonists, was carried across the Pacific to the Philippines (Pers.); and thence reached Hindustan, where it is called in Telugu "sima chinta," in Tamul "coorookoo-pally" (Drury); was observed in Hindustan by Roxburgh cor. pl. 99; by Graham, "common about Bombay," its "pods curiously twisted, filled with a sweet firm pulp which forms a very nourishing food."

Tigridia pavonia of Mexico. The *tiger-flower* called "cacomite" and its farinaceous root eaten by the ancient Mexicans — (Humb. iv. 9): observed by Hernandez viii. 23 in Mexico: and a drawing of "flos tygridis" sent by Brancion to Dodoens (Lobel hist. 59, and Dalech.). By European colonists, was carried to Northeast America, where it continues a favourite flower in gardens; and by Nimmo to the environs of Bombay.

"king" of Germany. An impression of the seal of Otto, — attached to a parchment written "in 956," is extant.

Hardly earlier than this date (Graha Munjari tables, Puranas, and Bentl.), Abhijit reigning in Hindustan.

938 A. D. = "863 an. jav." (Raffles x.), date of an inscription in the Kawi in ancient Javan character on a stone discovered near Jang'gala.

940 A. D. = "865 an. jav." (Raffles x.), date of an inscription in the ancient Javan character "very beautifully executed" on copper. Also of an inscription in the same character on a stone discovered on the Kedang hills.

"In this year" (Alst., and Nicol.), at Rome, Leo VII. succeeded by Stephanus IX., sixty-third archbishop.

"The same year" (art de verif.), Radi succeeded by Motaki, twenty-first Abbassid khalif.

Motaki was acknowledged by Ikhschid; who, from being appointed governor of Egypt, had rendered himself really independent, and had even extended his authority over Palestine and Syria. Coins issued by Ikhschid, are figured in Marcel p. 95.

About this time (tradit., and Colebrooke as. res. viii. 258 to 467), Gaudapada, "stated to have been" the instructor of Govindanat'ha, expounding the Vedas. Some of his writings — are extant.

"941 A. D." (palm-leaf ann. Jag., and W. W. Hunter), Jana Kesari succeeded by Nripa Kesari, now king of Orissa; a warlike and ambitious prince, — who founded the city of Cattack at the commencement of the delta of the Mahanadi, and reigned "twelve years."

"The same year (= 331 A. H. comm. Sept. 14th," Gildem. 77), Musir ben Muhalhil accompanying the Chinese ambassadors back to their own country.

"Oct. 27th" (Nicol.), Athelstan succeeded by Edmund, ninth Anglo-Saxon king of England.

"In this year" (Sm. b. d.), sudden appearance of a Russian fleet of "ten thousand boats" under Ingor, ravaging the country around the entrance of the Bosphorus. The Russians were repelled, and most of their boats destroyed, — and "in 945," Olga widow of Ingor came to Constantinople and received baptism under the name of "Helena."

"942 A. D." (J. Nicholson in Kitt. cycl. bibl.), death of Rabbi Saadjah Haggaon or Saadja Gaon, born in the Faijum, rector of the academy at Sora, and author of an Arabic version of the Pentateuch, Isaiah, Job, and a portion of Hosea. The version "often follows the Septuagint;" — and was published in the Hebrew character in the Tetraglott of "Constantinople in the year 1546."

"The same year (= 331 A. H. comm. Sept. 14th," Ebn Batut., and Gildem. p. 54), death of Abu Abdallah ben khalif; who first opened to Muslims the pilgrimage to the mountain in Ceylon containing the alleged imprint of Budha's foot.

Returning from Sindabil in China part of the way by sea, Musir ben Muhahil visited the "pepper country" (Malabar?), and mount Kafur on which among other great cities Kamrun is situated, that exports "the green wood called mandal kamruni" (. . . .). "There is also the city called Sanf, which gives its name to the Sanfi aloes-wood" (. . . .). "At another foot of the mountain towards the north is the city of Saimur" (not far from Sind) containing mosques, churches for Christians, synagogues, and even a temple for fire-worshippers (Parsees); the Hindu population not slaying animals, nor eating fish, eggs nor meat, except that some among them would eat animals beaten to death or thrown from a precipice, but not animals dying naturally. The "saimuri wood" is named from this city though it is only brought thither for sale. — Much of the narrative of Musir ben Muhahil has been preserved by Yakuti, and Kazwini (Gildem., and Yule).

"943 A. D. = 8th year of the 'thian-fou,' accession of Tchou-tchoung-kouei, of the later Tsin" or Seventeenth dynasty (Chinese chron. table).

"The same year" (Alst., and Nicol.), at Rome, Stephanus IX. succeeded by Marinus II. or Martinus II., sixty-fourth archbishop.

In this year (= "332 A. H., comm. Sept. 3d," Gildem.), Masudi, according to his own account, writing his "Meadows of gold." He speaks of the burning of widows with their deceased husbands in Hindustan (Wilford as. res. ix. 181), having visited Sind "in 912" while quite a youth, and afterwards Zanzibar and the Island of Kanbalu (Comoro?), Champa, China, and the country of Zabaj (Java?), besides travelling in Turkestan — (Yule cath. i. p. cx.). He died "in 957" (Pouchet).

Hernandia sonora of wooded Tropical shores from the Malayan archipelago to the Samoan Islands. The *jack-in-a-box* is a large tree called in Tagalo "colongcolong" (Blanco); and the tree bearing men and women on the island of Wak-wak in the Southern Ocean, mentioned by Masudi, — and Bakui (Yule 79), may be compared: Al Biruni denies that the island is named from a fruit shaped like a human head which cries "wak wak:" H. sonora was observed by myself frequent along the seashore of the Samoan Tongan and Feejeean Islands; by Rich, under cultivation at Otafu coral-island from a drifted seed; by Blanco, frequent along the seashore of the Philippines; by Rumphius ii. pl. 85, on the Moluccas, its fibrous roots chewed and applied to wounds caused by the Macassar poison form

an effectual cure (Lindl.); is known to grow also on Timor (Decsne) and as far as Java (Hassk., and A. Dec.). Eastward, was observed in the West Indies by Plumier, Browne, Jacquin amer. 245, and Descourtilz, but no Carib name is given, and from what is above stated, may have been carried there by Polynesians. From transported specimens, is described by Plukenet alm. pl. 208. The juice of the leaves according to Lindley "is a powerful depilatory," destroying "hair wherever it is applied, without pain."

"944 A. D." (art de verif.), Motaki deposed; and the accession of Mostakfi, twenty-second Abbassid khalif.

"Dec. 20th" (Sm. b. d.), at Constantinople, the throne recovered from his usurping guardian and colleague Romanus Lecapinus by Constantinus VII. Porphyrogenitus. By whose direction, Theophanes Nonnus compiled his medical compendium.

The earliest notice of *distilled rose-water* ροδοσταγματος is by Theophanes Nonnus 97 — (Spreng., and Sm. b. d.).

"945 A. D." A *Coptic inscription* dated in the "six hundred and sixty-second year of the Diocletian era, and three hundred and thirty-fourth of the Hejra" (the two reckonings agreeing with each other and with the above year) — is mentioned by Champollion-Figeac eg. anc. p. 228.

"In this year (= 2d of the khai-yun," geogr. Chin. transl. Klapr. p. 35), Kian succeeded by his son Wou, now king of Corea.

"In this year (= 8th year of the 'ten-kei' of Zu-siak," ann. Jap. transl. Tits.), Fousiwara-no Naka fira dying, received the posthumous title of Biwa-no Sadaisin.*

"946 A. D." (Alst., and Nicol.), at Rome, Martinus II. succeeded by Agapetus II., sixty-fifth archbishop.

"May 26th" (Nicol.), Edmund succeeded by Edred, tenth Anglo-Saxon king of England.

"The same year" (art de verif.), Mostakfi deposed, and the accession of Mothi, twenty-third Abbassid khalif. A coin issued by Mothi, is figured in Marcel p. 94.

Mothi was acknowledged by the eunuch Kafur, who governed Egypt in the name of the children of Ikhschid — (Marcel p. 97).

"947 A. D. = 12th year of the 'tching-tsin-thian-fou' of Kao-tsou IV.," now head of the new dynasty of the later Han — (Chinese chron. table).

"The same year" (ann. Jap., and art de verif.), Siusaki succeeded by his brother Murakami, fourteenth son of Dai-go, and now sixty-second dairo of Japan.

Greek manuscripts of about this date (Sylvestre) presenting the following forms of letters, δ, γ, λ, μ, σ, υ.

Under Constantinus VII. Porphyrogenitus (. . . .), the Geoponica, Greek agricultural writings, collected by Cassianus Bassus.

Pinus cembra of Europe and Northern Asia. Its cones called in France "ceinbrots," in Italy "zermi," in Germany "zirbelnusse," and the στροβιλον of the Geoponica xi. 1. 11 — is referred here by Sprengel: P. cembra is described also by Avicenna 179 (Spreng.), and is known to grow on the mountains of Switzerland (Lam. fl. fr., and Pers.). Eastward, is known to be frequent throughout Northern Asia as far as the Kurile Islands (Endl., and A. Dec.). Is "said to yield *Carpathian balsam*" (Lindl.).

"948 A. D. = 'kien-you,' 1st year of Yn-ti, of the later Han" or Nineteenth dynasty — (Chinese chron. table).

"The same year (= 337 A. H. comm. July 10th," Gildem. p. 54), date of an Arabic sepulchral inscription in the city of Colombo in Ceylon (trans. Asiat. i. 540).

The same year = "5th year of Mostakfi," in an inscription at the gold mines of Gebel Ellaka in the Ababdeh Desert. The earliest inscription in the current *Arabic letters* hitherto discovered (Wilk. theb. and eg. p. 416 and 545).

About this time ("909 to 951" Krapf trav.), Mukdishu on the coast of East Africa founded by Arabs.

"950 A. D." (Munk), the pilgrimage to Mecca again opened.

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* *Eriobotrya Japonica* of Japan. The first part of the above title is derived from this tree — (Klapr.), called "biwa" to the present day: E. Japonica was seen in Japan by Kaempfer v. p. 800; and is described by Thunberg as large and lofty, bearing esculent fruit. Westward, was observed by Loureiro in China or Cochinchina. But by European colonists may have been carried to Burmah, where it is enumerated by Mason as "exotic" and called *loquat;* and to Hindustan, where it was observed by Roxburgh, and Graham in gardens, and called *loquat* or *whampee.* Clearly by European colonists, carried to the Mauritius Islands, where it is cultivated in elevated situations and called "bibassier" (Boj.); to Europe, in the days of Plukenet alm. pl. 371; and to Northeast America, where it has become frequent in greenhouses.

Haly Abbas about this time writing.

"951 A. D. = 'kouang-chun,' 1st year of Tai-tsou II." or Ko-wei, head of the new dynasty of the later Teheou (Chinese chron. table, and Pauth.).

"954 A. D. = 'hien-te,' 1st year of Chi-tsoung, of the later Tcheou" or Twentieth dynasty (Chinese chron. table).

"955, Nov. 23d" (Nicol.), Edred succeeded by Edwy or Edwyn, eleventh Anglo-Saxon king of England.

Nigella damascena of the Mediterranean countries. Called in Britain *fennel-flower* or *devil-in-the-bush* or *bishop's-wort* (Prior), in Greece "mavrōkōkō" or "pōrthōhōrtōn" (Sibth.); in which we recognize the biscopwyrt of the Anglo-Saxon transl. Apul. 1,*—and a glossary at Epinal: N. damascena has been long cultivated in Britain (Curt. mag. pl. 22); is termed "n. angustifolia flore majore simplici cœruleo" by Tournefort inst. 258; was observed by Forskal near Marseilles; and is known to occur in cultivated ground in Southern France and Spain (Pers., and Boj.). Eastward, was observed by Sibthorp, and Chaubard frequent in cultivated ground in Greece and on the Greek islands; and is enumerated by Clot-Bey and Figari as long known in Egypt. By European colonists, was carried to Northeast America, where it continues under cultivation, and has been observed by A. Gray "nearly spontaneously around gardens;" to the Mauritius Islands, where it was observed by Bojer under cultivation as a garden flower. (Compare *bishop's-weed*, Ammi majus.)

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* *Ranunculus acris* of Europe and Northern Asia. Called in Britain with other species *butter-cup* or *king-cup* or *king-cob* (Prior), its many-petaled form in France "bouton d'or" (Pers.): the clufwyrt of the Anglo-Saxon transl. Apul. 10—is referred here by Cockayne: R. acris is termed "r. hortensis" by Fuchsius 157 (Spreng.); and is known to grow abundantly throughout middle and Northern Europe (Thuil, Dec. fl. fr., and Pers.). Eastward, is known to grow on Caucasus (Bieb.), and in Northern Asia (Wats.): and thence may have been carried by Russian colonists across the Pacific to Norfolk Sound, where it was observed by Mertens. Clearly by European colonists, was carried to Iceland and Greenland (Hook., and Wats.); to Northeast America, where it has become naturalized, multiplying especially in clearings that have become grass-grown in our Northern States and Canada, as far even as the central portion of the continent in "Lat. 58°" (Drumm., and Hook.). From its superior height over two allied species, is termed *tall butter-cup* by A. Gray.

Ranunculus gramineus of middle Europe. The crefnes fot raven's foot of the Anglo-Saxon transl. Apul. 28—is referred here by Cockayne: R. gramineus is described by Linnæus; and is known to grow in mountain meads in France and Britain (Gouan, Smith brit. ii. p. 588, Pers., and Steud.).

Saxifraga granulata of Europe and Northern Asia. Called in Germany "weiss steinbrech" (Trag.), and the sundcorn of the Anglo-Saxon transl. Apul. 99—from the figure in manuscript *v*, is referred here by Cockayne: S. granulata is described by Platearius, Brunfels 185, Tragus i. pl. 180, and Dodoens 316 (Spreng.); is termed "s. rotundifolia alba" by Tournefort inst. 252; and is known to grow throughout middle Europe (fl. Dan. pl. 514, Curt. lond. i. pl. 30, and Pers.). Eastward, was observed by Sibthorp, and Chaubard, frequent in grassy places in the Peloponnesus.

Eupatorium cannabinum of Europe and the adjoining portion of Asia. Called in Britain *hemp-agrimony* (Prior); the henep of the Anglo-Saxon transl. Apul. 116—may be compared, the figure in manuscript *v* agreeing according to Harley and Cockayne: E. cannabinum is classed under "hepatorium" by Gerarde; is known to grow in marshy ground throughout middle Europe as far as Denmark (Tourn. inst. 456, fl. Dan. pl. 745, Engl. bot. pl. 428, and Pers.). Eastward, was observed by Forskal, Sibthorp, and Chaubard, frequent in shady wet situations from the Peloponnesus to Constantinople.

Cirsium acaule of middle and Northern Europe. The wudu thistel of the Anglo-Saxon transl. Apul. 111—may be compared with its caulescent form when growing in woods, the figure in manuscript *v* resembling according to Cockayne C. lanceolatum: C. acaule is described by Linnæus; and is known to grow in France and throughout middle Europe as far as Denmark (fl. Dan. pl. 1114, Vill., and Pers.).

Gentiana amarella of Northern Europe, and farther South on mountains. One or more species called in Britain *felwort* (Prior); the feldwyrt of the Anglo-Saxon transl. Apul. 17,—may be compared: G. amarella is termed "g. pratensis flore lanuginoso" by Tournefort inst. 81; and is known to be frequent in Britain, France, and Northern Europe (flor. Dan. pl. 328, Engl. bot. pl. 236, and Pers.); Eastward, was observed by Sibthorp in grassy situations on the Bithynian Olympus. The plant according to Lindley is "one of the British substitutes for the gentian of the shops."

Pinguicula vulgaris of Northern Climates. Called in Britain *butterwort* (Prior): the

Medicago maculata of Europe and the adjoining portion of Asia. Called in Britain *heart-clover* (Prior p. 50), in Greece "triphullŏmmatēn" (Ang.), in which we recognize the heort cläefre of the Anglo-Saxon transl. Apul. 25, — and gloss. Laud. 567, referred here by Cockayne: M. maculata is described by Anguillara p. 285 (Spreng.), and Morison ii. pl. 15; is termed "medica echinata glabra cum maculis nigricantibus" by Tournefort inst. 410; and is known to grow from the Mediterranean to Britain (All., Curt. lond. iii. pl. 47, and Pers.). Eastward, was observed by Sibthorp, and Chaubard, frequent from the Peloponnesus throughout the Greek islands to mount Athos; and is described by Pallas (Steud.). By European colonists, was carried to Northeast America, where it was observed by A. Gray "introduced with wool into waste grounds in some places."

Trifolium procumbens of Europe and the adjoining portion of Asia. A yellow-flowered species called in Britain *hop-clover;* and the hymele of the Anglo-Saxon transl. Apul. 52, — figured with trefoil leaves in manuscript G, is referred here by Cockayne: T. procumbens is termed "t. lupulinum" by Rivinus tetrapt. pl. 10, "t. pratense luteum capitulo lupuli vel agrarium" by Tournefort inst. 404; and is known to grow in grassy situations throughout middle Europe as far as Denmark (Vaill. par. pl. 22, fl. Dan. pl. 945, and Pers.). Eastward, was observed by Sibthorp, and Chaubard, frequent in cultivated ground from the Peloponnesus to Asia Minor and Cyprus; by Hasselquist, around Damietta on the Mediterranean border of Egypt. By European colonists, was carried to Northeast America, where it continues in waste and cultivated ground as far inland as Kentucky (A. Gray); also to Austral Africa (Drege, and A. Dec.).

Asperula odorata of Europe and the adjoining portion of Asia. Called in Britain *wood-rofe* or *wood-ruff* or *wood-row* or *wood-rowel* from its whorled leaves resembling rowels of ancient spurs (Prior), in which we recognize the vvvdv rofe of the Anglo-Saxon transl. Apul. 33 and 53, — and the "woderoue" termed "herba muscata herba citrina" in gloss. Harl. 3388 (an instance according to Prior of the adoption of a French word into Anglo-Saxon): A. odorata is figured in manuscript V of the Anglo-Saxon transl. Diosc. 174 (Harley and Cockayne); is termed "aparine latifolia humilior montana" by Tournefort inst. 114; was observed by Scopoli in Carniolia (Steud.); and is known to grow throughout middle Europe as far as Britain (Curt. lond. iv. pl. 15, and Pers.). Eastward, was observed by Sibthorp in shady situations on the Bithynian Olympus and around Constantinople. According to Smith, and Lindley, "the herb while drying has the scent of new hay," and "passes for a diuretic."

Digitalis purpurea of middle Europe. Called in Britain *foxglove*, in Norway "rev-bielde" fox-bell, in France "gantes de notre dâme," in Germany "fingerhut" (Prior), in which we recognize the foxes glofa of the Anglo-Saxon transl. Diosc. 144, — and a manuscript glossary of Ælfric: D. purpurea is termed "digitalis" by Fuchsius, who remarked the absence of Greek and Latin names; is described also by Tragus 339 (Spreng.), and F. Columna (Mentzel.); and is known to grow wild throughout middle Europe as far as Norway (fl. Dan. pl. 74, Ehrard, and A. Dec.). By European colonists, was carried to Northeast America, where it continues under cultivation; to the Mauritius Islands, where according to Bojer it seldom flowers. The leaves and seeds according to Lindley "afford one of the most valuable of known medicines, for the purpose of reducing the action of the heart, promoting the action of the absorbents, as a diuretic, and for producing a specific action over the cerebro-spinal system."

Calamintha acinos of Europe and the adjoining portion of Asia. Called in Britain *basil-thyme* (Prior), and the mistel of the Anglo-Saxon transl. Apul. 119, — identified by Cockayne with the *basil*, may be compared: C. acinos is described by Fuchsius p. 896, Anguillara p. 218, Lobel, and Clusius (Spreng.), and Parkinson th. p. 19; is termed "clinopodium arvense ocymi facie" by Tournefort inst. 195; was observed by Forskal near Marseilles; is known to grow wild in Italy (Lenz), and throughout middle Europe as far as Britain (Lam. fl. fr., Pers., and Curt. lond. i. pl. 43). Eastward, was observed by Sibthorp, Chaubard, and Fraas, in the Peloponnesus; and is described by Pallas.

Calamintha clinopodium of Europe and the adjoining portion of Asia. Called in North America

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smeroVVyrT of the Anglo-Saxon transl. Apul. 20 — is referred here by Cockayne p. lvi: P. vulgaris is described by W. Coles (Prior); is known to grow in wet situations in Switzerland and throughout middle and Northern Europe as far as Lapland and Iceland (Oed. dan. pl. 93, Pers., Hook., and Wats.). Eastward, is known to grow in Siberia (Wats.). Farther East, a Pinguicula was observed by Chamisso on St. Lawrence Island; and P. vulgaris is known to grow on wet rocks from Lake Superior to Western New York (A. Gray).

Satyrium viride of middle Europe. The hrafnes leac raven's leek of the Anglo-Saxon transl. Apul. 16 — may be compared (the figure according to Cockayne being that of Satyrium of Linnæus and not a Habenaria): S. viride is known to grow in mountain meads from Britain throughout middle Europe (Engl. bot. pl. 94, and Pers.); was observed by Haller pl. 26 in Switzerland.

basil (A. Gray), in Greece "kōpsōhōrtōn" (Sibth.), and the "mistel" in question, — although the figure does not well agree, is referred here by Cockayne: C. clinopodium is described by Valerius Cordus, Gesner, Matthioli, and Clusius (Spreng.); is termed "c. origano simile elatius majore folio" by Tournefort inst. 195; is known to grow in Algeria (Benth.), Italy (Lenz), and throughout middle Europe as far as Sweden and Kasan (fl. Dan. pl. 933, Fries, and Ledeb.). Eastward, was observed by Sibthorp, and Chaubard, in mountainous stony places in the Peloponnesus and Crete; is known to grow on Caucasus, and throughout middle Asia as far as Cashmere and Lake Baikal (Ledeb., and Benth.). By European colonists, was carried to the Azores (Wats.); to Northeast America, where it has become naturalized in open situations from Newfoundland and Canada to South Carolina and Missouri (Hook., Beck, and A. Dec.).

Lysimachia nummularia of Europe and the adjoining portion of Asia. Called in Britain *money-wort* (Prior): the centimorbia of the Anglo-Saxon transl. Diosc. 162 — is referred here by Lovell, Lyte, and Nemnich (Cockayne): L. nummularia is termed "l. humifusa folio rotundiore flore luteo" by Tournefort inst. 141; and is known to grow in wet soil throughout middle Europe as far as Denmark (fl. Dan. pl. 493, Curtis lond. iii. pl. 14, and Pers.). Eastward, was observed by Forskal, and Sibthorp, in the environs of Constantinople.

Holcus lanatus of Europe and the adjoining portion of Asia. The cvvice of the Anglo-Saxon transl. Apul. 79 — may be compared with the "weich" of Hildegarde ii. 165, referred here by Sprengel: H. lanatus is termed "gramen pratense paniculatum molle" by Tournefort inst. 522; and is known to grow in meads in France and throughout middle Europe (Vill., Curt. lond. iv. pl. 11, and Pers.). Eastward, was observed by Sibthorp around Constantinople. By European colonists (according to Josselyn) *couch-grass* was carried to New England, and H. lanatus has been observed by myself sparingly naturalized in the environs of Salem.

"956 A. D." (Alst., and Nicol.), at Rome, Agapetus II. succeeded by Joannes XIII., sixty-sixth archbishop.

"957, Oct. 1st" (Nicol. p. 356), Edwyn succeeded by Edgar, twelfth Anglo-Saxon king of England. Dunstan in this year made bishop of Worcester (Cockayne iii. 435).

"959 A. D." (Blair), in England, the power of the monks very high. Dunstan and Ethelwold, with king Edgar, expelling the secular and married clergy from the great ecclesiastical foundations and substituting Benedictines (Cockayne iii. p. 406).

"Nov. 15" (Sm. b. d.), Constantinus VII. Porphyrogenitus succeeded by his son Romanus, thirty-seventh Byzantine emperor.

"960 A. D. = 'kian-loung,' 1st year of Tai-tsou III.," head of the new dynasty of the Soung (Chinese chron. table). A decree was issued or renewed by Tai-tsou III., making the emperor's signature indispensable to the execution of death-sentences — (Pauth. p. 337).

Hardly earlier than this date (Graha Munjari tables, Puranas, and Bentl.), Siva Swasa reigning in Hindustan.

"961 A. D." (Blair, and Sm. b. d.), Crete recaptured from the Muslims by Nicephorus Phocas.

"In this year (= 350 A. H.," Elph. v. 2), Abdulmelek succeeded by Mansur, now sixth Samani king of Bactria. Alptegin, having given his vote against Mansur, deprived of the government of Khorasan, but with a body of adherents found safety at Ghazni in the heart of the mountains of Soliman. The position, near the Indus, is important, as — subsequently the point of departure of Muslim invasions of Hindustan.

"963 A. D." (Alst., and Sm. b. d.), Romanus succeeded by Nicephorus Phocas, now Nicephorus II., thirty-eighth Byzantine emperor. Writings by the emperor Nicephorus Phocas are extant.

About this time (tradit., and Colebrooke as, res. viii. 467), Govindanat'ha, "instructor of Sancara," expounding the Vedas.

"964 A. D. = 2d year of the 'kian-te' of Tai-tsou III." (Chinese chron. table), beginning of the Sixty-first cycle.

"The same year" (Blair), Italy conquered and united with Germany by king Otto or Otho; who now assumed the title of "emperor." And deposing Joannes XIII., Leo VIII. was elected sixty-seventh archbishop.

"965 A. D." (Alst., and Nicol.), at Rome, Leo VIII. succeeded by Benedictus V., sixty-eighth archbishop.

"966 A. D." (Alst., and Nicol.), at Rome, Benedictus V. succeeded by Joannes XIV., sixty-ninth archbishop.

"967 A. D." (Blair), the city of Antioch recovered from the Muslims by Nicephorus II. Phocas.

One hundred and fifty-eighth generation. Sept. 1st, 967, onward mostly beyond youth: the Jewish writers, Joseph Ibn Santas: the Arab writers, Ebn Samhun, Caboudi, Harib, Ibn al-Gezzar, Temimi, Salmana: the Greek writers Suidas d. about 974, Symeon Magister d. after 975, Leo diaconus d. about 987: Abbo, the historian Armoin: the naturalist Alfredus.

Solanum insanum of Equatorial Africa. Mentioned by Abu'lfadli — (Celsius hierobot., and Spreng.) : and as transported to Europe, figured in manuscript V of the Anglo-Saxon herb. Diosc. 144 (Harley and Cockayne) ; described by Morison xiii. pl. 2, and Plukenet alm. pl. 226, and in English greenhouses called *egg-plant* (Prior) from seeming to bear hen's eggs. Eastward, has been observed under cultivation in Ceylon (Rumph. v. pl. 85, and Scop. insubr. i. pl. 1). By European colonists, was carried across the Atlantic to the West Indies (Pers.) ; and to Northeast America, where it continues to be occasionally seen in greenhouses. "S. ovigerum" of Tournefort inst. 151, and Lam. enc. p. 294, differing in the absence of prickles, is regarded by Persoon as perhaps only a variety.

Thymbra spicata of the East Mediterranean countries. — Termed "t. Abulfali" by Adanson, and known to grow in Macedonia and on Lebanon (Pers.)'; observed by Sibthorp pl. 546 on dry hills from Crete and the Peloponnesus to Asia Minor. From transported specimens, described by Plukenet alm. pl. 116.

"968 A. D." (ann. Jap., and art de verif.), Murakami succeeded by his second son Ren-sei or Rei-zen, now sixty-third dairo of Japan.

"The same year" (Marcel p. 97), death of the eunuch Kafur; Abul Fawaris, a grandson of Ikhschid aged "eleven years," becoming governor of Egypt.

"Dec. 22d, about ten a. m." (Blair), *eclipse of the sun.* Observed at Constantinople.

The Khalifate or United Muslim Empire now virtually at an end : though the spiritual authority of Mothi continued to be very extensively acknowledged.

"969 A. D." (art de verif.), entrance into Egypt of an army from the West; sent by Moez hereditary ruler of Barbary, claiming by his descent from Fatimah to be the real khalif. He obtained possession of the government; and his authority was soon acknowledged in Palestine, Syria, and even in Arabia. A coin issued by Moez, is figured in Marcel p. 102.

"The same year" (Alst.), Nicephorus II. Phocas succeeded by Joannes Zemisces, thirty-ninth Byzantine emperor.

"The same year" (Nicol.), a Conference at Constantinople between the Catholics and Jacobites.

"970 A. D." (Marcel), El-Kahira or Cairo founded by Djauhar Kaid, the general of Moez, for the new seat of government. He also founded the mosque and college of El Ezher — (Wilk. theb. and eg.).

"The same year" (ann. Jap., and art de verif.), Rai-zen succeeded by Jen-wo or Jin-jo or Yen-wou, fifth son of Murakami, and now sixty-fourth dairo of Japan.

"971 A. D." (Blair), the Bulgarians "three hundred thousand" in number defeated in battle and subjugated by Bardas, minister of Joannes Zemisces. This emperor also recovered "the whole of Judea" from the Muslims — (T. Wright early trav. Palest.).

"972 A. D." (Marcel p. 102), the great mosque and *college* of El-Azhar commenced by Djauhar Kaid in the Northeast quarter of Cairo. — This continues to be the principal Arab university; and students from Morocco, Astrakan, and Hindustan, were found there by Marcel.

"The same year" (Munk, and Marcel), removal of Moez into Egypt.

"The same year" (Alst.), at Rome, Joannes XIV. succeeded by Donus or Domnus II., seventieth archbishop.

"973 A. D." (Alst., and Nicol.), Otto succeeded by Otto II. or Otho II., second emperor of Germany and Italy.

"The same year" (Alst., and Nicol.), at Rome, Domnus II. succeeded by Benedictus VI., seventy-first archbishop.

"974 A. D." (Alst., and Nicol.), at Rome, Benedictus VI. succeeded by Benedictus VII., seventy-second archbishop.

975 A. D. (= "973 complete years" of text), end of the chronicle of Ethelwerd, with the reign of Edgar.

"July 18th" (Nicol.), Edgar succeeded by Edward II. the Martyr, thirteenth Anglo-Saxon king of England. The fleet of Edward II. was commanded by Brithric — (Blair).

"The same year" (Alst.), death of Joannes Zemisces; leading to the loss of Palestine, which returned to the dominion of Egypt. He was succeeded by the brothers Basilius II. and Constantinus IX., joint rulers of the Byzantine empire.

"The same year" (art de verif.), Moez succeeded by Aziz, of the Fatimite dynasty, second sultan of Egypt. A coin issued by Aziz — is figured in Marcel 103.

Citrus aurantium of Tropical Eastern Asia. Called in Britain *orange*, in Egypt "narindj," in Yemen "chommæsch" (Forsk.), in which we recognize the "narunj" whose bitter juice has been prescribed "from the tenth century" by Arab physicians — (Gallesio p. 122 and 247), and "naranj"

of Edrisi, Abd-allatif, and Ebn Baitar: the bitter variety was already cultivated "in Sicily in 1002," and was observed by the Crusaders in Palestine (A. Dec.); both the sweet and bitter varieties were observed by Forskal, and Delile, in Egypt; by Chaubard, in Greece; and are known to be abundantly cultivated throughout the Mediterranean countries. Farther South, C. aurantium was observed by Forskal under cultivation among the mountains of Yemen; but the fruit seen by Barthema in Yemen may have been imported from Egypt, as at the present day at Mocha: the oranges seen by Vasco de Gama in 1498 in Eastern Equatorial Africa were probably the same cultivated at present on Zanzibar, lemon-coloured and more acid than usual, Banians here being prohibited from eating oranges, the fact may help to explain the non-cultivation of C. aurantium in Hindustan, where I found only the imported fruit from Zanzibar. Farther East, C. aurantium is enumerated by Mason v. p. 452 as "exotic" in Burmah and called "lieng-mau," its fruit "quite abundant" but of inferior quality; is probably the species with petioles almost always winged and fruit "acido-dulcis" observed by Loureiro "culta incultaque" in Cochinchina and China, for C. aurantium I was assured by Mr. Williams grows wild in Southern China: throughout the Malayan archipelago, was observed by myself only at Manila, a small quantity of the fruit in market, clearly the species described by Blanco as having the flesh adhering to the rind and pleasantly acid. By European colonists, was carried to Madeira, where it was observed by Cadamosto in 1454; to the West Indies, where it became naturalized in the lifetime of Oviedo, and has extended throughout Florida; to Brazil, where I met with both the bitter and sweet varieties; and to the Taheitian, Hawaiian, Samoan, and Feejeean groups, the sweet variety only as verified by myself. (See C. Sinensis.)

In this year (= 925 + "50 years reign" of the Mahavams. LX.), Mahaloo Wijayaba succeeded by Wickramabahoo, now king of Ceylon.

"In this year (= 365 A. H." of Ferisht., Elph.), Alptegin succeeded by his son Isakh; who, proceeding with Sebektegin to Bokhara, was appointed by Mansur governor of Ghazni, and Sebektegin his deputy.

"976 A. D. = 'tai-ping-hing-koue,' 1st year of Tai-tsoung III., of the Soung" or Twenty-first dynasty — (Chinese chron. table).

Hunahpu, third king of Guatemala, may have been at this time reigning — (art de verif. contin.).

Theobroma cacao of Eastern Equatorial America. The *chocolate* tree wild in the forest along the Oronoco and Amazons, and the use of its nuts discovered in the reign of Hunahpu* — (art de verif. contin.): under the Mexican emperors the "cacari" was much cultivated and "chocolatl" made from its nuts, which were used besides for money (Hernand. iii. 46, and Humb. iv. 10): on the coast of Honduras, nuts in the hands of natives in a canoe were found by Columbus to be highly prized (F. Columb. 89). The living tree, described by Lopez de Gomara (Spreng), was quickly introduced by the colonists into the West Indies, where it was observed by Sloane ii. pl. 160, and Catesby iii. pl. 6: by Pedro Bravo de Lagunas, was carried in 1670 from Acapulco to the Philippines, a single stock from which most of the trees now so abundant have been derived (Blanco); thence to Burmah (Mason); to Hindustan (Wight, and Graham), where according to Drury it "has been long introduced."

Vanilla aromatica of Central America. A climbing Orchideous epiphyte called in Mexican "tlilxochitl" (.), and its product *vanilla* used perhaps from the beginning in making chocolate: — "vinelloes" with which chocolate is perfumed, were seen by Dampier on the coast of Honduras. By European colonists, was carried to the West Indies, observed there by Catesby iii pl. 7, and Swartz; to Burmah (Mason); to Egypt, where according to Clot-Bey it is successfully cultivated. Transported to Europe, is described by Plukenet, and is termed "v. mexicana" by Miller (Steud.).

"The same year" (Lubke and Lutrow), at Venice, the church of San Marco injured or destroyed by fire. — The walls of the present edifice were completed "in 1043;" and the building consecrated "in 1085;" but "the decorations of the round hills, with Gothic flowers," and "the finials of the tabernacle," were added in the "Fourteenth century."

"In or about this year (= 366 A. H. comm. Aug. 29th," Gildem.), Ebn Haukal writing his geographical work. He mentions Heathen tribes continuing in Sind; Bodhites, the Mund a pastoral.

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* *Gossypium Jamaicense*, *G. purpurascens*, and *G. oligospermum* of the West Indies and neighbouring portion of Tropical America. The use of *cotton* for spinning and weaving also discovered in the reign of Hunahpu — (art de verif. contin.): Columbus landing on Cuba found cotton spun and woven by the natives, from plants that "are not set, but grow naturally about the fields like roses" (F. Columb. 28 to 47); the wild cotton of Hayti is described by Oviedo as very abundant, forming an article of export to Spain; cotton growing wild in Northern Mexico is mentioned by Vasquez (Sloane ii. 69); and the above three species were observed by Macfadyen i. 72 wild on Jamaica and not cultivated (A. Dec.).

tribe, and the Hindu people called Zuth. The Muslims now having mosques throughout Guzerat as far as Cambay; a Muslim prefect, appointed over them by Balhara; and at Cambay, Camuhul, Sindan and Saimur, Muslim courts of justice.

"977 A. D." (Blair), the Bohemians subdued by the emperor Otho II.

"In this year (= 367 A. H." of Ferisht., Elph.), Isakh succeeded by Sebektegin, now third sultan of Ghazni. He was attacked by Jeipal Hindu king of Lahore, — who was twice defeated at Laghman, and the Ghazni dominions were extended to the main river Indus at Peshawer. Hamid Khan Lodi, Muslim ruler of Laghman and Multan, tending his submission (Elph. v. 3).

"978, March 18th" (Nicol.), Edward II. succeeded by Ethelred II., fourteenth Anglo-Saxon king of England.

About this time ("960 to 1000" Krapf trav.), Keelwah on the coast of East Africa founded by Arabs.

Eltamimi at this time writing. — He died in 980 (= "370 Hej" of Ebn Abi Osaib., Soyout., and Sonth.).

Cheiranthus cheiri of the cliffs of the Mediterranean. The "khiri" of Eltamimi i. p. 443, — Elgafaki, and Ebn Baitar, is referred here by Stapel and others: C. cheiri was observed by Sibthorp, Chaubard, and Fraas, on rocks and walls in Southern Greece and on the Greek islands. Westward, is known to grow on walls in Spain (Pers.); and according to Prior, was "introduced from Spain" into England "as a 'wall stock-gillofer,' which became successively *wall gilliflower* and *wall-flower*," is described by Brunswyck (Spreng.), Dodoens, and Gerarde; is termed "leucoium luteum vulgare" by Tournefort inst. 221; and in journeying through Europe, was observed by myself chiefly abounding in England, and clearly a genuine cliff plant that originated in some country containing mural precipices. By European colonists, was carried to Northeast America, where it continues to be cultivated for ornament; and to Hindustan, where it was observed by Graham "in gardens" around Bombay.

Balanites Aegyptiaca of the Southern border of the Sahara from the Atlantic to Hindustan. The "zakkum el achar" described by Eltamimi as a tree growing in ravines of the mountains of Persia and supposed there to be the myrobalanus chebula, transported into Syria and cultivated, the nuts yielding an oil of wonderful properties, — and by Ebn Baitar as a thorny tree, may be compared: B. Aegyptiaca was observed by Alpinus p. 20 and 205 in a garden at Cairo, a single tree described by Vesling as "myrobalanus el-chabul," named to Delile "sagar el-kably," but which according to Figari, and Lloyd, has since disappeared. Farther up the Nile, was observed by Delile at Siout; by Vansleb at Esneh; by Lepsius eg. and sin. p. 217, in Upper Nubia; by Cailliaud, from Sennaar to Fazoglo; and Westward, by Lippi in the Oasis El-wah, and by Adanson fam. plant. ii. p. 508 in Senegal. Eastward, the trees seen by Browne within the city of Cobbe in Dar Fur came from Arabia, and the "haledj" of Southern Arabia is described by Forskal p. xcvi. and 197 as having sweet edible fruit, the wood tough and hard, much used for household utensils: B. Aegyptiaca is known to grow also in the more arid portion of Hindustan, in Goozerat, the "Deccan plains and Candesh," being "one of the few trees which flourishes on black soil," and is called "hingenbet" (Roxb., Royle, Gibs., and Graham). By European colonists, probably through the medium of transported negroes, was carried to the West Indies, where trees were seen by Poiteau on Hayti.

Colchicum Illyricum of . . . . Called in Persian "us-abai-hoormuz" (Irvine mat. med. patn., and J. F. Wats. index), in which we recognize the "asabia Hermes" identified by Ebn Baitar with the "schanbalid" of the Persians and Eltamimi: — C. Illyricum is . . .

"979 A. D." (= 927 + cycle of 52 years, Clavig. ii.), accession of Xiutzatlzin, Toltec queen of Mexico.

Opuntia ficus-Indica of the West Indies. The large *prickly-pear* or "tunas" known there from early times,* — mentioned by Oviedo nat. hist. 80 and gen. hist. viii. pl. 25, together with the peculiar

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* *Comocladia dentata* of the West Indies. A Terebinthoid tree called on Cuba and Hayti "guao" (Lindl.); and from early times, death believed to be the penalty for sleeping in its shade: — observed by Jacquin am. xiii. pl. 173 in the West Indies, its milky juice on exposure turning black, and indelibly staining linen or the skin (Lindl.).

Chrysobalanus icaco of the wooded shores of Tropical America. The *coco-plum* or "hicacos" long known in the West Indies; — observed there by Oviedo gen. hist. viii. 9, Plumier pl. 158, P. Browne, Catesby, and Jacquin am. pl. 94, by Marcgraf as far as Brazil; known to grow also along the seashore on the Pacific side of the Isthmus (Benth. bot. Sulph.). From being maritime may have reached the African shore without human intervention, but was probably carried there on account of its edible fruit, and occurs naturalized only from Senegal to the mouth of the Congo, is called by the French "prune d'Amérique" (Perrottet fl. Sen., and A. Dec.). By European colonists has recently been introduced into Hindustan (Graham).

effect produced by its edible fruit; was observed also in the West Indies by Sloane, by Jacquin, used to fortify a town (Pers.). Transported to Europe, was seen by Oviedo in a garden in Italy, and according to Matthioli was brought within his own recollection from the West Indies; was known to Dodoens, Lobel, and Bauhin, only under cultivation (A. Dec.), but has since become naturalized on the Canaries and throughout the Mediterranean countries, and in Egypt the Aitian name is retained in "tin Franj" fig of Europeans (Forsk., and Del.). Possibly by Polynesians, was carried Westward to the Hawaiian Islands, where it has been established long enough to be regarded by the natives as indigenous. Clearly by European colonists, was carried farther across the Pacific to the Philippines, where it is called in Tagalo "sandocsandoc" or "dilang baca" (Blanco); to Burmah, called there "ka-la-zoung" (Mason); to Hindustan, observed by Roxburgh, and Wight, by Graham "commonly used as a hedge plant" on the Deccan, by myself forming thickets there and completely naturalized.

Cephaelis ipecacuanha of the West Indies and neighbouring portion of South America. Coffeaceous and suffruticose, yielding the drug *ipecacuanha* (Lindl.): the "gioia" mingled by the Aitians with another herb as an emetic*—(Columb. and F. Roman Pane 16) may be compared: C. ipecacuanha was observed by Martius in the woods of Brazil, is known to grow on the mountains of New Granada (Lindl.), and was observed by Tussac in the West Indies (Steud.). The drug ipecacuanha, known in Europe from nearly the middle of the Seventeenth century (Spreng.), was found by Forskal mat. med. imported by the way of Europe into Egypt. (See Ionidium ipecacuanha.)

"980 A. D." (Blair), Apulia and Calabria recovered by the Byzantine emperors.

"In this year" (Velasco, and Markh. edit. G. de la Vega ii. p. 347), the Caras, ascending the river Esmaraldas in balsas,† defeat the Quitus and take possession of their country. Their religion was that of the Sun and Moon,—and "they built a temple of the Sun on a height near Quito, now called Panecillo."

981, "June (= 372 Hej.," Sylv. de Sacy, and Sonth.), Soliman Ben Hassam Ebn Joljol writing at Cordova.

Senecio squalidus of the Egyptian Desert. Called in Egypt "korræjr" or "korreis," in which

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* *Geophila reniformis* of Tropical America. A small creeping Coffeaceous herb, possibly one of the plants in question:—observed by P. Browne 161, and Jacquin am. pl. 46, in moist shady places in the West Indies (Pers.); by Humboldt and Bonpland on the Oronoco, and known to grow in Brazil, "its root emetic, used as a substitute for ipecacuanha" (Lindl.). By Polynesians, was carried Westward to the islands of the Pacific, observed by myself completely naturalized on the Hawaiian Islands, seemingly wild in deep woods on Tahreiti, naturalized on the Samoan Islands occurring on Savaii only in pathways leading to the interior forest, naturalized also on the Feejeean Islands, and on the Philippines on mount Banajao. Farther West, was observed by Rheede pl. 21 in Malabar; by Roxburgh, and Wight, in other parts of Hindustan; and by Nimmo in the "S. Concan," nearly as far as Bombay (Graham).

Lucuma mammosa of the Upper Oronoco. Called by French and English colonists *mammei-sapote*, by Spanish "sapote" (A. Dec.), and its edible fruit known from early times:—observed by Sloane ii. 125 on Jamaica, apparently only under cultivation; by Jacquin am. 57 on other West India Islands and at Carthagena, and termed by him "a sapota major;" by Maycock 146, on Barbadoes; but by Humboldt and Bonpland iii. 240, wild in the forest at the missions on the Oronoco. By European colonists, was carried Westward across the Pacific to the Philippines, where it is called in Tagalo "mamei" (Blanco 238).

Sapota achras of the West Indies and neighbouring portion of Tropical America. The *sapodilla*, called by French colonists "sapotier" or "sapodiller," by Spanish "zapota" or "zapotilla" (A. Dec.), long known in the West Indies:—observed by Sloane ii. 172 to all appearance wild on an island near Campeachy and on Jamaica; by P. Browne ii. pl. 19, also on Jamaica; by Jacquin am. 59, and Humboldt and Bonpland iii. 239, wild in the forests of Venezuela. By European colonists, was carried to the Mauritius Islands (Boj.); to Hindustan (Roxb., and Wall. 4148), called at Bombay "kowut" (Graham); to Burmah (Mason); and to Java (Hassk. 463).

Coccoloba uvifera of the shores of the West Indies and neighbouring portion of Tropical America. A small tree called *seaside-grape*, and its fruit known from early times: the "guiabara"—is described by Oviedo gen. hist. viii. pl. 13: C. uvifera was observed by Sloane ii. pl. 220, Catesby ii. pl. 96, and Jacquin am. pl. 73, in the West Indies, its fruit eatable and commonly sold in market, but not much esteemed (Lindl.). From transported specimens, described by Lobel ii. 195.

† *Arundinaria* sp. of Tropical America. These balsas were of course made of the "caña de Guayaquil," a *bamboo*—afterwards sent by order of the Incas to all the rivers and lakes of Peru for the purpose of making balsas, the best kind always coming "from the province of Quitu" (G. de la Veg. iii. 16).

we recognize the "kurras" or "anjurat" of Ebn Joljol, — and the "korrais" or "anjurat" of Ebn Baitar: S. squalidus was observed by Forskal, and Delile, frequent in the Desert bordering Lower Egypt. Westward, is known to occur as a weed in Sicily and Southern Europe (Boccon. sic. pl. 41, Barrel. pl. 262, and Pers.); and though unknown in the intervening country, was already in Britain in the days of Dillenius, and has become naturalized there (A. Dec.).

"983 A. D." (Nicol., see also Alst.), Otto II. succeeded by his son Otto or Otho III., at the age of "ten" years third emperor of Germany and Italy.

"The same year" (Rafn), from Iceland sailing in search of the land seen a century previously by Gunnbjorn, Erikus Rufus found an extensive coast, which he named Greenland. After examining it, — and passing two winters there, in the third summer he returned to Iceland.

Chilian civilization as early probably as this date.

Acacia (*Vachellia*) *Farnesiana* of Chili. Arborescent and called in Chilian "caven" * — (Molina); observed by myself clearly indigenous, dotting the open country along and upon the basal portion of the Andes. Raised in Europe "in 1611" from seeds received from Hayti (Tob. Aldin. hort. farnes. 3), described also by Hyacinthus Ambrosinius, Parkinson, and Plukenet pl. 73; observed by Forskal, and Chaubard, in the gardens of the Peloponnesus and Rhodes, and by the Turks called "missetsjæ;" by Hasselquist, Forskal, and Delile, in the gardens of Egypt and called "fetneh;" was carried also to Western Equatorial Africa (Benth. fl. nigr.); and from Buenos Ayres to Louisiana (A. Dec.), continuing planted as far North as Charleston. By European colonists also, was carried to Taheiti (observed there by myself), and Westward across the Pacific to the Philippines, where it has become frequent and is called in Tagalo "aroma" (Blanco); to Timor (Decsne); to Java (Hassk., and Zoll.); to Burmah, observed by Mason "exotic" and called "nan-lung-kyeing;" to Hindustan, called in Sanscrit "urimeda" or "vitkhira," in Bengalee "gooya-babula," in Telinga "kustoori" or "piktoome" (Roxb. and Lindl.) or "piyi-tumma" or "kampu-tumma" or "naga-tumma," in Tamil "piy-velam," in Malabar "pivelam" (Drur.), observed by Graham "very common in the Eastern parts of the Deccan," by myself both under cultivation and naturalized; yielding according to Wight, and Drury, "a considerable quantity of useful gum," and the flowers distilled "a delicious perfume."

Solanum tuberosum of Southern Chili. The *potato*, called in Peru "papas" (Ciez., Carate, Gomara, Barcia, and myself), growing wild in Southern Chili and collected for food by the natives (Cl. Gay): carried thence, becoming an object of cultivation † in Northern Chili — and Peru "in the

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* *Dolichos funarius* of Chili. Climbing, called in Chilian "cogul" (Molin.), and doubtless from early times used for cordage, — as witnessed by Molina among the colonists.

Quillaia smegmadermos of Chili. A Rosaceous tree called in Chilian "quillai" from "quillcan" to wash (Molin.), its bark therefore from early times used as a substitute for soap: — observed by Frezier i. 206, and Molina; by myself, frequent from the coast throughout the basal portion of the Andes, and its bark exported in large quantities.

Cestrum parqui of Chili. A large many-stemmed shrub called in Chilian "parqui" or "palqui" (Molin.), and from early times its wood considered the best for procuring fire by turning a rod rapidly; also employed medicinally: — observed by Feuillée, and Molina; by myself, frequent at the outlet of valleys near the sea-level; described also by Ruiz and Pavon ii. pl. 32.

Ocymum? salinum of Chili. Its round articulate stem covered every morning with saline globules, doubtless from early times collected and used for salt, — as witnessed by Molina among the colonists.

Aristotelia macqui of Chili. A large shrub called in Chilian "maqui," its berries eaten and a drink prepared from them (Molin.) doubtless from early times: — observed by Molina; by myself, frequent in Lower Chili; described also in fl. peruv. 125 (Pers.).

† *Solanum cari* of Chili. A distinct species of *potato* from early times cultivated in Chili, — described by Molina, but according to Humboldt iv. 9 remaining unknown as far North as Quito, as well as in Mexico and Europe.

Heracleum tuberosum of Chili. Known from early times, — and enumerated by Molina among useful plants.

Luma sp. of Chili. Large Myrtaceous shrubs, one or more species called in Chilian "luma" (Molin.), and from early times a sort of wine made of the berries; — observed by Molina; by myself, several species some of them arborescent frequent in Lower Chili.

Lucuma Valparadisica of Chili. One of the three wild species called in Chilian "lucuma" (Molin.), and probably from early times: — observed by Molina (Steud.); by myself in a steep mountain-ravine facing the sea about three miles South of Valparaiso.

Lucuma bifera, *turbinata*, and *spinosa*, all of Chili. Also called in Chilian "lucuma" (Molin.), known from early times and one of them cultivated: — observed by Molina (Steud.).

Adenostemum nitidum of Chili. A large Sapotaceous tree, its delicious fruit known from early

time of the Incas" (Garc. de la Vega): the "papa" is mentioned in a Quichua prayer (preserved by C. de Molina edit. Markh. 30); and was cultivated as far North as the Bogotan Andes, but to the time of the Montezumas had not reached Mexico (Hernand. iii. 15, and Humb. iv. 9). Transported to Europe, S. tuberosum is described by Lobel nov. stirp. 317; Gerarde, Clusius, and C. Bauhin, its

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times: — termed "lucuma keale" by Molina 202 as observed by him wild in groves, "gomortega nitida" by Ruiz and Pavon 108 (Pers., and Steud.).

Peumus Dombeyi of Chili. A Lauraceous tree called in Chilian "peumo" (Molin.), and its fruit eaten from early times: — observed by Dombey (Steud.), and Molina; by myself, frequent from the coast to the Andes, and its fruit brought to market in large quantities.

Temus moschata of Chili. Called in Chilian "temo" (Mol.), and known from early times: — its seeds according to Molina may be used for coffee.

Sisyrinchium bulbosum of Chili. Violet-flowered, called in Chilian "illmu" (Molin.), and from early times its bulbs cooked and eaten, — exquisite in taste according to Molina; observed also by Feuillée iv. 8.

Alstroemeria ligtu of Chili and the mountains of Peru. Called in Peru "liutu" (Pers.), in Chili "utata" (Mol.), and from early times farina obtained from its bulbous root, — suitable for invalids according to Molina; observed also by Feuillée, and known to grow from Conception to the environs of Lima (Ruiz and Pav. 59, Few obs. ii. pl. 4, and Pers.).

Alstroemeria haemantha of Chili or Peru. Known from early times and farina also obtained from its root — (Ruiz and Pav. 60, and Pers.).

Alstroemeria revoluta of Chili. Growing in the Chilian province of Rere, and from early times farina obtained from its root — (Ruiz and Pav. iii. 59, and Pers.).

Alstroemeria versicolor of Chili. Growing with the preceding, and from early times farina obtained from its root — (Ruiz and Pav., and Pers.).

Rubia Chilensis of Chili. Dyeing with indigenous plants practised from time immemorial in Chili, and this species of *madder* called "*relbun*" *and used to dye red — (Molin.); observed* also by Feuillée pl. 45; *by myself, frequent in the environs of Valparaiso, its berries orange-*coloured.

Sassia tinctoria of Chili. Called in Chilian "sassia" (Molin.), and from early times its flowers used to dye purple: — observed by Molina (Steud.).

Eupatorium Chilense of Chili. Annual, used from early times to dye yellow, — and by colonists called "contra yerba" (Molin.); observed also by Feuillée.

Santolina tinctoria of Chili. Called in Chilian "poquel" (Molin.), and from early times used to dye yellow; — observed also by Feuillée pl. 45.

Coriaria ruscifolia of Chili. A shrub called in Chilian "deu" (Molin.), and from early times its bark and leaves used to dye black; — observed by Molina; by Brackenridge, in the "sands of the seashore" within a few miles of Valparaiso; by Feuillée iii. pl. 12, as far as Peru (Pers.).

Lonicera? corymbosa of Chili. A shrub called in Chilian "uthiu" (Molin.), and from early times its bark and leaves used to dye black: — observed by Molina. From transported specimens, termed "Ioranthus corymbosus" by Lamarck (Steud.).

Baccharis? sp. of Chili. Called in Chilian "thilco" (Molin.), being the third shrub with leaves and bark used from early times to dye black: — observed by Molina.

Gunnera scabra of Chili. A large Rheum-leaved herb called in Chilian "panke" (Molin.), and from early times its root used to dye black; — observed by Feuillée ii. 742, and Molina; by myself, at the outlet of valleys near the sea-level.

Poinciana? spinosa of Chili. Called in Chilian "jaru," known from early times, — and its berries furnishing ink (Molin.); observed also by Feuillée.

Pseudocacia fol. mucr. of Chili. Called in Chilian "mayu," known from early times, — and its juice furnishing ink (Molin.); observed also by Feuillée.

Lithræa Chilensis of Chili. A large shrub called in Chilian "lithi" (Molin.), allied to and resembling Rhus cotinus and its contact causing pustules: — observed by Molina; by myself, frequent on the basal portion of the Andes.

Maytenus Chilensis of Chili. A small and graceful Celastroid tree called in Chilian "mayten" (Molin.), and from early times a decoction of its young branches used to wash swellings produced by the Lithræa; — observed by Feuillée iii. pl. 27, and Molina; by myself, here and there in the Interior.

Ionidium maytensillo of Chili. Violoid, and from early times highly esteemed as a purgative: — observed by Feuillée fl. chil. iii. pl. 28. "I. parviflorum" of Linnæus, and Ventenat 27, is referred here by Hooker (Lindl.).

Linum aquilinum of Chili. Yellow-flowered, called in Chilian "retamilla" (Molin.), and from

cultivation extending so slowly as only recently to have reached Greece (Chaub.) and Egypt (Clot-Bey); roots "imported from Hindustan" were seen by myself at Muscat, Mocha, and Zanzibar, and the plant under cultivation at the last-named locality; observed also by myself cultivated on New Zealand by the natives; and in Northwest America, forming the Commencement of Agriculture among the Chinnooks.

"984 A. D." (Alst., and Nicol.), at Rome, Benedictus VII. succeeded by Joannes XV., seventy-third archbishop.

"985 A. D. (= 1645th of Synmu," art de verif.), Jen-wo succeeded by Quassan, eldest son of Ren-sei, and now dairo of Japan.

"The same year" (Alst., and Nicol.), at Rome, Joannes XV. succeeded by Joannes XVI., seventy-fourth archbishop.

"986 A. D." (Rafn), a colony from Iceland led into Greenland by Erikus Rufus, and a settlement formed on the "Southwestern shore." Later in the summer, Bjarnius sailing for Greenland, was driven by adverse winds far Westward, and saw land, covered with woods, and here and there low hills (Newfoundland). Leaving this to the larboard, at the end of "a day and night" he saw another land, "flat and covered with trees" (Labrador?). He continued thence "three" half days' sail to a high and mountainous land covered with glaciers; and "two days and two nights" afterwards, reached his destination in Greenland.

A portion of the constructions at Pachaçamac ("pacha" world and "camac" creator), and many huacas or burial-mounds in Lower Peru, older according to "some old writers" than the time of the Incas: * — the oracle and temple were captured by the inca Pachacutec, and a considerable portion of the city was in ruins when visited by Hernando Pizarro (Ciez., and Markham edit. p. 255).

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early times used medicinally: — observed by Feuillée ii. pl. 22, and Molina; by myself, frequent in the open country.

Polygala clinclin of Chili. Called in Chilian "clinclin" (Molin.), and from early times used medicinally: — termed "polygala coerulea ang." by Feuillée (Molin.).

Mimosa balsamica of Chili. Called in Chilian "jarilla" (Molin.), and from early times used medicinally: — observed by Molina.

Gnaphalium viravira of Chili. Called in Chilian "viravira" (Molin.), and from early times used medicinally: — observed by Frezier i. 205, and Molina.

Senecio nilgue of Chili. Called in Chilian "nilgue" (Molin.), and from early times used medicinally: — termed "jacobæa leucanthemi vulg. fol." by Feuillée (Molin.).

Solidago diuca of Chili. Called in Chilian "diuca-lahuen" (Molin.), and from early times used medicinally: — termed "virga aurea leucoi. fol." by Feuillée (Molin.); and possibly the species observed by myself from the coast to the middle mountain-region of the Andes.

Erythræa Chilensis of Chili. Annual, called in Chilian "cachanlahuen" (Molin.), and from early times used medicinally: — described in mem. Acad. 1707; observed also by Feuillée ii. pl. 35, and Molina.

Plegorhiza guaicuru of Chili. Called in Chilian "guaicuru" (Molin.), and from early times its root used medicinally: — observed by Molina.

Verbena erinoides of Chili. Prostrate and multicaul, called in Chilian "sandia-lahuen" (Molin.), and from early times used medicinally: — termed "lichnidea verbenæ tenuifolia" by Feuillée iii. pl. 25 (Molin.); described also by Ruiz and Pavon i. pl. 33. From transported specimens, termed "erinus laciniatus" by Linnæus.

Quinchamalium Chilense of Chili. A small Thesioid plant called in Chilian "quinchamali" (Molin.), and from early times used medicinally: — observed by Frezier i. 135, and Molina; by myself, frequent throughout the open country to the middle mountain-region of the Andes. "Q. procumbens" of Ruiz and Pavon ii. pl. 107, probably not distinct, was observed by myself on the basal portion of the Peruvian Andes.

Herniaria payço of Chili. Called in Chilian "payco" (Molin.), and from early times used medicinally: — observed by Frezier i. 205, and Molina.

Colliguaja? of Chili. Called in Chilian "pichoa" (Molin.), and from early times used medicinally: — termed "tithymal. fol. trinerv." by Feuillée (Molin.).

Bromus? catharticus of Chili. Called in Chilian "guilno" (Molin.), and from early times used medicinally: — termed "gramen bromoides cathart." by Feuillée, as seen at Lima (Pers.); but was observed by Molina in Chili; by myself, a Bromus-like grass with compressed spikelets in the environs of Valparaiso.

* *Lucuma obovata* of Western Peru. A Sapotoid tree called in Peru "lucuma" (C. P.); in which we recognize the luxurious "lucma" fruit of a legend of the Yuncas of the Lurin valley — (Avila 125): the "leucoma" is described in a letter to Monardes 3; was observed in Peru by J. Acosta, Feuillée,

"987, July 3d" (Blair, and Nicol), Louis V. succeeded by Hugh Capet, head of the Capetian or Third dynasty of French kings.

"The same year" (ann. Jap., and art de verif.), abdication of Quassan, who retired to the monastery of Quamsi, adopted the costume of a bonze or priest, and took the name of Nigugakf. He was succeeded by his cousin Itsi-dsio or Yets-sio, now sixty-sixth dairo of Japan:—and who patronized literature, and attracted many learned men to his court.

988 A. D. (= 975 + 13 years of twelve lunations) = "14th year of Aziz," in an Arabic inscription at the *gold* mines of Gebel Ellaka in the Ababdeh Desert (Wilk. theb. and eg. p. 416).

"The same year" (Nicol.), a synod at Llandaff. Arthmail king of Wales was "condemned to do penance for having slain his brother."

About this time (= "a little more than eight hundred years" before 1804, tradit., and Colebrooke as. res. viii. p. 467), Sancara or Sancar'acharya expounding the Vedas.

"990 A. D. = 1st year of the 'tchun-hoa' of Tai-tsoung III." (Chinese chron. table). "In the time of Chun-hoa" (topog. Cant., and Pauth. 473), the foreign agent at Canton receiving from the Chinese "*metals, silk, gold*, etc.," gave in return "*rhinoceros* horns, *elephants'* teeth, *coral, pearls, precious stones, crystal*, foreign stuffs or *cloth, paper, red-wood, drugs*, etc." At the capital, a tribunal of revenues established.

"In the Tenth century" (Storch, and Pouchet), the Russians had extended their commerce as far South as Constantinople.

"Towards the end of the century" (Talvi ii. 1), Christianity introduced into Russia through the influence of king Vladimir; who also founded the first schools there.

"993 A. D." (Nicol.), a synod at Latran in Rome. Udalric bishop of Augsburg declared a saint: the first act of *canonization* on record.

"In this year (= 383 A. H." of Ferisht., Elph.), Noah or Noh, seventh Samani king, driven from Bokhara across the Oxus by the Tartars under Bogra Khan; whose sickness retreat and death enabled Noah to recover his throne.

"994 A. D." (see Samuel Aniens., and his editor), end of the chronicle of Stephanus Asolnichius of Armenia.

"995 A. D. = 1st year of the 'tchi-tao' of Tai-tsoung III."—(Chinese chron. table).

"The same year" (Alst.), at Rome, Joannes XVI. succeeded by Joannes XVII., seventy-fifth archbishop.

"996 A. D." (Alst., and Nicol.), at Rome, Joannes XVII. succeeded by Gregorius V., seventy-sixth archbishop.

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and Ruiz and Pavon iii. pl. 239; its fruit by myself in market at Lima, solid in consistence, and so rich-flavoured and sweet that a small quantity suffices; the tree I was assured by Mr. Matthews is "native in ravines to the Northward." Is probably one of the two species cultivated according to Molina by the natives of Chili.

Prosopis dulcis of Peru. A Leguminous tree called "pacai:" its pods exhumed in the cemetery at Pachacamac,—great quantities observed also in the market at Lima, and the tree in gardens: the "pacay" was observed in Peru by J. Acosta, Feuillée ii. pl. 19, and is termed P. dulcis by Humboldt and Bonpland. By European colonists, was carried to the Taheitian Islands, a single young stock observed by myself on Aimeo.

Gossypium Peruvianum of Western Peru. The art of weaving *cotton* cloth known in Peru as early at least as this date: remnants of different degrees of fineness observed by myself in the ancient cemetery at Pachacamac, together with accompanying tufts of the wool, belonging to a free-seeded species:—a Gossypium was observed by myself about half-way to the Andes, a single small tree about fifteen feet high, its five-lobed leaves pubescent beneath. G. Peruvianum is described by Cavanilles vi. pl. 168 (Pers.).

Plumieria purpurea and *P. incarnata* of Lower Peru. Arborescent shrubs called "suchi" (Markh.), from early times cultivated for their flowers and fragrance:—observed by Ruiz and Pavon ii. pl. 137 and 138 in gardens in Peru; also by Markham p. xl.

Musa sapientum of Tropical America. The *plantain* called in Brazilian "paco." (Ler. 206), in Tamanaque "paruru," in Maypure "arata" (Humb. ii. 397), in Peru "arton" and cultivated there in the time of the Incas (Garcil. de la Vega i. 282); leaves also found in the huacas—(Stevenson. i. 320, and A. Dec.); and fruit offered to Pizarro on his arrival at Tumbez (early ms. quoted by Prescott): "plantans" were seen by De Soto in 1538 on Cuba: and the "plane" by J. Acosta in the neighbouring countries as far as Peru: plantains have been observed by myself only in Peru, much longer and of coarser substance than any varieties of the banana, but the plant producing them was not met with.

"The same year" (Blair), the succession to the German empire made elective by Otto III.

"The same year" (art de verif.), Aziz succeeded by Hakem of the Fatimite dynasty, third sultan of Egypt. A gold coin issued by Hakem is figured in Marcel 104.

"In this year" (= 975 + "21 years reign" of Mahavams. lxiii.), Wicramabahoo succeeded by his son Parackramabahoo, now king of Ceylon.

"997 A. D. (= 387 A. H." of Ferisht., Elph.), Noah or Noh succeeded by Mansur II., eighth Samani king of Bactria.

"Within a month" (Ferisht., and Elph.), death of Sebektegin, ally and friend of Noah. After contests for "seven months," Mahmud obtained the government of Ghazni.

"998 A. D. = 'hian-ping,' 1st year of Tchin-tsoung, of the Soung" or Twenty-first dynasty (Chinese chron. table). Reprinting of the ancient books for distribution throughout the Empire, was ordered by the emperor Tchin-tsoung — (Pauth.).

"999 A. D." (Alst., and Nicol.), at Rome, Gregorius V. succeeded by Gerbert, under the name of Sylvester II. seventy-seventh archbishop. Gerbert was one of the first among Europeans to direct attention to the writings of the Arabs.

"In this year (= 389 A. H." of Ferisht., Elph.), Mansur II. dethroned and blinded at Bokhara, through intrigues at court. Mahmud of Ghazni now ordered the name Samani to be left out of the public prayers, declared himself an independent sovereign, and receiving investiture from the khalif assumed the title of "sultan" (an old Arabic word for king).

"1000 A. D." (Alst. p. 216), in Hungary, Stephanus ruling as duke, made king. Regarded by Hungarians as the beginning of the Third dynasty.

"The same year" (Nicol.), Garcia III. succeeded by Sancho III. the Great, as king of Spain.

"The same year" (Rafn, Major gives "1001"), from Greenland sailing Westward in search of the land seen by Bjarne fourteen years previously, Leif son of Erikus Rufus reached the described flat land covered with trees, and named it "Markland" (i. e. Woodland). He thence continued on a day and night with the wind Northeast, to an island near the coast (Anticosti?). Here or in the neighbourhood, he wintered and called the country Vinland;* finding abundance of *salmon*, and cutting down trees to load his vessel. The days and nights were more equal than in Greenland, the shortest day consisting of eight hours (as understood by Thormodus Torfæus, and Wormkiold, placing the locality "in N. Lat. 49°").

"In this year = 927 an. jav." (Madura trad., Nata Kasum., and Raffles x.), death of Panji, and accession of Maisa Lalean as king of Java. Abandoning Jang'gala, Maisa Lalean established his seat of government at Koripan.

His brother Chamara Gading sailing with a party established himself on Celebes; and is supposed to be identical with Sawira Gading, the first prince of whom the Bugis accounts make mention.

One hundred and fifty-ninth generation. Jan. 1st, 1001, onward mostly beyond youth: the Persian poet Ferdusi: the Arab writers, Ebn Jounis (Pauth. 313), Al Biruni (d. after 1038): the Greek writer Leo grammaticus d. about 1013; Fulbertus, Burchardus, Berno Augiensis; Aimoin of Fleury.

"In this year (= 391 A. H." of Ferisht., Elph.), third Muslim invasion of Hindustan. "Nov. 27th," Jeipal of Lahore defeated near Peshawer and taken prisoner by Sultan Mahmud: who continued his march across the Panjab to Batinda, which he captured and plundered, and returned with the spoils to Ghazni.

"1002 A. D." (Alst., and Nicol.), Otto III., after an interregnum of "four months," succeeded by Henricus II. Claudus, fourth emperor of Germany and Italy.

"Nov. 13th, Sunday" (Blair), general massacre of the Danes in England.

"The same year" (Rafn), sailing from Greenland Westward, Thorwald brother of Leif reached the wintering-place in Vinland (mouth of the St Lawrence). — The following summer, in proceeding "occidentale terræ latus circumire, around the West side of the land," Thorwald found the sea "valde insulosum," full of islands (the Mingan Isles); and on an island far Westward, met with a "wooden

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* *Vitis cordifolia* of Northeast America. The *winter grape* probably the species found in the new country by Tyrker, a German companion of Leif; — Adamus Bremensis some seventy years later speaks of a country "by the Danes" called "Winland, eo quod ibi vites sponte nascantur" (grapes growing spontaneously being unknown in Europe): a large island below Quebec was named by Jacques Cartier "Bacchus Island" from abounding in wild grapes (Forst. discov. North), fruit of V. cordifolia was observed by myself in the Quebec market, but beyond this island I could not find any Vitis on the Lower St. Lawrence, nor in New Brunswick, nor even in Nova Scotia. V. cordifolia was observed by Beck near Castleton, Vermont; by myself, along the Pemigewasset as far South as 43° 40′, and planted near a dwelling on the Androscoggin; was received by Hooker from Lake Winnipeg Lat. 52.°

kornhjalmr" (corn-shed? for *maize*), but saw no other signs of inhabitants, nor of wild beasts. The next summer, 1004 A. D., he followed the Eastern shore and passed over to the land in the North, where, seeing three canoes, each containing three persons, he captured two of them and killed those on board (*Iroquois?*). He was attacked soon afterwards by the natives in a large number of canoes, and mortally wounded with an *arrow*.

The civilization of the Aymaras,* around the Southern extreme of Lake Titicaca, more ancient than the time of the Incas. They divided their year into "ten months"—(Ciez.): and their language, still in use, differs from the Quichua though having the same grammatical construction. The gospel of St. Luke was translated into Aymara and published by Pasoscanki, a native; and an Aymara grammar by P. Ludovico Bertonio "was published at Rome in 1608" (Markh. edit. p. xxxvi).

By the Peruvians, two quadrupeds reduced to the domestic state: the *lama* (Auchenia) for a beast of burden, and the *Guinea-pig* (Cavia); also one bird, *Anas moschata*.

The rats called "ucucha" abounding from early times at Panama and in the coast towns of Peru—(G. de la Vega ix. 22) doubtless the *black rat*, Mus rattus. This species, introduced by returning ships, had become naturalized in Europe and is described by Gesner, but is regarded by Linnæus, and Pallas, as an American animal; and by Bartram, and Bachman, as indigenous in Northeast America, occurring not only in the settlements, but among "the rocks of the Blue mountains remote from all human dwellings" (Kalm trav. ii. 47).

"In this year" (Wilford as. res. ix. 157, and Elph.), suicide of Chaitra-pala or Gepal or Jeipal, unsuccessful in battle against the Muslims under sultan Mahmud. He was succeeded by his son Mahendra-pala or Anang Pal, now tributary Hindu king at Lahore.—The raja of Batia, on the Southern side of Multan, refusing to pay his share of the tribute, was defeated by sultan Mahmud, and also committed suicide.

"1003 A. D." (Alst., and Nicol.), at Rome, Sylvester II. succeeded Joannes XVIII.; and before the close of the year, by a cardinal, now Joannes XIX. seventy-ninth archbishop.

"The same year" (Kufic inscript., and Wilk. theb. and eg. 299 and 547), building at Cairo of the mosque of Hakem; the arches all *pointed*. In a Kufic inscription over the door, Hakem is "treated as a prophet:" besides persecuting Christians, he founded a new religion;—being the Druse prophet of the sect so-named, now confined to Lebanon.

"1004 A. D. (= 395 A. H." of Ferisht, Elph.), Abul Fatteh Lodi, Muslim ruler of Multan, having revolted and in alliance with Anang Pal and mountain tribes raised an army, defeated near Peshawer by sultan Mahmud. Multan was soon besieged, but after "seven days" its submission was accepted by Mahmud, called away by news of a Tartar invasion.

"In this year" (quart. rev. for 1870), Ælfric appointed abbot of Peterborough,—and in "1023," archbishop of York.

Scirpus maritimus of the seashore and Interior salines of Temperate Climates. Called in Britain *spurt-grass*, and made into spyrtan baskets, employed as appears from Ælfric coll. for catching fish—(Prior): S. maritimus is described by Bauhin hist. ii. 495 (Spreng.), and Tournefort inst. 527; was observed by Desfontaines in Barbary; by Brotero, in Portugal; and is known to grow along the Mediterranean and Atlantic as far as Sweden, also in wet places more or less saline in the Interior (fl. Dan., Lam. fl. fr., Fries, and A. Dec.). Eastward, was observed by Sibthorp, and Chaubard, from the Peloponnesus to Cyprus and Constantinople; by Forskal, in Egypt and called "depsjæ" (Del); is known to grow in the Tauro-Caspian countries (Bieb.) and in Siberia (Kunth). Farther East, is known to grow along the Pacific shore of North America and throughout Canada (Hook. fl. bor. ii. p. 230); was observed by Baldwin along the Lower Missouri (Torr.); is known to grow at the Salina salt-springs in New York (A. Gray); and on the Atlantic seashore from Lat. 43° to Florida (Mx., Pursh, Muhl., Ell., and Chapm.). In the Southern Hemisphere, is known to grow from Senegambia (Kunth) to Austral Africa (E. Mey.), Australia (R. Brown), and New Zealand (Raoul). By European colonists, may have been carried with the salt manufacture to the Hawaiian Islands, where it was observed by Beechey voy. p. 98.

Potamogeton lucens of Northern climates. With other species called in Britain *pondweed* or *greeds*, and the Anglo-Saxon grædo translated ulva in Ælfric's glossary—is referred to this tribe by Prior: P. lucens is termed "p. foliis latis splendentibus" by Tournefort inst. 233; was observed by Desfontaines in Barbary; and is known to grow on the Azores (Wats., and A. Dec.), and

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* *Buddleia coriacea* of the country around Lake Titicaca. A stunted crooked tree called "ccolli" (Markh.), and known from early times:—observed by Markham p. xxxv one of the two trees "few and far between" on the bleak Collao table-land containing Lake Titicaca.

Baccharis sp. of the country around Lake Titicaca. A low shrub, from early times furnishing fuel:—observed by Markham "in some places on the Collao table-land."

throughout middle and Northern Europe as far as Sweden and Iceland (Pers., Hook., and Wats.). Eastward, was observed by Sibthorp from the Peloponnesus to Constantinople. Farther East, was observed by Drummond at Cumberland House Lat. 54° in central North America; and by myself along the Atlantic as far South as Lat. 42°.

"1005 A. D." (Nicol.), a synod in Brandeburg. Against "unlawful marriages, selling Christians to the Gentiles, and violating the laws of justice."

"In or about this year" (Blair), a new *style of architecture* in rebuilding old churches.

"1006 A. D." (Blair), *pestilence*. Extending over all Europe, — and continuing "three" years.

"1007 A. D." (Rafn ant. am.), from Greenland with three ships and carrying cattle, Thorfinn Karlsefni reached the wintering-place in Vinland. Where were "hvalir reythr" (*fin-back whales*. Physalus, observed by myself in the Lower St. Lawrence, in deep places approaching the shore regardless of spectators). — After the first winter, the natives came in numbers, though frightened "by the voice of the bull," bringing for traffic skins of "martium" or *sables*, and various other kinds of furs. A battle with the natives ensued in the second winter; and at the end of "three" years, finding the place constantly exposed to attacks, Karlsefni abandoned the country and returned to Greenland.

Triticum (*Agropyrum*) *repens* of America? Called in Britain *quitch grass* in Anglo-Saxon "cwice" from "cwic" yivacious (Prior), by Lobel "quych gras" (. . . .), in Greece "aira" (Sibth., compare Lolium), in Mongol "kia" (Klapr.): the "agros triticeos sponte satos" seen by Karlsefni on an excursion Southward * — (Rafn), or "champs de blé sauuiage" the spike like rye and seed like oats seen by Jacques Cartier on Bryon Island and around Chaleur Bay, may be compared: A. repens has been observed by myself abounding and to all appearance indigenous along the salt marshes of Eastern New England, and clearly indigenous as found by Oakes on the Subalpine portion of the White mountains in 1826; but in general occurs as a troublesome weed throughout our Northern and Middle States, sometimes regularly cultivated for feeding cattle. Westward, this or an allied species was observed by myself filling much of the unwooded country of Interior Oregon: A. repens according to Klaproth mem. i. 9 gave its name to the Siberian town and stream of Kiakhta or Kiaktou, abounding there and affording excellent feed for cattle; was observed by Forskal, Sibthorp, and Chaubard, from Constantinople to the Peloponnesus, frequent along roadsides and in cultivated ground. Farther West, figures in Matthioli 999, and Dodoens 345, are referred by Lobel to the "quych gras;" A. repens is distinctly described by C. Bauhin pin. 1 (Willd.); is termed "gramen loliaceum radice repente sive gramen officinarum" by Tournefort inst. 516; is known to occur in waste and cultivated ground from Algeria and the Canary Islands throughout middle and Northern Europe as far as Lapland (Pers., Munby, Webb, and Wats.); and was observed by Hooker on Iceland. In Austral America, was observed by myself at the mouth of the Rio Negro in Patagonia, and clearly indigenous in Terra del Fuego; is known to grow also on the Falkland Islands (Brogn. 1st voy. Astrol. 56, and J. D. Hook.); but seems unknown in other parts of the Southern Hemisphere (A. Dec.).

"In this year (= 4th of the 'king-tĕ' of the Soung dynasty," hist. Cor., and Klapr. note to geogr. Chin.), near Tan-lo or Quelpaerts Island, by a submarine volcanic eruption a new mountain raised out of the sea, more than a thousand feet in height.

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* *Elymus Virginicus* of Northeast America. Sometimes called *wild rye* (A. Gray); and possibly the grass in question: — "some eares of wheate," also "barly" (Hordeum jubatum), and "rie growing there wilde," were seen by visitors to St. Luke's Bay in Nova Scotia in 1623: E. Virginicus has been observed by myself from Lat. 45° at Mount Desert to our Middle States, often in little beds along the seashore; by Elliott, at Sister's ferry on the Savannah river; by N. A. Ware, and Chapman, as far as Florida; by Short, in Kentucky; and by Nuttall, along the Red river. From transported specimens, is described by Linnæus.

Betula papyracea of Northeast America. The *canoe birch*, a large tree, doubtless furnished the brooms of "mausur" wood brought by Karlsefni from Vinland: — Jacques Cartier entering the Straits of Belleisle met with natives in birch-bark canoes who had come from the Southward; and in the days of Gookin coll. 3, such canoes were occasionally seen as far South as Massachusetts Bay, sewed "with a kind of bark, and then smearing the places with turpentine;" water-buckets were also "of birch barks, artificially doubled up, that it hath four corners and a handle in the midst," and "several sorts of baskets great and small:" B. papyracea was observed by Lapilaye from Lat. 51° in Newfoundland; by myself, frequent on the Lower St. Lawrence and in New Brunswick and the neighbouring portion of New England, but ceasing along the Atlantic in about 42°, and a little farther South on the mountains; westward, is known to grow as far as Wisconsin (A. Gray) and Lake Winnipeg (Long's exp. ii. 81), was observed by Drummond at Cumberland House Lat. 54°, and nearly to the Rocky mountains.

"1008, in the spring (= 399 A. H." of Ferisht., Elph.), fourth Muslim invasion of Hindustan. Anang Pal of Lahore and the assembled forces of Gwalior, Ujen, Ajmir, Calinjer, Canouj, and Delhi, defeated near Peshawer by sultan Mahmud: who continued his march to the Eastern portion of the Panjab, plundered the fortified temple of Nagarcot on the lower portion of the Himalayas, and with immense booty returned to Ghazni.

"From this year" (G. de Tassy i. 519), Gwalior in the province of Agra — governed by rajas or princes.

"In this year" (C. Mackenzie as. res. ix. 270), birth of Ramanuja, reformer of the Saiva doctrine, and "the famous author of the Sri-bhashya." — He is invoked in a Jain inscription at Belligola dated in "A. D. 1367."

"1009 A. D." (Alst., and Nicol.), at Rome Joannes XIX. succeeded by Sergius IV., eightieth archbishop.

In manuscripts of this date (De Wailly vi. 3), *capital letters* used for beginning sentences.

"1011 A. D." (Elph.), fifth Muslim invasion of Hindustan. Crossing the Indus, Mahmud proceeded nearly as far as the waters of the Ganges, captured and plundered the temple and town of Tanesar, and returned with a multitude of captives to Ghazni before the Hindu princes could assemble to oppose him.

In this year (= 996 + "16th year of his reign," Mahavams. lxxv to lxxvii), a commotion in and about Matura subdued by king Parackramabahoo. — Pursuing the dhamila forces of king Kulesekara Pandya he conquered Soly or Coromandel, and returning to Ceylon, assembled a Budhist council under the great priest Causypa or Kaxapa.

"1012 A. D." (Alst., and Nicol.), at Rome, Sergius IV. succeeded by Benedictus VIII., eighty-first archbishop.

"The same year" (ann. Jap., and art de verif.), Itsi-dsio succeeded by Sandusio or San-zio, second son of Ren-sei, and now sixty-seventh dairo of Japan.

"1013 A. D" (Blair, and Nicol.), Ethelred II. abdicating, his brother Swegn or Sueno II. king of Denmark proclaimed king of England. The Danes in this manner gaining possession of England.

"The same year" (Pauth. 337), by census in China, the number of persons engaged in agriculture ascertained to be "21,976,965; not including women, youths under twenty, magistrates, literati, *eunuchs*, the military, bonzes, nor mariners."

"1014, Feb. 3d" (Nicol.), death of Sueno II., and election by the fleet of his son Cnut or Canute II. as king of England. The throne was however resumed by Ethelred II.

"1016, April 23d" (Nicol.), Ethelred II. succeeded by Edmund II. Ironsides, fifteenth Anglo-Saxon king of England; and "Nov. 30th," by Canute II.; who besides inherited and extended his dominion over Denmark, Norway, and Sweden.

"1017 A. D. (= 408 A. H." of Ferisht., Elph.), sixth Muslim invasion of Hindustan. With a large army Mahmud of Ghazni kept near the mountains until he had crossed the Jamna affluent of the Ganges, when turning South he reached the great city of Canouj so unexpectedly that the Hindu king could make no resistance, and gave himself up. The city was spared, and the king restored; but on his way back, Mahmud plundered Mattra, Munj, and other places.

"In this year" (ann. Jap., and art de verif.), Sandusio succeeded by Itsi-dsio II. or Go-itsi-dsio, younger son of Itsi-dsio I., and now at the age of nine dairo of Japan.

"1018 A. D." (Blair), first entrance of a body of Normans into Italy.

"1021 A. D." (art de verif.), Hakem succeeded by Daher of the Fatimite dynasty, fourth sultan of Egypt. A gold coin issued at Cairo by Daher, is figured in Marcel 105.

The same year (= "5th year of Itsi-dsio II.," art de verif.), permission granted to Sai-sin, a Japanese noble, to ride in a "khuruma" or covered chariot drawn by bullocks: the invention was soon adopted by all the court.

"In or about this year" (= 1062 — "30 to 40 years reign," G. de la Vega, Girolamo Benzoni f. 167, addit. art de verif., and Tschudi trav.), the city of Cuzco founded by the first Inca Manco Capac, who came with his companions from an island in Lake Titicaca. Bringing "the arts of government and society," Manco Capac peacefully acquired influence over the surrounding population, for "eight leagues" West, "nine" South, and Eastward as far as the river Paucartampu. The site of the city on the ridge of the Andes, and the plan, manifest ambition: a central intersection of streets leading North, South, East, and West by continuous roads to the bounds of the dominion.

At Cuzco on the hill Colcampata, Manco Capac built a palace, — subsequently occupied by Paullu son of Huayna Capac, and "the ruins" of which according to Markham p. 224 "are still very perfect."

The Inca policy, on conquering a country, was To extend the limits of cultivable soil by means

of channels of irrigation; so that larger crops of *maize*, "papas" (*potatoes*), and other esculents,* could be raised — (G. de la Vega v. 1).

"1022 A. D." (Nicol.), by a synod at Orleans, "thirteen Manichæans" condemned to be burned.

"The same year" (Blair), *music* of a new kind, "under six notes," invented by Aretinus (Guy d'Arezzo).

"At the time the first Incas were founding the city of Cuzco" (Ciez. lxxiv), incursion of the Yuncas of the Chincha valley Eastward into the mountains. They are said to have done "much mischief in Soras and Lucanas" and to have advanced as far as the Collao table-land, returning with "great spoils." — But were conquered in the time of Tupac Yupanqui.

The use of *guano* as manure in Lower Peru from Arequipa to Tarapaca known from early times. The sea-birds producing it on islets along the coast — protected by laws issued by the Incas (Ciez. lxxv, and Garc. de la Vega ii. 5: 3). Frezier 152 in 1713 found guano exported from Iquique and other places along the coast to Arica and Ilo.

Gen. Cucurbitac. of Western Peru. The "pepino" cultivated in the Chincha valley as early probably as this date: † — described by Cieza de Leon lxvi to lxxiv as "one of the most singular fruits I ever saw," fragrant, "not like those of Spain although they bear some resemblance," "yellow when the peel is taken off, and so delicious that it is necessary to eat many:" by Tschudi 192, as grown in great abundance, creeping on the ground, its fruit cylindrical, four to five inches long and somewhat pointed at both ends, the husk yellowish-green with long rose-coloured stripes, the edible part solid juicy and well-flavoured but very indigestible. "Momordica pedata" observed by Feuillée i. pl. 41 in Peru, the fruit striate (Pers.), may be compared. Transported to the Mediterranean, "M. pedata" was seen by Delile in gardens at Cairo.

"In this year (= 413 A. H." of Ferisht., Elph.), on his way to assist the Hindu king of Canouj, Mahmud opposed by Jeipal II. of Lahore. The city and territory were now annexed to Ghazni, and a permanent *Muslim garrison* for the first time established East of the Indus.

"1023 A. D. = 'thian-ching,' 1st year of Jin-tsoung, of the Soung" or Twenty-first dynasty — (Chinese chron. table).

"The same year" (art de verif.), the "jeki" or plague committing great ravages in Japan.

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* *Oxalis tuberosa* of Chili. A species of *wood-sorrel* having potato-like roots, and called in Chilian "oca" (Molin.), in the Collao "apilla" (Markh.); in which we recognize the "ocas," one of the esculents in question — according to G. de la Vega v. 1: O. tuberosa was observed also by Markham edit. ii. p. 359 under cultivation in the cold region of the Collao. Farther South, is regarded by Molina iii. 24 as properly a Chilian plant.

Oxalis crenata of the Peruvian Andes. An allied species, perhaps the "añus" in question, having a root differing in taste and which can only be eaten cooked — (G. de la Vega v. 1): O. crenata was observed by Feuillée iii. pl. 24, Molina 109, and Humboldt iv. 9, under cultivation on the Peruvian Andes; by myself, near the extreme limit on the Western slope, planted in small patches, often alternating with those of the potato.

Chenopodium quinoa of the Bogotan? Andes. A species of *goosefoot* bearing esculent seeds, one of the crops in question; its seeds used also by the natives to make a beverage like that from maize, its flower employed medicinally, and its tender and wholesome leaves eaten — (G. de la Veg. v. 1 to viii. 9): C. quinoa was observed by Feuillée med. pl. 10, Molina 101 (A. Dec.), Tschudi under cultivation on the Andes, according to Humboldt iv. 9 from Chili to Bogota; and seeds brought by Couthouy from Quito have been shown me. Transported to Europe, has been successfully cultivated in Germany (Markh. edit. ii. p. 357).

† *Baccharis scandens* of Lower Peru. Called there "chilca" (Markh.), and giving its name to the village of Chilca — (South of Lima): the Inca Huascar, when taken prisoner by the forces of Atahualpa, was insulted by the offer of "chillca" leaves instead of coca (Salcam. edit. Markh. 118): the "chilca" shrub is mentioned also by G. de la Vega i. 187: B. scandens was observed by Ruiz and Pavon in the arid portion of Peru (Pers.); by Markham edit. p. 307, thickets on the battle-field near Guamanga.

Prosopis horrida of the Western valleys facing the Pacific. A large tree called "guaranga" (Markh.), and known from early times: — the "algaroba" was observed by Cieza de Leon xxxvi to lxvii in the mountain-valleys throughout Western Peru, its pods "somewhat long and narrow and not so thick as" those of beans, used in some places, to make bread "and it is considered good:" P. horrida was observed in Peru by Humboldt and Bonpland (Steud.); by Markham p. 239, bearing abundant "clusters of pods, which form excellent food for mules and cattle and for immense herds of goats," its timber "very hard."

"1024 A. D. = 2d year of the 'thian-ching' of Jin-tsoung" (Chinese chron. table), beginning of the Sixty-second cycle.

"The same year" (Alst., and Nicol.), Henricus II. succeeded by Conradus II. Salicus, fifth emperor of Germany and Italy.

"The same year" (Alst., and Nicol.), at Rome, Benedictus VIII. succeeded by Joannes XX., eighty-second archbishop.

"September (= 415 A. H." of Ferisht., Elph.), leaving Ghazni with an army Mahmud crossed the Indus and reached Multan in October. With "twenty thousand" camels crossing the Desert, he made his appearance before Anhalwara so unexpectedly that the king of Guzerat was constrained to abandon the city. Continuing his march, Mahmud after a great battle captured and plundered the great temple at Somnat, and destroyed the idol. — He remained more than a year in Guzerat, having visions of a fleet, the gems of Ceylon, and gold mines of Pegu, and on leaving set up a new Hindu king.

"1025 A. D." (Alst.), Constantinus IX. now sole ruler of the Byzantine Empire.

"1026 A. D. (= 1083 ann. Vicram.," Wilford as. res. viii. p. 289 and ix. p. 74), the latest of the four mounds or "Meru-sringas" near Benares raised by two sons of Bhupala, king of Gaura.*

"1027 A. D." (Kalhana hist. Cash., and H. H. Wils. ind. dram. ii. 260), accession of Samgrama as king of Cashmere.

Mesue living at Cairo. He had been physician to "Alhaken" or Hakem (Leo Afric. med. arab. 273), quotes Avicenna, — and died "in 1028" (Spreng.).

Zygophyllum coccineum of the Desert, from Barbary to the border of Siberia. Called in Egypt "rotrætjt" or "kamun karamani," in which we recognize the "cimini carmeni" of Mesue electuar.: — Z. coccineum was observed by Forskal p. 87, and Delile, in the Desert between Cairo and Suez, frequent but avoided by all cattle, even by the camel; the aromatic seeds however used medicinally, against colic by the Egyptians. The plant was also observed by Shaw f. 231 in Barbary, and is known to grow on the border of Siberia (Pers.).

Laserpitium glabrum of the mountains of middle and Eastern Europe. By the French called "turbith des montagnes" (Fee); the "turbith" of Mesue, — referred by Sprengel to a Thapsia, may be compared: L. glabrum is described by Morison ix. pl. 19; and was observed by Crantz iii. 54, and Jacquin pl. 146 in dry wooded situations on mountains within the Austrian dominions (Pers.). According to Lindley, "the root is gorged with a gum resinous juice, which is acrid, bitter and even somewhat caustic: it is reckoned a violent purgative."

Achillea ageratum of Europe. Called in Britain *mawdeleyn* or *maudeline* from Magdalen (Prior), in Languedoc "herba divæ Mariæ" (Lyte ii. 67): the "eupatorion" of Mesue — is referred here by Andr. Marinus ed. Mes. pl. 59; A. ageratum is described also by Tragus i. pl. 175, Matthioli (Spreng.), and Lobel pl. 489; is termed "ageratum" by Bauhin; is known to grow wild in Southern France (Lam. fl. fr., and Pers.); and was observed by Gittard in the Peloponnesus (Chaub.).

"1028 A. D." (Alst.), Constantinus IX. succeeded by Romanus II., forty-first Byzantine emperor.

"1029 A. D." (rudim. chron. Lond.), in England, the causeway connecting Peterborough with Ramsey built by Canute II.

"The same year" (Talvi iii. 1), the Moravian kingdom dissolved; and Moravia proper, inhabited by a Slavonian people, united with Bohemia.

In this year (996 + "after his 33d year," Mahavams. lxxviii.), Parackramabahoo succeeded by his nephew Pandita-wijeya-Chako, now king of Ceylon. — He composed poems in the Pali language.

"1030, Apr. 29th (= 421 A. H." of Ferisht., Elph.), death of Mahmud of Ghazni, the most renowned monarch of his time. "Within five months," he was succeeded by his son Masaud.

"1030–2 A. D." (Humb. cosm. ii.), Abul-Ryhan, or Albiruni of Byrun in the valley of the Indus, corresponding with Avicenna — who died "in 1036."

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* *Zizyphus oenoplia* of Tropical Hindustan and Burmah. A thorny shrub (Graham), called in Bengal "sehacul," and brought to W. Jones as the "ghonta" or "gopaphonta" of an ancient Sanscrit poet, a tree shaped like the "vadari" (Z. jujuba), growing only in forests and having very small fruit, — and "ghonta" of the Amara-cosha (as. res. iv. 264): the "ghonta" or "gopaghonta" is mentioned by Susrutas (Hessl.): Z. oenoplia was observed by Graham, in "the Concans;" by Burmann pl. 61, W. Jones, Roxburgh, and Wight, as far as Ceylon and Bengal, its fruit black and of the size of a pea, eaten by the natives, and the bark of the fresh root in decoction "said to promote the healing of fresh wounds;" was observed by Mason in Burmah.

Abutilon Avicennae of China and Mongolia. Mentioned by Avicenna — (according to Gaertner): from seeds sent from Pekin, ascertained by Roxburgh to be the "king ma" of China, occurring from "Lat. 32° to 39°" and cultivated for its fibre (Royle him. p. 116 and fibr. pl.); observed by Pallas trav. i. 593 as far West as the Yaik. Farther West, is described by Gesner, Anguillara, Matthioli, Dalechamp p. 592 (Spreng.), Dodoens, Camerarius, and C. Bauhin; is known to occur in Siberia and Switzerland (Pers.), and is regarded by A. Decandolle as "probably naturalized in Southern Europe." Possibly by European colonists carried to Northeast America, where it continues in Carolina and Georgia "in waste places chiefly in the middle and upper districts" (Ell., and Chapm.); so far as observed by myself from Lat. 39° to 43° along the Atlantic, has more of the aspect of a weed brought by our aboriginal tribes.

Reseda Mediterranea of the East Mediterranean countries. Called in Egypt "romeykh" (Forsk., and Del.), and the "raamek" of Avicenna (Kirst.) may be compared: the "gselbehnak" of Avicenna — (Kirst.), and Ebn Baitar, is referred here by Sontheimer: R. Mediterranea is described by Linnæus; was observed by Sibthorp in grain-fields on the Greek islands; by Forskal p. 92 at Alexandria; by Delile, not far from Cairo growing in the Desert; is known to grow also in Palestine (Pers.).

Melia azedarach of Subtropical Japan and China. Called in Egypt "zænzalacht" (Forsk.), in Northern Hindustan "dek" (Royle): the "azedarach" of Avicenna — is referred here by writers, probability favouring according to Royle him. p. 141: the "mahanimba" of Susrutas ..... is referred here by Hessler: M. azederach is known to occur on Ceylon (Pers.); was observed in Hindustan by Roxburgh, Royle, and Wight; by Graham, "a common tree, generally met with about villages both in the Concan and Deccan," the name given me by the natives signifying "English tree," but according to Royle var. sempervirens is distinguished in Hindustanee as "bukayun" or "bukain." Farther East, M. azedarach is enumerated by Mason v. 411 and 479 as "exotic" in Burmah and called "ka-ma-kha," cultivated for ornament and the root used as a vermifuge; was observed by Blanco on the Philippines, in one or more localities and called in Tagalo "malongain;" by Kaempfer, and Thunberg, frequent in Japan from Nagasaki to Jeddo, having several native names and furnishing oil for burning. Westward from Hindustan, was observed by Forskal under cultivation in Yemen; by him, and Delile, in the gardens of Egypt; by Rauwolf, and Hasselquist, in Palestine; by Chaubard, on the Greek islands; is termed "pseudo-sycamorus" by Matthioli pl. 232; and is known to occur under cultivation as far as Spain (Pers., and Blanco). By European colonists, was carried to the West Indies (Comm. hort. pl. 176, Swartz ii. p. 737); to our Southern States, where it is planted for ornament and called *China tree* (Chapm.); and as verified by myself, to Taheiti, and the Hawaiian Islands.

M. composita, enumerated as distinct, was observed in Hindustan by Roxburgh ii. p. 397, and Wight; by Graham, "a middle sized tree" called "neembarra" or "limbarra," on the "hilly parts of the Concan, Parr Ghaut, not common."

Canarium commune of the Malayan Archipelago. The *Java almond* or *elemi tree*, pinnate-leaved and called in Hindustanee "junglee-badam" (Drur.), in Tagalo "palsahingin," in Ylocano "anten" (Blanco), was known to Avicenna as growing at Macassar — (Spreng.); was observed by Blanco on the Philippines, the liquid resin procured from the trunk much used by the natives; by Rumphius ii. pl. 47 to 48, under cultivation on the Moluccas, where according to Ainslie its exudation is burned as a lamp; by myself, under cultivation as far East as the Feejeean Islands. Westward, is known to occur on Java (Drur.); is termed "amyris Zeylanica" by Retz iv. 25, observed by him on Ceylon; was observed by Roxburgh, and Wight, in peninsular Hindustan, yielding according to Lindley "abundance of limpid oil, with a pungent turpentine smell, congealing in a buttery camphoraceous substance," the "raw fruit eatable but apt to bring on diarrhœa." By European colonists? was carried to the Mauritius Islands, where it is called "bois de colophane." From transported specimens, is termed "colophonia Mauritiana" and "balsamodendron Zeylanicum" by Decandolle prodr. ii. 76 to 79, and "bursera paniculata" by Lamarck (Lindl.).

Mimosa abstergens of Hindustan. Called at Lahore "shekai" (Honigb.); and the "schekaaai" of Avicenna, — may be compared: M. abstergens is described by Honigberger 403, as observed in Hindustan (J. F. Wats.).

Lathyrus tuberosus of the Uralian plains. Called by the Calmucks "sohnok" (Pall.), in Germany "erdnuss" or "sewbrot" (Trag.); and the "harthanita" of Avicenna — is referred here by some writers: L. tuberosus was observed by Pallas trav. i. 513, cooked and eaten by the Calmucks; by Tragus ii. pl. 19 in cultivated ground in Germany, its tuberous roots sometimes eaten, and much sought for by swine; is known to occur also in France (Pers.).

Spiræa aruncus of Northern climates. Called in Germany "waldgeissbart" (Trag.), in Japan "sjoma" or "torino asikusa" (Sieb.); and the "barba hircina" described as astringent by Avicenna, — and Serapion, may be compared: S. aruncus was observed by Tragus i. pl. 95 in Germany; is known to grow also on the Pyrenees and Jura (Dec.), and on Caucasus (Bieb.); was observed by

Thunberg on mount Fakon in Japan; by Siebold, on the island of Yeso; by Gmelin, throughout Siberia to Kamtschatka. Farther East, is known to grow on Puget Sound and from the mouth of the Columbia to its source (Hook.); was observed by E. James on the Missouri; by Beck, near St. Louis; by Michaux, on the Alleghanies from Georgia to Virginia; by Schweinitz, at 36° in Upper Carolina; and by Eaton, as far as the Catskill mountains.

Manettia lanceolata of Tropical Arabia. Called in Yemen "laæja" (Forsk.), and the "laija" described by Avicenna as bitter and milky, or "laaijah" of Abu Khoraij, Elgafaki, and Ebn Baitar, may be compared: M. lanceolata was observed by Forskal p. 42 everywhere on the mountains of Yemen, the bruised root applied to ulcers.

Memecylon tinctorium of Tropical Hindustan and Burmah. A highly ornamental shrub called in Mahratta "anjun" or "anjuna" (J. F. Wats.), in the environs of Bombay "anjunee" (Graham), in Telinga "alli chettu," in Tamil "kayampoovoocheddi" or "casau-cheddy" or "casha-marum" (Drur.), in Burmah "myen-khæ-ta-nyet" (Mason); and the plant growing according to Avicenna 165 in Yemen and India, and dyeing yellow, — mentioned also by Serapion c 170, is referred here by Sprengel: M. tinctorium was observed by Rheede v. pl. 19 in Malabar; by Murray, Law, and Graham, "common at Mahableshwur" and "along the Ghauts;" by Roxburgh, and Wight, as far as Travancore and Coromandel, cultivated besides in gardens, its fruit eaten and leaves "affording a delicate yellow lake" (Drur.); by Mason v. 419 to 512, indigenous in Burmah, its leaves affording a bright yellow dye. Westward, if occurring in Yemen, doubtless only in gardens.

Strychnos ignatia of the Philippines. Imported *Ignatius beans* are called in Arabic "narmuschk" (Mowafik ii. 96), in Persian "fafita," in Hindustanee "papita" (J. F. Wats.); in which we recognize the "naarmesk" of Avicenna: — these beans are "used successfully in India as a remedy for cholera" (Lindl.). Farther East, the living tree is described by Loureiro i. 155; was observed by Blanco in the Bisayan portion of the Philippines, especially in Catbalogan, and called in Bisaya "pangaguason" or "aguason" or "canlara" or "mananaog" or "dancagai" or "igasud" or "catalonga," in Pampango "pepita sa Catbalogan," in Tagalo "pepita" or "fruta," used in fevers and against the bite of poisonous reptiles. Described also by Kamel phil. trans. xxi. 88 and act. erud. 1700, and termed "caniram de St. Ignaco" by Petit Thouars (Steud.).

Pergularia tomentosa of Nubia and Arabia. A woody Asclepiaceous vine called in middle Egypt "leben el-homarah" donkey's milk (Del.), in Yemen "dæmia" (Forsk); the "lactuca asini" of Avicenna — may be compared: P. tomentosa was observed by Forskal, and Delile, not far from Cairo, growing in the Desert; by Forskal p cviii and 49, among the mountains of Yemen near Taæs. Eastward, by Graham, "common in gardens Bombay," its "flowers yellow, very fragrant;" by Roxburgh, and Wight, in other parts of Hindustan; is described also by Rumphius vii. pl. 26; was observed by Mason v. 421 "exotic" in Burmah, cultivated for its fragrant flowers; is termed "cynanchum odoratissimum" by Loureiro, as observed by him in Anam.

Hyoscyamus pusillus of Persia. The yellow-flowered "bnj" of Avicenna 145, — and Serapion c. 340, is referred here by Sprengel: H. pusillus is known to grow in Persia (Pers.): transported to Europe, is described by Plukenet alm. pl. 37. f. 5.

Mentha piperita of Hindustan. Called in Egypt "lemmam" or "na'na" (Del., and Lindl.), in which we recognize the "nana" of Avicenna, — Edrisi, the treatise Erfahrungen, and Ebn Baitar: the Coptic or Egyptian "sōumanas" (Edw.) may also be compared: M. piperita was observed by Forskal, and Delile, in the gardens of Egypt. Farther North, has not been found in Greece, but is described by Linnæus, is well known in gardens throughout middle Europe, is called in Britain *pepper mint* (Prior), and had become naturalized there before the days of Persoon. Eastward from Egypt, the "nana" is identified by Persian writers with the "podeena," a "species of mint cultivated in the gardens of Northwestern India" (Royle in Kitt. bibl. cycl.); M. piperita is called in Bengalee and Hindustanee "pudina," also in Hindustanee "nana," and the liquor distilled from it "araq-i-nana" (D'rozar.); was observed by Law "on the banks of the Yena at Mahableshwur," but as occurring in gardens around Bombay is said by Nimmo to have been introduced from Europe (Graham): farther East, a species of mint "exotic" in Burmah, and called "boo-dee-na" is enumerated by Mason; and M. piperita was observed by Thunberg in Japan, around Nagasaki and called "faki." By European colonists, was carried to Northeast America, where it continues to be cultivated, and to a limited extent has become naturalized (A. Gray, and Chapm.); also to South America (Lindl.). According to Pereira, is "an aromatic stimulant and the most pleasant of all the mints." (See M. arvensis.)

Salicornia Arabica of the shores of the Red Sea. Called by Arabs in Hindustan "ushnan" (J. F. Wats., U. U. 163, B. 69), in which we recognize the "aschnaanun" of Avicenna — (Kirst.), or "uschnan" of Ebn Baitar: S. Arabica was observed by Forskal p. 3 on the shore of the Red Sea from Ghomfude to Djidda; by Pallas trav. i. 745, on salines near the Caspian. From transported specimens, is described by Morison ii. 5. pl. 33.

Salix Babylonica of Eastern Asia. Called in Britain *weeping willow*, in the gardens of Egypt "safsaf roumy" willow of Constantinople (Del.), by the Arabs of Syria "garb" (Rauw.), in the gardens of Burmah "mo-ma-kha" (Mason); and the "ghrb" of Avicenna 279 — is referred here by Sprengel: the willows planted for shade according to Raschid-eddin along roads in China (Yule cath. 260) may also be compared: S. Babylonica was observed by Loureiro ii. 609 in Anam; by Mason, "exotic" in Burmah; by Graham, "in gardens" around Bombay (but no native name is given). Farther West, was observed by Rauwolf pl. 183 during his visit to Palestine, and was now first made known to Europeans (Spreng.); is termed "s. orientalis flagellis deorsum pulchre pendentibus" by Tournefort cor. 41; was observed by Forskal, and Delile, in gardens from Cyprus and Constantinople to Athens; and has become well known throughout Europe. By European colonists, was carried to Northeast America, where it continues to be planted for ornament; to the island of St. Helena, and thence in one instance to Hindustan (Graham). One sex only being known, the tree has been kept in cultivation by cuttings only, and is therefore regarded by A. Decandolle as perhaps a deviation from its undiscovered normal state.

Populus fastigiata of Central Asia. The "ghurb" of Arab writers — is referred here by Royle himal. 344: P. fastigiata was observed by him on the Himalayan mountains. Westward, is known to have been introduced in the Eighteenth century throughout Europe; was observed by Chaubard in Greece; is described by Aiton, Poiret, and Duroi; and its French name "peuplier d'Italie" and English *Lombardy poplar* seem derived from resembling the artificially-trimmed poplars of Lombardy. By European colonists, was carried to Northeast America, where trees planted for ornament were frequent within my remembrance, but they did not continue thriving, and one sex only being in the country, are rapidly disappearing; was also carried to Chili, where I have seen trees in flourishing condition. According to Lindley, the young leafbuds are used medicinally for the same purposes as those of P. nigra. (See Salix Babylonica.)

Gymnadenia conopsea of Europe and the adjoining portion of Asia. A palmate-rooted orchid called in Germany "kreutzblum," in drug-shops "palma Christi," by the Arabs "bucheiden," and the "digiti citrini" distinguished by Avicenna as altogether yellow — is referred here by Fuchsius pl. 712: G. conopsea is described also by Brunfels i. 104, and Lobel obs. 90 (Spreng.); is termed "o. palmata minor calcaribus oblongis" by Tournefort inst. 435; and is known to grow in meads from Denmark throughout middle Europe (fl. Dan. pl. 224, Engl. bot. pl. 10, Vaill. pl. 30, Hall. helv. pl. 29, and Pers.); was observed by Sibthorp, and Chaubard, in the Peloponnesus.

Orchis maculata of Europe and the adjoining portion of Asia. Also called in Germany "kreutzblum," and the "digiti citrini" distinguished by Avicenna as yellow mixed with white — is referred here by Fuchsius pl. 713: O. maculata is described also by Lobel obs. 90; is termed "o. palmata pratensis maculata" by Tournefort inst. 435; is known to grow in meads from Denmark throughout middle Europe (fl. Dan. pl. 933, Engl. bot. pl. 632, Hall. helv. pl. 32, and Pers.); was observed by Sibthorp in meads in the Peloponnesus.

Narcissus jonquilla of the West Mediterranean countries. Called in Spain "junquillo" from its slender rush-like stem, in Britain *jonquill* (Prior), in France "jonquille" (Nugent); and the "nesryn" described by Avicenna as a kind of narcissus, — by Ebn Alwam i. 334 as growing in Spain and yielding an oil, is referred here by Sprengel: N. jonquilla is known to grow wild in Spain (Pers.), but has been long cultivated as a garden flower: is described by Dodoens; and was observed by Clot-Bey and Figari in the gardens of Egypt.

Fritillaria imperialis of Central Asia. Called in Britain *crown-imperial*, in Persia "tusac:" the "corona regia" is mentioned by Avicenna — (according to Kirsten): roots of F. imperialis about the middle of the Sixteenth century were brought from Persia to Constantinople, thence some to Vienna and distributed throughout Europe (Clus. rar. ii. 1, and Beckm): the plant is described also by Dodoens, Lobel, and Tournefort 372. By European colonists was carried to Northeast America, where it continues a favourite garden flower.

Alectoria Arabum of Hindustan. The best and most fragrant kind of "oschnah," enumerated by Avicenna p. 128 as brought from India, — is referred to this tree lichen by Dillenius pl. 84 f. 10, and Acharius (Spreng.).

"1031 A. D." (Blair), Apulia in Southern Italy conquered from the Greeks by the Normans.

"The same year" (Alst., and Nicol.), Robert succeeded by his son Henri, as king of France.

"The same year" (= 979 + cycle of 52 years, Clavig. ii.), accession of Topiltzin, eighth Toltec king of Mexico.

Bixa Orellana of Tropical America. The *arnotto* tree called in the West Indies "bixa" (Ovied.) or "urucu" (Sloane), in Carib by the men "cochehuc" (Desc.); and from early times, the red pulp around its seeds used by the Caribs to paint themselves; its bark used also for cordage, and its wood to procure fire by friction — (Drur.): observed by Oviedo nat. hyst. f. 13 and c. 76, and Sloane ii. pl. 181, in the West Indies, mixed in chocolate by the Spanish colonists; by myself, under

cultivation in Peru and Southern Brazil. Possibly by Polynesians, was carried to the Hawaiian Islands, observed there by myself; and to Tongatabu, observed by Rich. Clearly by European colonists, was carried across the Pacific to the Philippines, where it has become frequent, and is called "achote" (Blanco); to the neighbouring islands (Rumph. ii. pl. 19); to Burmah, observed by Mason v. 511 abundantly cultivated by the natives; to Hindustan, called in Telinga "jafra," in Tamil "kooragoomangjul," in Malabar "korungoomunga," in Hindustanee "gawpurgee" (Drur.), in the environs of Bombay "kisree" (Graham), cultivated as a dye, which however is not very durable, used also medicinally (Roxb., and Wight). Transported to Europe, is described by Clusius, and Commelyn hort. i. 65; the imported drug is used to tinge butter, cheese, oils, and varnish (Drur.).

Swietenia mahagoni of the West Indies and Central America. The *mahogany* tree, called in Carib "oubouheri" or by the women "liaçaicachi" (Desc.), and known from early times*:—

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* *Ochroma lagopus* of the West Indies. A large-leaved Bombaceous tree called in Carib "saamonna" or "zamacuna" or "comaka" (Desc.), and known from early times:—observed by Plumier, and Swartz fl. ii. 1144, in the West Indies; by Descourtilz, frequent there in the forest. (See Eriodendron anfractuosum.)

Humirium balsamiferum of Guayana. A lofty tree called in Carib "houmiri" or "touri" (Lindl.), and known from early times:—observed by Aublet pl. 225 in the Guayana forest, and its *balsam* compared to that of Peru; mentioned also by Schomburgk (annotat. Ralegh). From transported specimens, is termed "myrodendron amplexicaule" by Schreber 901.

Humirium floribundum of Eastern Equatorial America. A tree thirty feet high, called at Para "umiri" (Lindl.), known from early times,—and yielding the valuable *umiri balsam*; possessing the same medicinal properties as copaiva balsam, but regarded by Martius as superior and rivalling the Peruvian: the living tree observed by Martius ii. pl. 199 in various parts of Brazil.

Sauvagesia erecta of Tropical America. Suffruticose, called in Guayana "adima" or "yaoba" (Lindl.), and from early times used medicinally:—in the West Indies, in slight inflammation of the bladder (Jacq. am. pl. 51); in Brazil, in complaints of the eyes (A. Saint-Hil. rem. pl. 3); in Peru, in disorders of the bowels, and called "yerba de St. Martin" (Ruiz and Pav. iii. 11); is known to grow also in Mexico (A. Saint-Hil.). Probably by European colonists was carried across the Atlantic to Senegal and Guinea (Willd., and fl. nigr.); to Madagascar (A. Saint-Hil., and A. Dec.); and to Java (Perrott.).

Spondias mombin of the West Indies. A large Terebinthoid tree called there "hobos" (Ovied.), in Carib "oubou" or by the women "monbea" (Desc.), and its plum-like fruit eaten from early times:—described by Petrus Martyr, and Oviedo nat. hyst. 72 and gen. hist. viii. 2; observed also in the West Indies by Sloane ii. pl. 219, Jacquin am. pl. 88, and Descourtilz. Transported to Europe, is termed "s. purpurea" by Miller (Steud.).

Spondias myrobalanus of Guayana. An allied species known also from early times:—observed by Sloane ii. pl. 219, and Jacquin 138; by Merian pl. 13, in Surinam. Transported to Europe, is termed "s. lutea" by Miller (Steud.).

Hedwigia balsamifera of the mountains of Hayti. An Amyroid tree, known from early times:—observed by Swartz fl. ii. 672. From transported specimens, is termed "bursera balsamifera" by Persoon i. 414 and 524.

Icica heptaphylla of Guayana. An Amyroid tree called there "hyawa" or "haiawa" (Hancock) or in Carib "arou aou" (Aubl.), and known from early times:—observed by Aublet pl. 130 in the Guayana forest, its trunk exuding a fragrant liquid that hardens into a whitish resin, according to Hancock a valuable remedy for coughs (Lindl.).

Icica aracouchini of Guayana. A small tree yielding *balsam of acouchi*, an aromatic terebinthinous liquid highly esteemed by the Caribs from early times as a vulnerary:—observed by Aublet pl. 133 in the Guayana forest, near the source of the Courou river (Pers., and Lindl.); mentioned also by Schomburgk (annotat. Ralegh).

Icica tacamahaca of the Oronoco. Known from early times,—and yielding one of the bitter resins called *tacamahaca*:—observed by Humboldt and Bonpland common near Calabozo on the plains of the Oronoco (Lindl.).

Icica carana of the Oronoco. Known from early times:—observed by Humboldt and Bonpland at the missions on the Oronoco, and supposed by most writers to yield the fragrant balsamic substance called *caranna*, but this is disputed by Hancock (Lindl.).

Cedrela longifolia of Guayana. A lofty tree, known from early times:—observed by Aublet i. pl. 126 in the depths of the Guayana forest, and termed by him "aniba guianensis;" according to Hancock yielding the balsamic substance called *caranna* (Lindl.).

Erythrina corallodendron of the West Indies. A *coral tree* called in Carib "aiphí tuinanti-iba"

observed by Catesby ii. pl. 81, and Jacquin am. 127, in the West Indies; known to grow also in Honduras, whence its ornamental wood is largely exported. By European colonists, was carried to Burmah, observed "exotic" there by Mason.

Ionidium ipecacuanha of Eastern Equatorial America. A Violoid plant called in Guayana "itoubu" (Aubl.), and from early times its roots taken as emetic: — observed by Aublet ii. pl. 318 in Guayana; by Vandelli, pl. 1, and Martius med. pl. 8, in the Brazilian forest, called "poaya branca" or "poaya da praja," and its roots collected as a substitute for true ipecacuanha (Lindl.).

Simaruba amara of Guayana. A large tree called in Carib "chipion" (Desc.), and known from early times: — "in 1713," the bark of its root was first imported into Europe (Desc.), where it continues to be employed medicinally: the living tree was observed by Aublet pl. 331 and 332 in sandy soil in Guayana: and a dioecious tree observed by Macfadyen on the mountains of Jamaica, is regarded by him as not distinct (Lindl.).

Mucuna pruriens of the West Indies. The *cowitch* is a twining bean called in Carib "mantia kaira" (Desc.), and known from early times: — observed by P. Browne pl. 31, Jacquin am. pl. 122, Macfadyen, and Descourtilz, in the West Indies, common in woods and along river courses, as well as in waste places. The hairs on its pods, constituting the exported drug, are according to Lindley "a mechanical anthelmintic."

Bromelia ananas of the West Indies and neighbouring portion of Tropical America. The *pine-apple*, called in Brazilian "nana" (Marcgr.), in the West Indies "yayama" (Ovied.), in Carib "yayoma" or "boniama" (Desc.), in Mexican "matzatli" (Hernand.), and its fruit eaten from early times: — "a sort of fruit which looked like our green pine-apples" (Pinus pinea cones) "but much bigger, and within full of solid meat like a melon, and much sweeter both in taste and smell, which grow on long stalks like lilies or aloes, wild about the fields, and are better than those brought up by art, as afterwards appeared," were seen by Columbus on Guadelupe in 1493, and on a subsequent voyage at Veragua (F. Columb. 47 to 96): B. ananas was observed in Tropical America by Oviedo hist. gen. pl. 13, three varieties cultivated by the natives; also by Thevet, J. Acosta, and Hughes; by Marcgraf 33, wild and bearing seeds in Brazil; by Martius, wild in the catingas of Bahia (A. Dec.); by Humboldt and Bonpland, wild with some seeds on the Upper Oronoco; by Hernandez 311, wild in the warm hilly region of Mexico. By European colonists, was carried Westward across the Pacific to the Philippines, where it continues abundantly cultivated and is called in Tagalo "piña" (Blanco); to China, cultivated according to Kircher 253 and supposed to have come from Peru; to Java before 1599 (C. Acosta, and Clus.), and observed by Rumphius v. 228 seemingly wild on Celebes; to Burmah, called there "na-nat" (Mason); to Bengal "in 1594 in the reign of Akbar" (hind. hist., and Royle ill. 376), is called in Sanscrit "anarush" (Pidd.), in Bengalee "anaras," in Hindustanee "anannas" (D'rozar.), was observed by Turner seemingly wild in jungles near Teshoo-Loomboo, occurs also seemingly wild on Ceylon (Royle), was observed by Rheede xi. 6 in Malabar and called "kapa-tsjakka," by Graham "in gardens" at Bombay, but I was told does not succeed; to Eastern Equatorial Africa, observed by myself naturalized on Zanzibar. Transported to Europe, fruit was shown to the emperor Charles V. (J. Acost.); the plant is described also by Monardes

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(Desc.), and known from early times: — in the West Indies (Pers.); observed there by Descourtilz. Transported to Europe, is described by Commelyn hort. i. pl. 108, and is termed "e. spinosa" by Miller (Steud.). If the species observed by myself planted on Zanzibar, a magnificent flowering tree, probably the finest of its tribe.

Cæsalpinia coriaria of the Northern shore of South America. An unarmed Leguminous tree twenty-five or thirty feet high, its ripe pods called "libidibi" and used in preparing leather: — observed by Jacquin am. pl. 175 on the seashore from Carthagena to Curaçao (Pers.); and known to grow as far as Hayti (Drur.). By "Wallich twenty-five years ago" introduced into Hindustan, where according to Drury it has now become "extensively distributed," its pods being "considered superior to any other material used in the" country for tanning.

Dicypellium caryophyllatum of Eastern Equatorial America. A. Lauraceous tree called by French colonists "bois de rose," in Carib "licari kanali" (Lindl.), and its hot peppery clove-like bark known from early times, — having "powerful tonic properties:" observed by Aublet, pl. 121 in the Guayana forest; by Martius, extending into the Brazilian forest (Nees handb. ii. 435).

Euphorbia hirta of Tropical America. A weed called in Carib "araouebara, caatia" or "alaourou coulri" (Desc.), and known from early times: — observed by Descourtilz troublesome in the West Indies. Probably by European colonists carried across the Pacific to the Malayan archipelago, termed "esula esculenta" by Rumphius vi. pl. 23; to Burmah, but enumerated as indigenous by Mason; to Hindustan, observed by Ainslie ii. 99, and Roxburgh, by Graham as far as Bombay, "a very common weed, springing up on garden walks etc.," by Burmann pl. 104 on Ceylon.

iii. 4, and continues in greenhouses, not succeeding in the open air even as far South as Egypt (Hasselq., and Clot-Bey). By European colonists also, was carried to Guinea (Clus., and R. Brown); and subsequent to the visit of Forster, to the islands of the Pacific, observed by myself on Taheiti naturalized, on the Samoan, and Feejeean Islands, and at Sydney in Australia.

"1033 A. D." (Nicol.), in Spain, Sancho III. the Great succeeded as king of Castile by Ferdinand. Who marrying Sanctia, daughter of the king of Asturias and Leon, added these provinces to his dominions.

"June 29th, about mid-day" (Blair), great *eclipse of the sun.* Observed in France.

"1034 A. D." (Alst.), Romanus II. succeeded by Michael IV. Paphlago, forty-second Byzantine emperor.

"The same year" (Alst.), at Rome, Joannes XX. succeeded by Benedictus IX., eighty-third archbishop.

One hundred and sixtieth generation. May 1st, 1034, onward mostly beyond youth: the Jewish writer Benjamin ben Serach: the Arab writers, Ebn Wafid, Alhazen: the Greek writers, Eugesippus, Georgius Cedrenus d. 1057, Symeon Sethus, Petrus Antiochenus d. after 1053, Michael Cerularius d. 1058, Nicon d. 1060: Merboldus; Campanus of Novarro; Glaber Radulphus; Franco; Humbertus Cardinalis, Adelmannus, Haymo of Canterbury.

"In this year" (palm-leaf ann. Jag., and W. W. Hunter), Kurma Kesari succeeded by Matsya Kesari, now king of Orissa. — He built the great bridge over the Atharanala at Puri (existing to this day), and reigned "sixteen years." (According to Stirling, the bridge was built by Kabir Narsinh who reigned 1282–1307.)

"The same year" (Nicol.), Malcolm II. succeeded by Duncan, as king of Scotland.

"1035 A. D." (Blair, and Nicol.), in Spain, the kingdom of Arragon established by Ramirez.

"1036 A. D." (Nicol.), Canute II. succeeded by his son Harold, seventeenth king of England.

"The same year" (art de verif.), Daher succeeded by Mostanser, of the Fatimite dynasty, fifth sultan of Egypt. Gold coins issued by Mostanser, are figured in Marcel p. 118.

Amomum grana-paradisi of Equatorial Africa. "Fulful elsudan" a kind of pepper from Aethiopia, is mentioned by Ebn Wafid, — and "shushamir" is further given by Ebn Baitar as the Persian name of *grains of paradise* (Sonth.): called according to Delile in the drug-shops of Egypt "tyn el-fyl." Farther North, "grana paradisi" are mentioned by Franciscus Pedemontium f. 133; but at the present day are imported direct from Western Equatorial Africa under the name of *malagueta pepper* or *Guinea grains.* According to Lindley, the plant grows near Sierra Leone, and the seeds are hot and acrid, "powerfully aromatic, stimulant, and cordial." I found the seeds exported also from Africa Eastward, across the Indian Ocean.

"1037 A. D." (ann. Jap., and art de verif.), Itsi-dsio II. succeeded by his younger brother Go-siu-saku or Go-ziu-ziak, sixty-ninth dairo of Japan.*

"1039, March 17th" (Nicol.), Harold succeeded as king of England by the king of Denmark, Hardicnut or Hardicanute.

"The same year" (Alst., and Nicol.), Conradus II. succeeded by his son Henricus III. Niger, sixth emperor of Germany and Italy.

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* *Hibiscus rosa-Sinensis* of the Philippines. The *shoe flower* or *rose Hibiscus*, a small ornamental tree, is called in Tamil "sapatoo cheddie," in Telinga "dasanie," in Bengalee "juva" (Drur.), in Burmah "khoung-yan" (Mason), in Tagalo and Pampango and Bisaya "cayanga" or "tarocanga" or "tacorangan" or "arogangan" or "tapolanga" or "antolanga," and the double-petaled var. "gomamila" (Blanco): the "fou-sang" from which Japan is said to have been named on account of its beauty, — described also by Li-chi-tchin, is referred here by Klaproth (introd. ann. Jap.): H. rosa-Sinensis is known to grow also in China, where garlands and festoons of its flowers are employed on festive occasions, and during funeral rites; also in Anam, where its leaves are used medicinally (Drur.); was observed by Blanco on the Philippines, in one locality producing simple flowers with perfect fruit, elsewhere very generally planted for ornament around native dwellings, its flowers staining leather black; by myself, on the Feejeean, Samoan, and Taheitian Islands, planted by the natives for ornament, remaining in abandoned clearings, and even met with in wild situations. Westward, wreaths of "djava" flowers are mentioned by the Hindu poet Harivansa 122: H. rosa-Sinensis was seen on Java by Bontius in 1630 and termed "rosa batavico-indica" (Piso); by Mason v. 416 to 756 "exotic" in Burmah, several varieties cultivated, the flowers used for blacking shoes; by Rheede ii. pl. 17 and vi. pl. 43, in Malabar; by Ainslie, Roxburgh, Wight, Graham, and Drury, in gardens throughout Hindustan; by myself, a planted tree in front of the lesser cave-temples at Karli, and flowers among temple-offerings to the end of my journey. By European colonists, was carried to the Mauritius Islands, where it has become frequent in gardens (Boj.); and to Northeast America, where it continues in greenhouses.

"In this year (= 432 A. H." of Ferisht., Elph.), sultan Masaud defeated at Zendecan near Merv by Toghral Beg and the Seljuks, the first horde of Tartars that acquired possessions South of the Oxus. Masaud retreated to Ghazni, and across the Indus, — where in the following year he was dethroned and put to death. His son Modud, having married a granddaughter of Togh.-Beg, was enabled to recover Ghazni and maintain his authority.

"1040 A. D." (Nicol.), Duncan succeeded by Macbeth, as king of Scotland.

"In the Eleventh century" (Pouchet), the *whalebone* procured along the Atlantic coast of Europe appears to have been claimed and regarded as the special property of the feudal chiefs. — This is expressed in charters of the time of Edward II. The "nordhval" of the Norwegians and Icelanders of the Twelfth century is clearly the *right whale* Balæna mysticetus; the mystery as to its food, being of course due to filtration through the bands of whalebone in the mouth.

"1041, June 8th" (Nicol.), accession of Edward III. the Confessor, son of Ethelred II., and now nineteenth king of England.

"The same year" (Alst.), Michael IV. succeeded by Michael V. Calaphata, forty-third Byzantine emperor.

"The same year" (Nicol.), several synods in France. And in one, ordained that "from Wednesday evening until Monday morning, no one should take anything by force, nor revenge an injury.

"1041–8 A. D." (Humb. cosm. ii), printing with *moveable types* practised in China.

"1042 A. D." (Alst.), Michael V. succeeded by Constantinus X. Monomachus, forty-fourth Byzantine emperor.

"1043 A. D. (= 435 A. H." of Ferisht., Elph.), the Panjab overrun by the Hindu king of Delhi, who captured Nagarcot and laid siege to Lahore. This last Muslim stronghold was saved by the bravery of the garrison, and a false report of the approach of sultan Modud.

Carissa spinarum of Tropical Eastern Asia. An allied species called in Japan "sonoki," or by some persons "fira" or "virasi" (Thunb.); and (notwithstanding C. carandas was always brought to W. Jones) probably the "carcandhu" of the Amara-cosha, — and Jayadeva, lips compared with the red lustre of its fruit by Kalidasa sacont.: C. spinarum is described by Rumphius vii. pl. 19; was observed by Graham "in gardens" around Bombay, "very beautiful when covered with bright red fruit," which "makes good tarts." Farther East, was observed by Kaempfer, and Thunberg, in Japan, cultivated in vases, and in rare instances springing up spontaneously.

"1044 A. D." (Alst., and Nicol.), at Rome, Benedictus IX., the last archbishop who in his Bulls used the years of the German emperors, succeeded by Gregorius VI.

"1046 A. D." (ann. Jap., and art de verif.), Go-siu-saki succeeded by his eldest son Go-reisei or Rei-sei II., seventieth dairo of Japan.

"The same year" (Marcel 106), the mosque of Amru at Fostat near Cairo, repaired by order of sultan Mostanser.

"About Christmas" (Alst. p. 352, and Nicol.), a synod at Sutri near Rome. Gregorius VI. was deposed, Clemens II. elected his successor, and the law renewed, making the consent of the emperor indispensable to elections of the archbishops of Rome.

"1048 A. D." (Alst., and Nicol.), at Rome, Clemens II. succeeded by Damasus II., eighty-sixth archbishop.

"In the middle of the Eleventh century" (E. A. Soph.), first appearance of the English at Constantinople, as battle-axe men forming a part of the emperor's body-guard and called "Varaggōi:" they are termed Kelts by Cedrenus ii. 613; "barbarians from Thule," by Anna Comnena i. 120 (compare Burray in the Shetland Islands); and according to Curopalates 57, spoke "igklinisti," *English*.

"*1049 A. D.*" (*Alst., and Nicol.*), at Rome, Damasus II. succeeded by Leo IX., eighty-seventh archbishop.

"In this year (= 441 A. H." of Ferisht., Elph.), Modud succeeded by his brother Abul Hasan, now sultan of Ghazni.

"1050, May 2d" (Alst., and Nicol.), a synod convened at Rome. The opinions of Berenger on transubstantiation were opposed by Lanfranc, archbishop of Canterbury (regarded as the earliest *scholastic theologian*).

"The same year" (Alst.), end of the chronicle of Hermannus Contractus.

"In this year" (= 1192 — "142 years" of Abul-Fazil, Wilford as. res. ix. 170), the city of Delhi on the Ganges founded by Raya-sena, head of the Tomara dynasty: or according to Elphinstone iv. conquered by Visal, Hindu king of Ajmir, and ancestor of Prithwi.

In this year (= "400 + 650 yrs." of Bigandet, Max Müll. p. xvi), the transcribed Budhist scriptures and other writings of Budhaghosha carried from Ceylon to Pagan in Burmah.

"1051 A. D." (Humb. atl. pict.), pestilence and destruction among the Toltecs: who now push their migrations farther South.

Carica papaya of Panama. Called by Portuguese colonists, "papay" or "mamodira" (Marcgr.), in Carib "abapaye" or "aleulé" or "alélé" (Desc.), and from early times cultivated for its fruit* — (Humb. iv. 9): the "higos del mastuerzo" was known to Oviedo nat. hyst. 70 as growing on the Panama Isthmus; C. papaya was observed by Ximenes in Mexico (Marcgr. 104); by Beechey 425, at Realejo in Mexico; by Squier (as he informed me) to all appearance indigenous in Nicaragua; by Hernandez 99, seemingly indigenous on Hayti; by Sloane on Jamaica, according to Browne indigenous there; by Marcgraf "in 1648" in Brazil, the female plant chiefly in gardens and the male plant in the woods, but so far as observed by myself in Southern Brazil a decidedly introduced plant. Possibly by Polynesians, was carried to the islands of the Pacific, where it seems to have been distributed after the visit of Foster; was observed by myself very generally cultivated by the natives on Metia, Taheiti, the Hawaiian, Samoan, Tongan, and Feejeean Islands, and according to Hale is called in Feejeean, "walete." Clearly by European colonists, was carried across the Pacific to the Philippines, where it is called in Tagalo "papaya" (Blanco); to the neighbouring islands, introduced by the Portuguese (Rumph. i. 147); to Anam and Tropical China (Boymius, and Lour.); to Burmah, called there "them-bau-thee" (Mason); to Hindustan, called in Hindustanee and Bengalee "pepeya," in Tamil "pappali-marum," in Malabar "pappoia-umbbalay-marum" (Drur.), observed in Malabar by Rheede i. pl. 15, by Graham, as far as Bombay, and now cultivated throughout, its milky juice a powerful vermifuge, possessing besides the peculiar property of rendering meat tender (Ainsl., Roxb., Drur., and Lindl.); to Yemen, called there "amba hindi" Indian mango (Forsk.); to Eastern Equatorial Africa, observed by myself on Zanzibar. From "Inde Orientale" brought to Europe by de Valle "in 1626," is described by Columna pl. (A. Dec.); and recently, according to Clot-Bey, has been successfully cultivated in Egypt; probably from America, was carried to Western Equatorial Africa (R. Brown cong.), and the Mauritius Islands (Boj.).

"In this year (= 443 A. H." of Ferisht., Elph.), Abul Hasan succeeded by Abul Rashid, now sultan of Ghazni. He recovered the Panjab, which had been seized by a Muslim chief.

"1052 A. D. (= 444 A. H." of Ferisht., Elph.), Abul Rashid succeeded by Farokhzad, now sultan of Ghazni. He gained advantages over the Seljuk Tartars until checked by Alp Arslan.

In this year (= "1027 + 25 yrs." of Kalhan. hist. Cash., H. H. Wils.), Samgrama succeeded by Harir, and after "twenty-two days" by Ananta as king of Cashmere.

"1053, June 18th" (Blair), archbishop Leo IX. defeated in the kingdom of Naples by the Normans, and taken prisoner.

"In or about this year" (Way pref. pr. pm.), the vocabulary called Elementarium compiled by Papias. — It appears to be the ground-work of the dictionary of Uguitio or Hugo.

"1055 A. D." (Alst., and Nicol.), at Rome, Leo IX. succeeded by Victor II., eighty-eighth archbishop.

"The same year" (Alst.), Constantinus X. succeeded by his widow Theodora Porphyrogenita, as ruler of the Byzantine Empire.

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* *Mammea Americana* of the West Indies and neighbouring portion of Tropical America. A Calophylloid tree called by Spanish and English colonists *mammee* or *mamee*, by French "abricotier d'Amerique" (A. Dec.), and its fruit eaten from early times: the "mamei" — was observed by Columbus in 1502 on first visiting Veragua, growing upon very high trees, tasting "like a peach" and "as big as a large lemon, and every one" having "two, three, and some nine stones," known also in the West Indies (F. Columb. 96): the "mamey" is described and figured by Oviedo nat. hyst. 62 and gen. hist. viii. 20: M. Americana was observed by Sloane ii. pl. 217, and Macfadyen, wild in the West Indies; by Jacquin am. pl. 182, wild on the neighbouring portion of South America; is also cultivated, but does not appear to have been carried to other countries (A. Dec.). According to Lunan, and Lindley, its "bark abounds in a strong resinous gum, used by negroes for extracting chigoes from their feet."

Cereus pitayaya of the West Indies and neighbouring portion of Tropical America. An upright *cactus* bearing edible fruit, known from early times: the "pitahaya" — is described by Oviedo gen. hist. viii. pl. 23, and its fruit pronounced wholesome; was observed by Guzman on Puerto Rico (soc. Hackl.); and is known to grow in maritime thickets at the Northern extreme of South America, near Carthagena (Jacq., and Pers.).

Crescentia cujete of the West Indies and neighbouring portion of Tropical America. The *calabash tree* called in Mexico "tecomate" (Blanco), and known from early times: — the "higuero" is described by Oviedo nat. hyst. 73 as a tree bearing "calabaças redondas" used for drinking-vessels, the natives on the greater part of Tierra firme having no other kind: C. cujete was observed by Plumier 23, Swartz obs. 234, and Jacquin am. pl. 111, on the West Indies and neighbouring mainland.

Argania sideroxylon of Morocco. The "arjan" of Ebn Redwhan, — or "arjan of West Africa" of Ebn Baitar, is referred here by Sontheimer and others: A. sideroxylon was observed by Schousboe p. 89, a small tree frequent in woods in Southern Barbary between the rivers Tansif and Suz, and an oil-like olive-oil obtained from the nuts (Pers.). From transported specimens, described by Commelyn hort. i. pl. 83.

"1056 A. D." (Alst.), Theodora succeeded by Michael VI. Strato, forty-sixth Byzantine emperor.

"The same year" (Alst.), Henricus III. succeeded by his son Henricus IV., seventh emperor of Germany and Italy.

"The same year" (Talvi i.), date of the manuscript Evangelium of Ostromir, posadnic or mayor of Novogorod; the earliest example known of *Slavonic writing*. Except that writings of about the same age occur in the Glagolitic character. — The next oldest Slavonic manuscripts are: one written "seventeen," and another "twenty" years later.

"The same year" (Pouchet), Greenland and Vinland (and of course North America) included in a Bull from pope Victor II.

"1057 A. D." (Alst., and Nicol.), Victor II. succeeded by Stephanus X., eighty-ninth archbishop of Rome.

"The same year" (Alst.), Michael VI. succeeded by Isaacus Comnena, forty-seventh Byzantine emperor.

"The same year" (Nicol.), Macbeth succeeded by Malcolm III., as king of Scotland.

"1058 A. D. (= 450 A. H." of Ferisht., Elph.), Farokzad succeeded by his brother Ibrahim, a religious devotee, and now sultan of Ghazni. He yielded to the Seljuks all their demands, — and had a long and peaceful reign.

"Dec. 28th" (Alst., and Nicol.), a synod at Sienna; and through the influence of the emperor Henricus IV., Nicolaus II. elected ninetieth archbishop.

"1060 A. D." (Alst. p. 372), Petrus Damiani bishop of Ostia, writing against the abuses and corrupt condition of the church.

"1061 A. D." (Alst., and Nicol.), at Rome, Nicolaus II. succeeded by Anselm da Baggio of Milan; now Alexander II., ninety-first archbishop.

"The same year" (Alst.), Isaacus Comnena succeeded by Constantinus XI. Ducas, forty-eighth Byzantine emperor.

"In or about 1062 A. D." (= 1091 — "supposed 30 years reign," G. de la Vega, and addit. art de verif.), Manco Capac succeeded by his son Sinchi-Roca, now second Inca of Peru. Who continued his father's laws and peaceful policy; * — and by these influences, added twenty leagues to his dominions on the South.

"1063 A. D." (Lubke and Lutrow), after a plan furnished by Rainaldus, the building of the church at Pisa commenced.

"In this year" (Grey transl. Angiolello 97), foundation of the city of Tiflis on the river Kur. — It is the present capital of Russian Trans-Caucasia.

"1064 A. D. = 'tchi-ping,' 1st year of Yng-tsoung, of the Soung" or twenty-first dynasty (Chinese chron. table).

"1065 A. D." (Marcel), while engaged in expelling the Muslims from Southern Italy, count Roger

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* *Tropæolum tuberosum* of Peru. From early times cultivated on the Peruvian Andes for its tuberous roots (Humb. iv. 9): observed by Ruiz and Pavon pl. 314; by myself, planted in small patches in company with the preceding.

Basella tuberosa of Peru. A fourth tuber cultivated from early times on the Peruvian Andes: — observed by Humboldt and Bonpland; by myself, with the others planted in small patches just below the Paramera or cold pastoral region.

Monina polystachia of the Peruvian Andes. A downy Polygaloid shrub growing in the cool region and called in Peruvian "yallhoy masca" (Lindl.), and from early times the bark of its root used as a substitute for soap, — and for cleansing and polishing wrought silver; preferred also to quassia as a remedy in dysentery and irritating diarrhœa (Ruiz and Pav. 171).

Monina salicifolia of the Peruvian Andes. An allied species growing in the middle mountain-region of the Western slope, and possessing the same properties (Ruiz and Pav. 172, and Lindl.).

Calceolaria trifida of Peru. Suffruticose, called in Peruvian "tumpu" (Lindl.), and known from early times, — regarded as antiseptic, tonic, and febrifugal; observed by Ruiz and Pavon i. pl. 26 in the middle mountain-region, in shaded situations near water (Pers.).

Calceolaria cuneiformis of the Western slope of the Peruvian Andes. Its chewed leaves showing a yellow dye: — observed by Ruiz and Pavon pl. 27 near Canta and Tarma in the middle mountain-region (Pers.).

of Normandy hearing of civil war among the Muslim population of Sicily, crossed over and obtained the government. — Coins issued by the Norman kings of Sicily, and bearing bi-lingual inscriptions, Latin and Arabic, are figured in Marcel p. 120.

Serapion at this time writing. — He died "after 1068."

Geranium columbinum of Europe and the adjoining portion of Asia. Called in Britain *dove's foot* (Prior), and probably the "pede columbino" supposed by Serapion to be identical with the "amomum" — (G. robertianum; see J. Jacobi de Manliis): G. columbinum is termed "g. c. dissectis foliis pediculis florum longissimis" by Tournefort inst. 268; and is known to grow throughout middle Europe as far as Denmark (Cav. iv. pl. 82, Vaill. paris. pl. 15, fl. Dan. pl. 1222, and Pers.). Eastward, was observed by Sibthorp, and Chaubard, in the Peloponnesus. By European colonists, was carried to Chili, observed by Molina employed medicinally and called "corecore," by myself, seemingly wild throughout from the coast to the Andes, subscandent with small purple flowers.

Centaurea (*Amberboa*) *moschata* of middle Asia. Called in the environs of Bombay "shah pusund" sweet sultan (Graham), in Egypt "ambar" (Forsk.) or "a'nbar" (Del.); and the "moschata" of Serapion — (Trag. i. 24) may be compared: C. moschata was observed by Forskal p. liii, and Delile, in the gardens of Egypt, fragrant and coronary; by Graham, "in gardens" at Bombay, flowering "chiefly during the cold season;" by Roxburgh, in Eastern Hindustan. Transported to Europe, is described by Morison vii. pl. 25.

Rumex alpinus of the mountains of middle and Southern Europe as far as the Crimea and Caucasus. Called in Britain *monks rhubarb* (Lindl.), in Germany "münch rhabarbarum," and described by Serapion — according to Fuchsius 460: R. alpinus was mistaken by the commentators on Mesue for a rhubarb, and hence according to Parkinson the European names, but a different reason is assigned by Tabernæmontanus 824 (Prior); is termed "lapathum foliis amplis" by Clusius hist. ii. 69, "l. folio rotundo alpinum" by Tournefort inst. 504; is known to grow wild on the Pyrenees and the mountains of Switzerland and North Germany (Koch, and A. Dec.); was observed by Sibthorp on mountains from the Peloponnesus to the Bithynian Olympus; is known to grow also in the Crimea and on Caucasus (Lindl.); was formerly cultivated in Britain and its root used medicinally, and has recently been found springing up spontaneously in seven different localities (Wats); in Switzerland also, occasionally occurs around dwellings (A. Dec.). The root according to Lindley is "purgative like rhubarb, only in a much less degree."

Cakile maritima of the seashore of the Mediterranean and North Atlantic. An annual called in Britain *sea-rocket* (Prior), in Egypt "rechad el bahr" or "figl el-gemel" (Del.), and described by Serapion — (Gaertner, and Steud.): the "genus erucæ," of Cæsalpinus viii. 63 growing in maritime sands, having thick fleshy leaves, and short angular pods used against renal calculus, clearly corresponds: C. maritima was observed by Forskal, and Delile, on the Mediterranean shore of Egypt; by Sibthorp, and Chaubard, on the seashore of Greece and the Greek islands; by Scopoli, along the Adriatic (Steud.); is termed "c. maritima" by Tournefort cor. 49; and is known to grow along the Atlantic as far as Denmark and Lapland (fl. Dan. pl. 1168, and Wats.). Westward, was observed by Hooker on Iceland; by Baldwin, on Bermuda; by myself, on our Atlantic seashore from 45° to 39°; by Pursh, as far as Virginia; by Eliot, and Chapman, as far as South Carolina; by Humboldt, on Cuba; and by Nuttall, on the shores of the Lakes of the St. Lawrence.

"The same year" (Nicol.), in a synod in London, full immunity granted to the Abbey of Westminster by Edward III.

Delphinium consolida of middle Asia. Called in Britain *larkspur*, in Germany "feld-ritter-sporn," in Italy "consolida regale" or "speronelle salvadeghe" or "fior capuccio selvatico" (Lenz), and figured in manuscript V of the Anglo-Saxon transl. Dioscorides 160 — (according to Harley and Cockayne): D. consolida is described by Gesner hort. f. 265 (Spreng.); is termed "d. segetum flore cæruleo" by Tournefort inst. 426; and is known to occur as a weed in cultivated ground in Italy and throughout middle Europe as far as Denmark (Ray, fl. Dan. pl. 683, and Lam. fl. fr.). Eastward, was observed by Forskal at the Dardanelles; but occurring in wilder situations towards Caucasus (Griseb., and Bieb.), is regarded by A. Decandolle as probably derived originally from that quarter. By European colonists, was carried to Northeast America, where it continues a garden flower, and in Virginia and Carolina is becoming naturalized (A. Gray, and Chapm.); to the Mauritius Islands, observed in gardens by Bojer. "A tincture of the seed" has "been recommended in asthma," and "the leaves and stalks are said to enter into the composition of some cosmetics" found according to Burnett to be destructive to the skin (Lindl.).

"1066, Jan. 5th" (Blair, and Nicol.), death of Edward III., after naming Harold II. son of the earl of Kent, as his successor.

"Oct. 14th" (Blair, and Nicol.), Harold II. defeated and slain in battle at Hastings by invading Normans: their leader William becoming twenty-first king of England and the head of a new dynasty. That the country was conquered, — appears from the freedom granted by a synod some

ten years later to "such nuns as had assumed the veil as a security against the insults of the Normans."

"1067 A. D." (Alst.), Constantinus XI. succeeded by Michael VII. Ducas, forty-ninth Byzantine emperor.

One hundred and sixty-first generation. Sept. 1st, 1067, onward mostly beyond youth: the Chinese writers, the historians Sse-ma-kouang, and Lieou-yû: the Jewish writers, Jehuda Ibn Balam, R. Ishak Cordubensis, Jacob ben Reuben, and Isaac Ibn Gajjat: the Arab writers, Ebn Ssaid, Ebn Jezla d. 1095: the Greek writers, Joannes Scylitzes d. after 1031, and Joannes Micrologus: Adamus Bremensis, Ado Trevirensis; William of Spires; Roscelinus the reviver of Nominalism; Anselmus of Lugo, Anselmus of Laon, Ingulphus; Nestor of Russia; Ivo Carnotiensis: the scholastic theologians, Guitmundus, and Anselm afterwards archbishop of Canterbury: the translators of Arabic, Hermannus comes Veringensis, Gerardus Cremonensis, and Daniel Morlæus.

"1068 A. D. = 'hi-ning,' 1st year of Chin-tsoung, of the Soung" or Twenty-first dynasty (Chinese chron. table). By his minister Wang-'an-chi, *mints*, coining and regulating the amount of money in the provinces, and other innovations in government, introduced.

A new philosophy, the "Philosophy of Nature," also founded by Wang-'an-chi.

"1069 A. D." (ann. Jap., and art de verif.), Go-reisei succeeded by his younger brother Go-sandsio, now seventy-first dairo of Japan.

By Karika, "a chief of an island to the westward called Manuka" (Manu'a in the Samoan Group), the Rarotongan or Hervey Islands found uninhabited and colonized in the "twenty-ninth generation" before — his lineal descendant Makea (the principal chief at the time of the visit of J. Williams miss. ent. 169). "Again putting to sea," Karika encountered Tangiia a fugitive Taheitian chief, and allowed him to settle on the East side of Rarotonga.* Communication with the Taheitian Group, from this time continued "very frequent" (Hale ethnogr. expl. exp. 136).

"In or about this year" (Nicol.), by a synod at Spalatro, the Dalmatians prohibited from using the Slavonic language in religious services.

"1070 A. D." (Blair), by Arzachel of Toledo, the *sun's declination* observed to be "29° 34'." — Four hundred and two "observations on the *apogee of the sun*" were left by Arzachel.

"The same year" (M. Russell pp. 150 and 250), the altars, fifty-five obelisks, with other ancient structures at Axum, mostly broken and destroyed by Goudit or Judith, coming from Amhara. She was of Hebrew lineage, and on the death of Dalnaad, usurped the government, and reigned "forty" years.

"1072 A. D." (Nicol.) in England by a synod, the primacy confirmed to Lanfranc archbishop of Canterbury.

"1073 A. D." (Alst., and Nicol.), at Rome, Alexander II. succeeded by Hildebrand of Tuscany, now Gregorius VII., ninety-second archbishop.

"October" (Alst., and Nicol.), a synod at Erford. *Tythes* were exacted from the Thuringians. Also, a proposal was received from Hildebrand, That priests should either abjure matrimony, or give up their office.

"The same year" (ann. Jap., and art de verif.), Go-san-dsio succeeded by his eldest son Surakawa or Ziro-kawa, now seventy-second dairo of Japan.

"1074, or thereabouts" (Nicol.), in a synod at Paris, the abbot of Pontoise abused and beaten, for defending the decree of Hildebrand, forbidding the hearing of mass "said by incontinent priests."

"1075 A. D." (Nicol.), a synod in London, of all England. "The ancient canons touching the rank of bishops" were renewed, and "superstitions, divinations, etc.," forbidden.

"June 9th" (Blair), at Neustadt in Thuringia, the Saxons defeated by the emperor Henricus IV.

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* *Pachyrhizus angulatus* of the Malayan archipelago. — A common-looking bean under cultivation on Metia was said to produce a yam-like edible root, and I heard a similar account on Tongatabu. P. angulatus was observed by Rumphius v. pl. 132 in the Malayan archipelago, producing a large edible tuberous root; and the "hicamas" or "sincamas" of the Philippines is described by Blanco as well known there and its large root eaten crude by both natives and Europeans; P. angulatus was seen by Parish in Burmah, and Mason v. 466 to 889 speaks of "a variety of the Goa bean which produces esculent roots that are eaten like potatoes, and are a very tolerable vegetable." Farther West, P. angulatus was observed by Roxburgh, and Wight, in Hindustan; by Graham, as far as Bombay, but no native names are given. By European colonists, was carried to the Mauritius Islands, observed by Bojer under cultivation and growing spontaneously. Transported to Europe, is described by Plukenet alm. pl. 52. "Dolichos tuberosus" received by Lamarck from Martinique (Pers.), but according to Descourtilz "introduced" there, no Carib name being given, may also be compared.

"1076, Jan. 23d" (Alst., and Nicol.), a synod at Worms; "twenty-six" bishops being present, together with Henricus IV. The deposition of Hildebrand was declared; a sentence approved soon afterwards in the synod at Pavia by many French and Italian bishops. In return, Hildebrand in a synod at Rome adopted the novel measure of excommunicating the emperor, absolving his subjects from their allegiance.

Finding himself abandoned by both nobles and people and the succession being elective, Henricus IV. in the end yielded, and made a journey to Rome. The beginning of the *Papal Hierarchy* over the monarchs of Western Europe.

"October" (Nicol.), in a synod at Salona, Demetrius crowned king of Dalmatia.

"1077, March 13th" (Nicol.), a synod at Forcheim in Franconia. Henricus IV. was declared deposed, and Rodolph of Swabia elected emperor of Germany.

"The same year" (Alst.), end of the chronicle of Lambertus Schafnaburgensis. By whom also, many abuses in the church are enumerated.

"1078 A. D." (Nicol.), a synod in London. Ulstan or Wulstan bishop of Worcester was deposed, for not understanding the French language; and Bath, Lincoln, Exeter, and Chichester were made episcopal cities.

"The same year" (Alst.), Michael VII. succeeded by Nicephorus III. Botoniates, fiftieth Byzantine emperor.

"November" (Nicol.), in a synod at Rome, the Byzantine emperor excommunicated.

About this time (= "1392 — more than 300 years" of Dallet p. xiii), Ouang-kien, king of Kao-li, aided by China conquering the States of Pet-si and Sin-la, thus uniting all Corea under his rule. He is called the founder of the Kaoli or Korie dynasty.

"1080 A. D." (Nicol.), a synod at Rome. The investiture of laymen was forbidden; Rodolp of Swabia was declared emperor of Germany; and the session closed "March 7th."

"The same year" (Nicol.), by a synod at Burgos in Old Castile, the Roman ritual substituted in Spain for that of the Goths.

"The same year" (Alst., and others), the Carthusian Order of monks, founded by Bruno.

"The same year" (Nicol.), beginning of the compilation of "Dooms-day book," from a survey of all the estates in England. — The compilation was completed in "six" years.

"The same year" (Klapr. mem. i. 410), end of *Armenian history*. — The nation no longer having a government and territorial home, but consisting of dispersed individuals engaged in commerce.

"1081 A. D." (Alst.), Nicephorus III. succeeded by Alexius Comnenus, son of Isaacus, and now fifty-first Byzantine emperor. Writings of the emperor Alexius Comnenus are extant.

"The same year" (Alst.), Rome captured by Henricus IV. And in a synod assembled there, Guibertus or Clemens elected to the place of the escaped Hildebrand.

"1082 A. D." (Puranas, Bentl. as. res. viii. 243, and H. H. Wils. dram. Hind.), Munja succeeded by Raja Boja also called Vicrama as Hindu king. The last two names (according to Wilford as. res. ix.) belonging to one king.

The astronomer Varaha Mihiri, author of the Surya Siddhanta, enumerated among the "nine gems" in the council of king Vicrama; together with Cshapanaca, Sancu, Betalabhatta, Ghatacarpura, and Bararuchi (Navaratna, and Bentl. p. 242).

"1083 A. D." (Alst.), end of the chronicle of Marianus Scotus.

Amera Sinha, ninth gem in the council of king Vicrama (Bentl. as. res. viii. p. 242, and Colebr. p. 499) mentions in his dictionary relating to animals the "gavaya" (gayal ox), the spotted axis (Cervus axis), the porcine deer (Cervus . . . .), the black antilope (Antilopa . . . .), and the painted or white-footed antilope (Antilopa nilgau).*

* *Hemidesmus Indicus* of Tropical Hindustan. A shrubby twining Asclepiaceous plant called in Sanscrit "shariva" or "ununta" (Pidd.), in Bengalee and Hindustanee "ununtamul" (J. F. Wats.), in Telinga "soogundapala," in Tamil "nunnari" (Drur.); in which we recognize the "sariva" of the Amara-cosha, — and "sariva" and "ananta" of Susrutas chik. 15 to 38: H. Indicus was observed by Rheede x. pl. 34 in Malabar; by Graham, "very common" in the environs of Bombay; by Burmann zeyl. pl. 83, Ainslie, Roxburgh, and Wight, as far as Travancore, Ceylon, and Bengal, its root used among the natives particularly for the thrush in children, and by Tamil physicians in cases of strangury and gravel (Drur.). According to Lindley, "a great deal of it is consumed in London now, as a very fine kind of sarsaparilla."

Villarsia Indica of Tropical Hindustan and Ceylon. An aquatic plant "with large reniform

"1084 A. D. = 7th year of the 'youan-foung' of Chin-tsoung." (Chinese chron. table), beginning of the Sixty-third cycle.

The poet Damodara* among the many writers patronized by the Hindu king Bhoja or Vicrama — (Bhoj.-Prab., and H. Wils. ind. dram. ii. 373).

"1085, January" (Nicol.), in a synod at Rome, the excommunication of Henricus IV. by Hildebrand declared null. "May 25th," death of Hildebrand.

Instructions for the use of oil in painting "accipe semen lini," given by the monk Teofilo, called Ruggiero. — An *oil-painting* by Filippo Tesauro dated "1309," is extant; also another, somewhat later, by Stefanone (Bryan dict. paint.).

"1086 A. D. = 'youan-yeou,' 1st year of Tchi-tsoung, of the Soung" or Twenty-first dynasty (Chinese chron. table). The "Ten precepts," each in two Chinese characters, were composed and presented to him by his minister Liu-koung-tchu.

"In this year" (Humb. cosm. ii.), the Chinese statesman See-ma-kuang writing his poem "The Garden."

"May 24th" (Alst., and Nicol.), cardinal Desiderio, under the name of Victor III., elected second pope.

In this year (Pouchet), Constantinus Afer writing on Medicine. — He died "in 1087."

Gentiana acaulis of the alpine portion of Switzerland. Called there "bitterwurz," by the Italians "gariofonaria," and the "cantabrica" of Constantinus, — and Zwinggerus, is referred here by Gesner ii. fig. 86; G. acaulis is termed by him "g. minima floribus maximis," and was observed by him on the higher portion of the Alps; by myself, on the crest of the St. Gothard Pass; is termed "g. alpina magno flore" by J. Bauhin iii. 523, "g. grandiflora" by Persoon. (See Convolvulus cantabrica).

Pastinaca secacul of the East Mediterranean countries. The Oculcea of Constantinus 352 — is referred here by Sprengel: the "secacul" of the Arabs is mentioned by Christoph. de Honestis comm. Mesul: P. sacacul was observed by Rauwolf, and Russel, in Syria. From transported specimens is described by Miller, and Ventenat hort. c. pl. 78.

"1087 A. D." (ann. Jap., and art de verif.), Surakawa succeeded by his second son Foricawa, now seventy-third dairo of Japan.

"The same year" (Alst.), end of the chronicle of Leo Hostiensis.

"1088, March 12th" (Nicol.), Victor III. succeeded by Otho of France or Urbanus II., third pope. William II. Rufus ruling England; and Philip, France.

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orbicular leaves" (Graham); and the "syadanantotpala," with which the "syama" is identified in the Amara-cosha, — is according to the commentator a name arising from the flowers of the "syama" (Ichnocarpus) resembling those of the "utpala," an aquatic plant: the "utpala" is mentioned also by Susrutas, and is referred to this tribe by W. Jones as. res. iv. 263: V. Indica was observed by Rheede xi. pl. 28 in Malabar; by Graham, in "tanks throughout the Concans;" by Roxburgh, in Eastern Hindustan; is known to grow also on Ceylon (Pers.). By European colonists, was carried to Austral Africa, and to Jamaica (Sloane pl. 252, and Pers.).

Hydrolea Zeylanica of Tropical Hindustan and the Siamese countries. An annual herb called in Sanscrit "languli" (Pidd.), in Bengalee "kauchra ishalangulya" (Drur.) or "isholangolya" (W. Jones); in which we recognize the "langali" of the Amara-cosha, — and Susrutas sutr. 36 to chik. 8: H. Zeylanica was observed by Rheede x. pl. 28 in Malabar; by Graham, on "margins of tanks throughout the Concans;" by Burmann pl. 2, W. Jones as. res. iv. 270, Roxburgh, Wight, and Drury, in marshy places as far as Ceylon and Bengal, the leaves beaten into a pulp applied to ulcers; by Mason, in Burmah; and is known to grow as far as Java (Linn. mant. 54).

Piper chaba of the Malayan archipelago. Imported *island long pepper* is called in Sanscrit "chuvēya" (Pidd.) or "chuvee" or "chuvyung" or "chuvika" or "chuvikung" (Roxb.), in Bengalee and Hindustanee "choee" (Pidd.) or "chayi" or "chava" (W. Jones), in the Taleef Shereef "chaab" (J. F. Wats.); in which we recognize the "chavya" or "chavica" of the Amara-cosha — (W. Jones as. res. iv. 303), and Susrutas sutr. 44 to chik. 37: P. chaba or its fruit was seen by Jordanus in "India the Greater," by Nicolo Conti on "Sciamuthera" (Sumatra); the living plant is described by Rumphius v. pl. 116, and was observed in the Malayan archipelago by Blume. According to Lindley, "its properties appear to be the same as those of Piper longum."

* *Chonemorpha dichotoma* of Eastern Hindustan. A twining Apocynous plant called in Sanscrit "vishulya-krit" (Pidd.); and the "visalya" of Damodara hanum.-nat. 13, a drug from the mountains, — mentioned also by Susrutas sutr. 25 to chik. 15, may be compared: C. dichotoma is described by Roxburgh ii 19 as observed by him in Bengal. "From Bengal," was introduced by Nimmo into the environs of Bombay (Graham).

"The same year" (Blair), the Northern division of Portugal wrested from the Muslims by Alphonso VI. of Castile, and bestowed by him on his son-in-law Henricus. The origin of the independent kingdom of Portugal.

"1089 A. D. (= 481 A. H." of Ferishti., Elph.), end of the reign of Ibrahim, sultan of Ghazni.

"1090 A. D." (Alst.), Samuel Marochianus, a convert from Judaism to Christianity, writing against the Jews.

"Towards the close of the Eleventh century" (Hyde relat. vet. Pers. 209, and Pouchet), the calendar not having been corrected in Persia for more than "four thousand" years, the astronomers were assembled by Melek Shah; and one of them, Omar Cheyam, found the length of the solar year "365d. 5h. 48m. 48s."

"1091 A. D." (Nicol.), a synod at Leon in Spain. *Gaulish writing* was "substituted for that of the Goths in the books of the church;" and the Liturgy of Isidorus, ordered to be "made conformable to that of Rome."

"In or about this year" (Garc. de la Vega, and addit. art de verif.), Sinchi-Roca succeeded by his son Lloque Yupanqui, now third Inca of Peru. Who changed the policy hitherto pursued, raised an army, and extended his dominion by military conquests.* — According to G. de la Vega i. 2. 18, he conquered and annexed the district of Canas, South of Cuzco.

"1092 A. D.," as appears from Karmatic inscriptions on the building (copied by Marcel p. 116), the nilometer at Rhoda repaired.

"The same year" (Nicol.), by a synod at Szabolchs in Hungary, a *code of laws*, civil and ecclesiastical, compiled.

"1093 A. D." (Nicol.), a synod at Rheims. Robert, earl of Flanders, was "compelled to resign the appointments of clerks;" and a bishop was promised to the clergy of Arras by pope Urbanus II.

"The same year" (Lubke and Lutrow), building of the church at Laach on the Rhine commenced. — "After many interruptions," the edifice was completed "in 1156."

"1094, March 11th and 12th" (Nicol.), decision by a synod at Rockingham castle, That "the archbishop of Canterbury should not promise obedience to, or request the pall" (mantle of state) "from pope Urbanus II. without the king's consent."

"The same year" (art de verif.), Mostanser succeeded by Mostaali, of the Fatimite dynasty, sixth sultan of Egypt.

"1095, March 1st to 7th" (Nicol.), a synod at Plaisance in Lombardy. Aid against the Muslims was requested by the Byzantine emperor: inaugurating the *Crusades;* the first one now beginning to be preached by Peter the hermit throughout Europe.

"The same year" (Nicol.), a synod in England. Against Anselm archbishop of Canterbury, who had received the "pall" from pope Urbanus II. "without the king's consent."

"1096, February" (Nicol.), a synod at Rouen in France. Among other canons instituted, was one prohibiting "the wearing of long hair."

"In this year" (Sm. b. d.), arrival before Constantinople of the first Crusaders; an undisciplined body of men under Peter the hermit; they were allowed to pass into Asia, where they were massacred by the inhabitants.

"1097 A. D." (Sm. b. d.), a powerful army of Crusaders under Godfrey of Bouillon advancing into Asia, enabling the Greek emperor Alexius Comnenus to extend his authority over all Asia Minor.

Malva Tournefortiana of the Mediterranean seashore. Called in Greece "mōllōha," or by the Turks "æbedjumez" (Forsk.): the πράσομολοχα enumerated as esculent by Hierophilus the sophist De alim., — mentioned also in anon. De mens., may be compared: M. Tournefortiana was observed by Forskal, Sibthorp, and Gittard, in calcareous soil along the seashore from the Peloponnesus and Greek islands as far as the Dardanelles. Westward, is termed "alcea minor maritima tenuifolia procumbens" by Hermann par. pl. 2, "a. maritima galloprovincialis geranii folio" by Tournefort inst. 98; and is known to grow on the seashore of Southern France and Spain (Lam. fl. fr., Cav., and Pers.).

Laserpitium aquilegifolium of the East Mediterranean countries. The περπερόκυμινον of Hierophilus the sophist De alim., — may be compared: L. aquilegifolium was observed by Sibthorp in shady woods on the Bithynian Olympus; and farther North and West, is known to grow on stony hills in

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* *Ilex Paraguayensis* of the Upper Paraguay. A shrub indigenous there, and its leaves called "maté" or *Paraguay tea* collected from early times and drank in infusion, cultivated besides for the same purpose by the natives, — the cultivation continuing in the same district to the present day (A. Saint-Hilaire, and A. Dec.). Transported to Rio Janeiro, was seen under cultivation by A. Saint-Hilaire, and is termed "cassine gongonha" by Martius (Lindl.).

Austria. (Jacq. austr. pl. 145, and Pers.). The seeds of at least some species of Laserpitium are excessively bitter (see L. siler).

"Dec. 13th" (Nicol.), a synod at Gironne. "For the maintenance of ecclesiastical liberties."

"1098 A. D. (= 492 A. H." of Ferisht., Elph.), accession of Masaud II. as sultan of Ghazni.— His generals carried on war beyond the Ganges, and for some years he resided with his court at Lahore.

"1099, July 15th" (Blair, and Marcel), capture of Jerusalem by the Crusaders, after journeying all the way by land; and their leader, Godfrey Baldwin, established in the city as king.

"Aug. 13th" (Alst., and Nicol.), Urbanus II. succeeded by cardinal Rainer or Paschalis II., fourth pope. Paschalis II. first employed the "Years of his pontificate" in dating his Bulls.

"In this year" (Bentl. as. rēs. viii. 243), the Bhasvati composed by a pupil of the Hindu astronomer Varaha Mihira.

"In this year" (palm-leaf ann. Jag., and W. W. Hunter), Sujan Kesari succeeded by Salini Kesari, now king of Orissa. — His queen built the Nat Mandir or dancing-hall of the Siva temple at Bhuvaneswar.

"1100 A. D." (Nicol.), a synod at Lambeth. Proof was given by Maud daughter of Malcolm III. of Scotland, That she had not entered the religious life by her own choice, or by the vow of her parents.

About this time, "942 to 1227 A. D." (J. Nicholson in Kitt. cycl. bibl.), the Samaritan Arabic version of the Bible, by Abu Sa'id.: — the last named date, being that of the Barberini manuscript copy.

"1100 to 1101 A. D." (De Wailly pl. xiv. 1), manuscripts of this date presenting the following form of the letter ṭ.

One hundred and sixty-second generation. Jan. 1st, 1101, onward mostly beyond youth: the Jewish writers, Abraham ben Chijja, Solomon ben Isaac, Bechaji, Meir ben Isaac, and Peter Alphonso: the Arab writers, Ghazali, Elzaharawi (Abulcasis) d. 1106 or "1122" (Casiri): the Greek writers, Euthymius Zigabenus, d. after 1118, Theophylactus bishop of Bulgaria d. 1112, Michael Glycas d. 1118, Joannes Cinnamus d. 1118, Joannes Zonaras d. after 1118, Poellus d. after 1105: Hildebertus, Rupertus Tutiensis abbas, Theodoricus abbas Leodiensis, Bernhardus Cluniacensis, Zacharias Chrysopolitanus, Godfridus Vindocinensis, Berengosius, Algerus: the scholastic theologians, Petrus Cluniacensis: the Slavonic writers, Vladimir, V. Monomach, Sylvester of Perejaslavl, and Hegumen Daniel: the Icelandic writer Thorlak Runolfson.

"The same year = 'kian-tchoung-king-koue,' 1st year of Hoei-tsoung, of the Soung" or Twenty-first dynasty — (Chinese chron. table).

"The same year" (Alst.), end of the chronicle of Bertholdus Constantiensis.

"The same year" (art de verif.), Mostaali succeeded by El-Amr of the Fatimite dynasty, seventh sultan of Egypt. A coin issued at Alexandria by El-Amr, is figured in Marcel 126.

"1102 A. D." (T. Wright early trav. Pal., and D'Avezac), pilgrims now thronging to Palestine, and on "Sunday Oct. 12th," the wreck of all but seven out of "thirty very large ships" in the unsafe port of Jaffa, "more than a thousand" persons perishing, witnessed by Sæwulf.

"1104 A. D." (Nicol.), a synod at Rome. Bruno archbishop of Treves was "reprimanded for receiving investiture from the emperor" Henricus IV.

"1105, March 26th" (Nicol.), a synod at Rome. The earl of Mellent and his associates were excommunicated, for supporting the right of the king of England to invest bishops.

"May 29th" (Nicol.), in a synod at Quedlimbourg in Thuringia, prince Henricus rebelling against his father "declared, That he had accepted the sceptre against his own will, and was willing to surrender it." The Diet assembling at Mayence on "Christmas day," Henricus IV. was deposed, and his son Henricus V. crowned emperor by the archbishop of Mayence.

"The same year" (Nicol.), a synod at Florence. "Against the bishop of that city, who averred, That Antichrist was already born."

In this year (= "1027 + 25 + 53 yrs." of Kalhan. hist. Cashm., H. H. Wils. ind. dram. ii. 260), Ananta succeeded by his son Kalasa, now king of Cashmere.

"1106, October" (Nicol.), a synod assembled at Lisieux by king Henry of England. The regulations made, "were rather civil than ecclesiastical, and the lay lords present were more numerous than the bishops."

"The same year" (S. D. in Kitt. cycl. bibl.), date of the *Hebrew manuscript* "154 Kennicott;" the oldest one extant, so far as ascertained; for those conjectured to be older are devoid of any accurate register of their antiquity. — Of private manuscripts in the Rabbinical character, none are more than "five hundred" years old.

"1107 A. D. = 1st year of the 'ta-kouan' of Hoei-tsoung" — (Chinese chron. table).

"1108 A. D. (= 1768th of Synmu," art de verif.), Foricawa succeeded by his eldest son To-ba, now dairo of Japan.

"The same year = 2d year ta-kouan" (topog. Cant., and Pauth. 473), the provinces of Tchekiang, Fo-kien, and Kouang-toung, assigned for the admission of foreign ships: a supplementary officer was sent to Tchintcheou. — The following year, foreign merchants wished to visit other ports; and after giving assurance that they had no prohibited articles, were permitted, and were furnished with arms for their defence.

As early as this date, Nicolaus Praepositus writing. He mentions Roger son of Robert Guiscard — "who died in 1111" (Spreng.).

The galla muscata of Nicolaus Praepositus, — and Franciscus Pedemontium, is perhaps *civet* (a perfume procured from a weasel-like animal, Viverra zibetha): the "zubbad" is mentioned by Edrisi, and Ebn Baitar; the "zapětiōn," by Actuarius: civet was seen by Cadamosto on the Gambia; by Baumgarten i. 28 in Egypt; by Alpinus iii. 15, used there medicinally; and by myself, a well-known article of commerce at Mocha. The civet animal was found by Browne kept in cages in Darfour, and wild farther South.

Campanula rapunculus of middle Europe. Called in Britain *rampion*, in France "raiponce," in medieval Latin "rapunculus" (Prior): the rape silvestris of Nicolaus Praepositus 106 — may be compared: C. rapunculus is described by Columna ecphr. i. p. 225; is termed "rapunculus esculentus" by C. Bauhin pin. 92; was observed by Forskal near Marseilles; and is known to grow throughout middle Europe as far as Denmark and Gothland (Pers., and A. Dec.). Was cultivated in Europe for its esculent tubers prior to the introduction of the potato, had become spontaneous in Britain before the days of Ray syn. p. 277, and is regarded by Watson as perhaps exotic there and only naturalized.*

Leontodon taraxacum of Subarctic climates. Called in Britain *swine's snout* or *dandelion*, in France "dent de lion" (Prior), in Germany "löwenzahn," in Italy "tarassaco" (Lenz), in Greece "agriōmarōulia" (Sibth.) or "pikraphakē" (Fraas); in which we recognize the taraxicon of Nicolaus Praepositus — (identified with the "aborsus porcinus" by Marco Gatinaria), and the "rostrum porcinum" of Matthæus Sylvaticus pand. 610; — a name changed according to Ortus sanitatis 152 to 226 by surgeon Wilhelmus to "dens leonis," continued to the present day in "a similar name in nearly every European language" (Prior): L. taraxacum is termed "dens leonis latiore folio" by Tournefort inst. 468; was observed by Desfontaines ii. p. 228 in Barbary, by Moris in Sardinia, by Lenz in Italy, and is known to grow throughout middle and Northern Europe as far as Lapland, Spitzbergen, and Iceland (Hook., Wats., and Fries). Eastward, was observed by Sibthorp, Chaubard, and Fraas, from the Peloponnesus and summit of Taygetus to Caria and Constantinople; is known to grow also along the Taurian mountains and throughout Siberia to Kamtschatka (Bieb., and Ledeb.); was observed by Kaempfer, and Thunberg, along roadsides in Japan and called "fosei;" or usually "fudsina" or "tsugumi gusa" or "tampopo." Farther East, is known to grow from Bering's Island to the American continent, the Rocky mountains, Saskatchewan river, Melville Island, Labrador, and Greenland (Hook., R. Brown, and Meyer), in our Northern States multiplying in grass-grown clearings. Clearly by European colonists, was carried to Madeira, and Mexico (A. Dec.), and to the Mauritius Islands (Boj.).

Zacintha verrucosa of the Mediterranean countries. An annual called in Greece "ōrnithōkōli" or "karavithōhōrtōn," and the sylvestris endivia prescribed in medicinal syrup by Nicolaus Florentinus — is described by Caesalpinus xiii. 9 as springing in neglected gardens, more than a cubit high, branching and leafy with a yellow flower in the axils of the leaves: Z. verrucosa is termed "z. sive cichorium verrucarium" by Tournefort inst. 476; and is known to occur in Italy and Southern France (All., and Pers.). Eastward, was observed by Forskal, Sibthorp, and Chaubard, from Crete and other Greek islands to the Peloponnesus and Mount Athos.

"1110 A. D." (Nicol.), in a synod at Constantinople, convened against the heresy of the Bogomiles, a constitution respecting the election and duties of bishops, was published by the emperor Alexis Comnena.

"The same year" (Blair), learning revived at the University of Cambridge.

Ægopodium podagraria of Europe and the adjoining portion of Asia. A ferulaceous plant called in Britain *gout-wort* or *gout-weed* or *ax-weed* or *ash-weed* (Mylnes, and Prior), in which we

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*. *Galeopsis tetrahit* of Northern Europe and Asia. Called in Britain *bee-nettle* or *hemp-nettle* or *hemp-deadnettle* (Prior): the herbe tetrait of Nicolaus Praepositus 125, — and Matthæus Platearius f. 251, is referred here by writers: G. tetrahit is known to occur from Switzerland to the Northern extreme of Lapland in "Lat. 71°" (Martins, and A. Dec.); also in Northern Asia (Wats.). Possibly by European colonists carried to Iceland, where it was observed by Hooker; clearly by European colonists carried to Northeast America, where it has been observed by myself in cultivated ground from Lat. 48° on the Lower St. Lawrence throughout New England.

recognize the λεσcthrotu of Anglo-Saxon glossaries, — referred here by Cockayne: Æ. podagraria is described by Dodoens pempt. 320; is termed "angelica sylvestris minor sive erratica" by Tournefort inst. 313; is known to grow along hedges throughout middle Europe as far as Denmark (fl. Dan. pl. 607, Engl. bot. pl. 940, and Pers.). Eastward, was observed by Sibthorp and Chaubard, in the Peloponnesus.*

"Dec. 19th" (T. Wright early trav. Pal.), "Saet" or Sidon captured by Godfrey Baldwin and the crusaders; Sigurd, brother of the king of Norway, co-operating with a fleet.

"The same year" (Abul-Fazil, and Wilford as. res. ix. 168), Jidahana, king of Delhi, slain in battle against Bala-deva of the legitimate Chauhana family.

"1111, Feb. 12th" (Nicol.), a synod at Latran, wherein Henricus V. "instead of resigning the right of investiture as he had previously agreed to do," took the pope prisoner. He compelled a treaty, signed "April 11th," whereby the emperor resumed his right.

"The same year = 1st year of the 'tching-ho' of Hoei-tsoung" — (Chinese chron. table).

"The same year" (Clint. iv. p. 835, see also Alst.), end of the chronicle of Sigebertus Gemblacensis.

Spiræa filipendula of middle and Northern Europe. Called in Britain *dropwort* (Turn. iii. 31, and Prior), in Anglo-Saxon "dropeworte" (gl. Laud. 553, and ms. Bodl. 536); described by Matthæus Platearius f. 237, — and termed "oenanthe" by Fuchsius 562 (Spreng.): common according to Lindley "in pastures in elevated situations" in Britain; known to grow also from Denmark to middle France (fl. Dan. pl. 935, Pers., and A. Dec.). Eastward, the "philipĕnthoula" is mentioned by Nicolaus Myrepsus 40. S. filipendula according to Lindley is accounted tonic on account of its "bitter astringent qualities."

"1112, or thereabouts" (Nicol.), by a synod in Jerusalem, the emperor Henricus V. excommunicated.

"1113 A. D. (= 1027 + 25 + 53 + 8 yrs" of Kalhan: hist. Cashm., H. H. Wils.), Kalasa succeeded by Utkarsha, and after "twenty-two days" by Harsha, now king of Cashmere. Harsha patronized literature, and was acquainted with various languages.

Somadeva, the author of the Vrihat-Katha, at this time writing — (H. H. Wils. ind. dram. ii. 257).

"In this year" (Alst.), a military monastic Order founded, that of the Knights of St. John of Jerusalem. — Some centuries later, this Order of monks, under the name "Knights of Malta," exercised great influence throughout the Mediterranean: until the seizure of their island by Buonaparte.

"1114 A. D. (= 508 A. H." of Ferishta, Elph.), Masaud II. succeeded by his son Arslan, now sultan of Ghazni.

"In this year (= 1036 an. Saca," Colebrooke as. res. ix. 351), birth of the Hindu astronomer Bhascara.

In this year = "4th year tching-ho" (topog. Cant., and Pauth. p. 473), tribute of *precious stones, rhinoceros* horns, and *elephants'* teeth, sent by the ship-captains.

About this time ("between 1111 and 1117," Humb. cosm. ii.), the manner of measuring the Westerly *variation of the magnetic needle* mentioned in the Chinese Penthsaoyan as long understood.

"1115 A. D." (Chinese chron. table), the name Tai-tsou and the title "ti" or emperor, assumed by the Tartar chief of the Kin; now in possession of the Northern portion of China.

"After Christmas" (Nicol.), a synod in Syria. Arnulph, patriarch of Jerusalem, was deposed.

"1116, March 20th" (Nicol.), a synod at Salisbury. Wherein, king Henry being present, an attempt was made to compel Thurstan, archbishop of York, to promise obedience to the archbishop of Canterbury.

"In this year (= 510 A. H.," Edrisi, and Jaub.), a palace built at Ghana in Soudan by the Muslim ruler of the city and country.

Canavalia ensiformis of Tropical Africa. Seeds of the *sword bean* are called in Egypt "ful djellabe" or "ful barabra" (Forsk.), and the plant in Hindustanee "suffaid" or "lal kudsumbal," in Telinga "yerra" or "tellay tumbetten-kaya," in Tamil "segapoo" or "vellay thumbetten," in Bengalee "mekhun shirn" (Drur.), in Burmah "pai-noung-nee" (Mason), on the Philippines "habas" or on Leite "magtambocao" (Blanco): known from early times: — C. ensiformis is known to occur in Equatorial Africa (A. Dec.); a species regarded as probably identical was observed by Grant at Chopeh in N. Lat. 2° on the Nile, the "Wanyamuezi spin its beans as an amusement;" and "dolichos

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* *Mentha citrata* of middle Europe. Called in Britain *bergamot mint* (Prior): the bαlsmethαn of didax. 15, — or "balsaminta" of gloss. m., is referred here by Cockayne: M. citrata is termed "m. rubra" by Miller (Steud.); and is known to grow in Germany and Britain (Ehrh., Smith brit. ii. p. 616, and Pers.). The plant according to Lindley "furnishes a fragrant oil, having very much the odour of bergamot."

faba nigrita" was observed by Forskal p. 133 a single stock under cultivation at Djidda, and beans brought by caravans from Abyssinia worn by Egyptian women and children for ornament. Eastward, C. ensiformis was observed by Rheede viii. pl. 44 in Malabar; by Graham, "commonly cultivated" in the environs of Bombay, "varieties with red and white flowers, the half grown pods are eaten;" by Drury, "cultivated in the Peninsula" for "its esculent pods," also "a common plant in hedges and thickets" (naturalized); by Roxburgh, and Wight, as far as Bengal; by Mason v. 466 "exotic" in Burmah, cultivated "to a small extent, and its young pods" eaten; is described by Rumphius v. pl. 135; was seen by Blanco at Batangas village on the Philippines, the flowers white, and young pods eaten. By European colonists, was carried to Jamaica prior to the visit of Sloane i. pl. 114 (Pers.).

"In this year (= 6th year 'tching-ho' of Hoei-tsoung," Remus. iii. 86), arrival in China of Seng-ka or Kieou-ma-seng-ka, ambassador from Cambodia bearing tribute.

"1117, April" (Nicol.), a synod at Benevento. Wherein the archbishop of Braga was excommunicated, for crowning Henricus V. at Rome during the absence of the pope.

"In or about this year" (according to Klaproth) the *mariner's compass* brought from China by the Arabs. — It is mentioned as long known in Europe in a poem by Guyot of Provence "in 1199" (Whewell, Kobell iv., and Humb. cosm. v.); the "shipman's stone that draws the needle to it" is also mentioned by Maundeville xiv.

"1118, Jan. 25th" (Alst., and Nicol.), Paschalis II. succeeded by cardinal John Gaetano or Gelasius II., fifth pope. Louis VI. ruling France; and Alexander, Scotland.

"The same year" (Alst.), Alexius Comnenus succeeded by his son Joannes II. or Calo-Joannes, fifty-second Byzantine emperor.

"The same year" (Nicol.), in a synod at Rouen, king Henry of England "treated with the lords and the archbishop of Canterbury concerning the peace of the realm, whilst Geoffry bishop of Rouen treated of the affairs of the church."

"In this year (= 512 A. H." of Ferisht., Elph.), Arslan succeeded by his brother Behram, now sultan of Ghazni. He patronized Literature, — and the Persian poet Nizami resided at his court.

"1119, Feb. 1st" (Alst., and Nicol.), Gelasius II. succeeded by Guy archbishop of Vienne, now Calixtus II. sixth pope.

"The same year" (Alst.), founding of a second military monastic Order, the Knights Templars. — Nine years later (Nicol.), a synod was convened at Troyes, on "the rule and habit to be given" to these military monks.

"1120 A. D. = end of the Fourteenth manwantara," and of the Graha Munjari tables. None of the Puranas, "in the form they now stand, are older than" this date; — some "are the compilations of still later times" (Benth. as. res. viii. p. 241).

"In this year (= second year siouan-ho of Hoei-tsoung," Remus. mel. iii. 88), arrival in China of Ma-la-ma-thou-fang, ambassador from Cambodia bearing tribute.*

"1121 A. D." (Pouchet, and Major), sailing of bishop Eric from Greenland for Vinland, "to convert his countrymen."

"1122 A. D." (Nicol.), by a synod at Soissons, Abelard "compelled to burn his book concerning the Trinity."

"1123 A. D. = 1st year of the 'thian-hoei' of Tai-tsoung of the Kin;" ruling Northern China, while in the South, the Soung dynasty continued — Chinese chron. table).

"March 18th to April 5th" (Nicol.), general Councils no longer held in the East, but the Ninth general ecclesiastical Council assembled at the Lateran in Rome. Marriage among priests was condemned by pope Calixtus II., an additional fast-day instituted, and dissent from the Catholic church prohibited (Alst.).

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* *Ocymum sanctum* of Tropical Hindustan. Called in Hindustan "tulsi" or "tulosi," in Sanscrit "vrinda" or "cut'heraca" or "cat'hinjara" or "tulasi" (W. Jones), in the environs of Bombay "kala toolsee" (Graham), in which we recognize the plant into which the nymph Tulasi is said in the Puranas to have been metamorphosed: — the "tulasi" plant according to H. H. Wilson hind. dram. i. p. 21 continues to be worshipped in some Bengal families as their tutelary divinity or household god: O. sanctum is described by Rumphius v. pl. 92; was observed in Hindustan by Rheede x. pl. 86, and Roxburgh; by W. Jones as. res. iv. p. 288, "one or two feet high," the whole plant having "a dusky purplish hue" and "thence perhaps" held "sacred to Crishna;" by Graham, "common in gardens and about Hindu temples everywhere." Farther East, is enumerated by Mason v. p. 438 and 790 as "exotic" in Burmah and frequent around dwellings of the Karens: was observed by Blanco on the Philippines, used by the natives, and called in Tagalo "balanoi." A species of Ocymum observed by myself on the top of a column near a Hindu temple seemed the same aboriginally introduced throughout the Feejeean, Samoan, and Taheitian Islands, met with around the native dwellings, and in one instance at Taheiti planted on a grave.

"1124 A. D. (= 1784th of Synmu," art de verif.), To-ba succeeded by his eldest son Sintoku, now dairo of Japan.*

Acacia (Albizzia) nemu of Japan. Having native names (Thunb.), and clearly not a Tropical tree: — observed in Japan by Kaempfer v. 840, and Thunberg. Westward, the "djul ibrzim" seen by Forskal in gardens at Constantinople, by Bory under cultivation in Greece, or the "A. julibrissin" of Scopoli delic. pl. 8, seems identical. Transported to North America, this tree continues planted for ornament in our Southern States, and was observed by myself well-grown and in flourishing condition as far as Philadelphia.

"After Dec. 12th" (Nicol.), Calixtus II. succeeded by Lambert bishop of Ostia, now Honorius II. seventh pope.

"In or about this year" (Marcel), the Bathenians or Hassassins, a fanatical sect, founded by Ismael; who, establishing himself in the mountains near Damascus, within the new Christian kingdom, rendered himself formidable all around through his secret emissaries. — The Bathenians are mentioned by Hedessi, and Benjamin de Tudela (Jost. p. 145, and note to Steinschneid. ii. 14); and though said to have been exterminated by the Egyptian sultan Beybars, continued extant in the days of Ebn Batuta; and a remnant termed "Fedouis," was found in the environs of Laodicea by Van Ghistele (Voyag. Belg.).

"1125 A. D." (Lassen, and Buns. iv. 7. 1), the Chronicle of Cashmere composed. Or (according to Kalhana, and H. H. Wilson ind. dram. ii. 260) end of the reign of Harsha king of Cashmere.

"1126 A. D. = 'king-kang,' 1st year of King-tsoung II., of the Soung" or Twenty-first dynasty — (Chinese chron. table).

"In or about this year" (= 1156 — "about 30 years," G. de la Vega, and addit. art de verif.), Lloque Yupanqui succeeded by his son Mayta Capac, now fourth Inca of Peru. Who continued his father's policy, making military conquests,† — and enlarged the bounds of his dominion.

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* *Kerria Japonica* of Japan. A weak-stemmed shrub whose flowers were dried and used medicinally as early probably as this date: — observed by Kaempfer v. 344, and Thunberg, in Southern Japan, growing spontaneously and cultivated besides for its ornamental yellow flowers; described also by Houttuyn vii. pl. 45. Transported to Europe and North America, has become frequent in gardens.

Cydonia Japonica of Japan. Usually a shrub but sometimes becoming a tree, its fruit edible: — observed in Japan by Kaempfer v. 884, by Thunberg, wild on Mount Fakon. Transported to Europe and North America, the *scarlet-flowered quince* has become frequent in gardens.

Saxifraga sarmentosa of Japan. Herbaceous and ornamental, with long creeping or pendent stolons bearing propagated plants: — observed in Japan by Kaempfer v. 870, by Thunberg, among the mountains of Niphon. Transported to Europe and North America, the plant has become a favourite in parlours and greenhouses.

Amaryllis (Nerine) Sarniensis of Japan. A lily-like plant called in Anam "tuyen thao," in China "hiuien tsao" (Lour.); in Japan "seki san" or "sibito banna" (Thunb.), and its root known to the natives as poisonous as early probably as this date: — observed in Japan by Kaempfer, by Thunberg, on the hills around Nagasaki; by Loureiro, cultivated for ornament by the Chinese as far as Anam. Transported to Europe, the "narcissus Japonicus" according to Cornuti pl. 158 first flowered "in 1634" (see also Beckmann); bulbs from a stranding vessel afterwards took root on the seashore of Guernsey, where the plant maintained itself for many years (A. Dec.). By European colonists, was carried to Austral Africa (Pers).

Funkia Japonica of Japan. White-flowered and lily-like, cultivated there for ornament as early probably as this date: — observed in Japan by Kaempfer v. 863, by Thunberg, both wild and cultivated. Transported to Europe, the plant has become frequent in greenhouses.

Hemerocallis fulva of China and Japan. The *day-lily* is called in Anam "rau hien," in China "kim cham hoa" (Lour.); in Japan "ken" or "kwanso" (Thunb.), and cultivated there as early probably as this date: — observed in Japan by Kaempfer v. 872, by Thunberg, growing spontaneously here and there and often cultivated. Westward, was observed by Loureiro under cultivation in China and Anam; by Mason, "exotic" in Burmah, but no native name given; by Roxburgh, and Graham, "in gardens" in Hindustan "introduced," and no native name given; the plant may have reached Europe before the Voyage of Columbus, being termed "lilium obsoleto flore rubens" by Dodoens 204 (Spreng.). By European colonists, was carried to Northeast America, where it continues frequent in gardens, and escaping according to A. Gray, has been sometimes found springing up spontaneously.

† *Ionidium microphyllum* of the Equatorial Andes. A Violoid plant called at the foot of Chimborazo "cuichunchulli" (Lindl.), and from early times regarded as a specific in tubercular ele-

"In this year" (Angrim. Jonas, and Relation du Groenl. 201), the Greenland bishop Arnaud, on his way to Norway, shipwrecked on Iceland: and among the articles thrown on shore were "dentes balenarum pretiosi" (*Monoceros unicornu*) inscribed by some sailor with Runic letters so that he could reclaim them. Arnaud or Arnold (according to Major edit. Zen. p. lxv) set up the episcopal seat at Gardar.

"1127 A. D. = 'kien-yen,' 1st year of Kao-tsoung II., of the Soung" or Twenty-first dynasty (Chinese chron. table). The seat of government was removed by Kao-tsoung II. to Nan-king; — and afterwards, farther South to Hang-tcheou (Pauth. 346).

"November" (Nicol.), in a synod at Troie, the excommunication of Roger II. Norman king of Sicily for assuming the title "duke of Pouille and Calabria," was confirmed.

The same year = "1st year kien-yen" (topog. Cant., and Pauth. 346), a great scarcity of metals having been produced by over-exportation, clandestinely carried on in spite of the severity of the laws, an edict: That many useless things being imported, *precious stones* for rings etc. might be purchased with *silver*, and if the foreigners were fraudulent the Chinese would be severely punished. Officers of the government were however permitted to receive *elephants'* teeth, and *rhinoceros'* horns.

Books in the Tagalo language written by the natives of the Philippine Islands as early probably as this date.*

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phantiasis — (Bancroft): observed by Humboldt and Bonpland pl. 495 among rocks at Lactacunga in Quito.

Arracacha esculenta of the Bogotan Andes. An Umbelliferous plant cultivated from early times for its edible root: — described by Bancroft.

Cestrum Mutisii of the Bogotan Andes. Called there "uvilla" (Humb. iv. 10), its fruit furnishing a dye known from early times, — and to the present day used for ink in the city of Bogota: observed and described by Humboldt and Bonpland.

Festuca quadridentata of the Equatorial Andes. A grass called "pigouil" by the natives of Quito (Lindl.), and known from early times as very poisonous and fatal to animals: — observed by Humboldt and Bonpland i. pl. 160 (Pereir. in med. gaz. xvii. pl. 6).

* *Uvaria amuyon* of the Philippines. A tree called in Tagalo "amuyon" (Blanco); its seeds employed medicinally, and according to the books of the country a counter-poison: — observed by Blanco.

Impatiens (*Hydrocera*) *triflora* of Ceylon. Called in Tagalo and Pampango "camantigui," in Bisaya "Surañga" or "solañga" (Blanco); and in ancient times according to history, its leaves used by women to paint themselves: — observed by Blanco cultivated by the natives on the Philippines; by Blume, on Java; by Mason in Burmah, enumerated as indigenous; by Hermann par. pl. 105, and Burmann pl. 116, in the marshes of Ceylon (Pers.).

Mocanera thurifera of the Philippines. A large tree called in Tagalo "lavaan" or "sandana," in Bisaya "lavaan" (Blanco); and in ancient times, used in ship-building — (P. Gaspar): observed by Blanco common in Bisayas, Tagalos, and elsewhere.

Mocanera verniciflua of the Philippines. A tree called in Tagalo "malapaho" or "balao," or "panao" (Blanco), yielding the fluid resin mentioned in the books under the name of "malapajo" and "balao," — and to the present day sold for varnish: growing according to Blanco in Bisayas and various places of the Tagalos, common.

Mocanera grandiflora of the Philippines. A large tree called in Tagalo "apiton" or "hapiton" (Blanco), yielding a very similar resin, furnishing besides large canoes and planks for house-building: — observed by Blanco in Bisayas, Marinduque, Mindoro, and other places.

Nauclea lutea of the Philippines. A large Cinchonoid tree called in Tagalo "bangcal," in Pampango "bancal," in Bisaya "bancal" or "gabag hanbabalos;" in Ylocano "bulala" (Blanco); and before the arrival of the Spaniards, used by the Bisaya for "ataudes" for their dead: — observed by Blanco, the wood yellow.

Premna odorata of the Philippines. A Verbenaceous tree called "alagao," in Bisaya "adgao" or "pamuhat," in Ylocano "anobran," in Pampango "tanglay maloto" (Blanco), and mentioned in the books; its dried flowers from early times employed medicinally: — growing on all the islands, according to Blanco.

Clerodendron fortunatum of the Philippines. A Verbenaceous shrub called in Tagalo "casopañgil gubat" (Blanco); and the superstitious belief giving rise to the name, as early probably as this date: at the same time, cutting a flower of the unfortunate species was believed to cause the breaking of some article in the house: — C. fortunatum was observed by Blanco on the Philippines; is described also by Osbeck trav. pl. 11.

Clerodendron infortunatum of Tropical Hindustan and the Malayan archipelago. A shrub called in Sanscrit "bhanti" or "bhantaca," in Bengalee "bhant" (J. F. Wats.), in Telinga "bock-

"1128 A. D." (Nicol.), a synod at Ravenna. "The patriarchs of Aquila and of Venice, or of Grado," were deposed.

"In this year (= 2d year kian-yan of Kao-tsoung," Remus. mel. iii. 88), the prince of Cambodia raised to the dignity of king.

"1130, Feb. 15th" (Nicol.), Honorius II. succeeded by cardinal Gregory now Innocentius II., eighth pope. Lotharius II. ruling Germany and Italy; and David, Scotland.

"The same year" (art de verif.), El-Amr assassinated by emissaries of Ismael; and the accession of El-Hafez of the Fatimite dynasty, eighth sultan of Egypt. A coin issued by El-Hafez at Alexandria is figured in Marcel p. 127.

"1131, Oct. 19th" (Nicol.), a synod at Rheims. Wherein "seventeen canons were published:" one of them, prohibiting "canons regular and monks" from acting either as "pleaders or physicians;" and another, prohibiting *tournaments*.

The "Dhanvantari" enumerated as the "Seventh" gem in the council of king Vicrama (Navaratna, and Bentl. as. res. viii. 243) is perhaps the Sanscrit medical writer Susrutas * (called a "pupil

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ada" (Drur.); in Burmah "bu-gyee-phyoo" (Mason); and apparently the species regarded as unlucky: — the "bhantaki" of Susrutas, may be compared: C. infortunatum was observed by Rheede ii. pl. 25 in Malabar; by Law, Nimmo, and Graham, in the Southern Concan and the environs of Bombay, common; by W. Jones as. res. iv. 259, Roxburgh, and Wight, as far as Bengal, the juice of the leaves employed by the natives as a vermifuge, also as a bitter tonic and substitute for chiretta (Drur.); was observed by Burmann z. pl. 29 on Ceylon; by Mason, indigenous in Burmah.

Cynomorium Philippense of the Philippines. Parasitic on the roots of trees, entirely red, called in Tagalo and Bisaya "capulao" (Blanco); and enumerated by botanical writers as astringent and medicinal: — brought from Cebu to Blanco.

Ficus laccifera of Cebu and Negros Island. A tree called in Bisaya "lagnob;" and the *gum lac* produced on it by an insect, regarded by Blanco as probably known in early times: — the tree seems confined to the two islands of Cebu and Negros.

Ficus pseudo-palma of the Philippines. A tree called in Tagalo "niogniogan;" and from identity in name, supposed to possess equal vermifuge powers with *Quisqualis Indica*, mentioned in the native books: — observed by Blanco.

* *Menispermum* (*Tinospora*) *cordifolia* of Tropical Hindustan. A woody twining plant called in Sanscrit "amrita" or "guduchi," in Hindustanee "gurcha," in Bengalee "guluncha" (J. F. Wats.); in Tamil "sheendie codie," in Telinga "tippatingay" (Drur.), in the environs of Bombay "goolwail" (Graham); in which we recognize the "amrita" or "guduchi" prescribed by Susrutas sutr. 25 to chik. 15: — T. cordifolia was observed by Rheede vii. pl. 21 in Malabar; by Graham, "common everywhere in hedges and jungles" in the environs of Bombay; by Roxburgh, Ainslie, and Wight, as far as Bengal and Assam, much used medicinally by the natives, and the *guluncha* extract a well-known specific in the bites of poisonous insects (Drur.).

Capparis aphylla of Hindustan. An arborescent thorny shrub, with only a few small linear leaves on the younger shoots (Graham); and the "karira" having edible flowers according to Susrutas sutr. 46, — is referred here by Hessler: C. aphylla was observed by Elphinstone in the midst of the Desert on the route to Cabul; by Powell, and Stewart, in the Punjaub, employed medicinally by the natives and the buds eaten as a potherb, also the fruit both green and ripe, prepared or pickled (Drur.); by Law, and Graham, from Guzerat to Broach, and "common in the barren tracts of the Deccan;" by Wight, perhaps somewhat farther South.

Guatteria longifolia of Tropical Hindustan? A tall and very handsome tree called in Sanscrit "daru" or "devadaru" or "pitadaru," in Bengal "devadar" (W. Jones), in Tamil "deva-daru" or "asokh," in Telinga "asoka" or "asoka-chettu" or "asokam," in Hindustanee "asog" (J. F. Wats.), in the environs of Bombay "asoca" or "deodar" (Graham); and the "devadaru" tree of Susrutas, — and Kalidasa ragh. ii. 36, may be compared: G. longifolia was observed by Graham "in gardens Bombay and the Deccan, the natives have an idea that it is the male of Jonesia asoca;" by Sonnerat iv. pl. 131, planted by the road sides at Pondicherry; by W. Jones as. res. iv. 288, and Wight, as far as Bengal.

Averrhoa carambola of the Malayan archipelago. A small tree called in Sanscrit "kurmurunga," in Bengalee "kumurunga" (J. F. Wats.), in the environs of Bombay "kurmul" (Graham), in Burmah "zoung-ya" (Mason); and the "b'havya" of Susrutas sutr. 46, — and Harivansa 126, is referred here by Hessler: A. carambola is planted in gardens according to the Canara inscription (transl. Colebr.); is described by Rumphius i. pl. 35; was observed by Rheede iii. pl. 43 in Malabar; by Graham, common "in gardens," its leaves "very sensitive;" by Roxburgh, and Wight, cultivated in other parts of Hindustan; by Mason, "exotic" in Burmah but "quite naturalized," the "sour

of Dhanvantari"). Susrutas — is mentioned in the Puranas (Wils., and Royle antiq. ind. med. 63), and a commentary on his writings by Ubhatta of Cashmere "may be as old as the twelfth century" (Ainsl. ii. præf.).

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fruit" making "a good tart, and there is a variety which bears a sweet fruit;" by Nieuhoff, in the Malayan archipelago, and called "karembolas." Transported to Europe, is described by Parkinson, and Cavanilles vii. pl. 220.

Hibiscus cannabinus of the Siamese countries? An annual erect plant called in Bengalee and Hindustanee "nalkee" (J. F. Wats.), in the environs of Bombay "ambaree" (Graham), in Telinga "gongkura," at Muttra "wilaitee sunn" foreign sun-hemp (Royle); and the "nalica" of Susrutas sutr. 46, — planted in gardens according to the Canara inscription, is referred here by Hessler: H. cannabinus was observed in Hindustan by Royle fibr. ind., only in the cultivated state; by Graham, "commonly cultivated" around Bombay, its leaves eaten "as greens by the natives," and hemp "made of the fibres of the bark;" by Roxburgh, and Wight, in other parts of the peninsula; and by Mason, in Burmah. Transported to Europe, is described by Miller, Linnæus, and Cavanilles iii. pl. 52 (Pers., and Steud.).

Hibiscus tortuosus of Eastern Hindustan. Called in Sanscrit and Bengalee "bala" (Pidd.); and the "bala" of Susrutas chik. 15 to kalp. 8, — may be compared: H. tortuosus is described by Roxburgh, as observed by him in Bengal, and is enumerated by Irvine among the medicinal plants of Patna (J. F. Wats.).

Pavonia odorata of Southern Hindustan. A shrub called in Sanscrit "bala" (Pidd.), in Tamil "peramootie," in Telinga "mootoo-pelagum" (Drur.); and the "bala" of Susrutas sar. 10 to chik. 15, — is referred here by Hessler: P. odorata was observed by Roxburgh, and Wight, from the Dindigul hills to Coromandel, an infusion of the root used by the natives as a drink in fevers (Drur.).

Shorea laccifera of Southern Hindustan. A large Dipterocarpous tree called in Canara "jalin" or "jalari" (J. F. Wats.), in Telinga "jallari," in Tamil "talura" (Drur.); and the "jalini" of Susrutas chik. 2 — may be compared: S. laccifera was observed by Roxburgh, Wight, and Beddome, from Mysore and the Palghaut forests to Wynaad, the timber brought in large quantities to Madras, and very useful for house-building and other purposes: a species of *lac* is also procured from the tree (Drur.).

Amoora rohituka. of Tropical Hindustan. A small Meliaceous tree called in Sanscrit "rohituka," in Telinga "rohitakah" (J. F. Wats.), in Malabar "chemmarum," in Hindustanee "hurinhura" or "khana," in Bengalee "tikhta-raj" (Drur.); in which we recognize the "rohitaka" of Susrutas: — A rohituka was observed by Roxburgh, Wight, and Drury, from Travancore to Bengal, an oil extracted from the seeds by the natives and used for many economical purposes.

Leea sambucina of Tropical Hindustan and Burmah. A shrub with elder-like foliage called in the environs of Bombay "kurkunnie" (Graham), in Telinga "ancadoo" or "ankadosa" (J. F. Wats.), in Bengal "kakajangha" (W. Jones), in Burmah "ka-let" (Mason); and the "kakajang'ha" prescribed by Susrutas chik. 19 to 37, — may be compared: L. sambucina was observed by Rheede ii. pl. 26 in Malabar; by Graham, "in the densest parts of the jungle" in the environs of Bombay and on the Ghauts, also by myself; by Burmann ind. pl. 24, W. Jones as. res. iv. 260, and Wight, as far as Bengal; by Mason, in Burmah.

Ailanthus excelsa of Tropical Hindustan. A large pinnate-leaved tree called in Sanscrit "aralu" or "araloo" (Ainsl., and Pidd.), in Tamil "peroomarum," in Telinga "peddamanoo" (Drur.); in which we recognize the "aralu" prescribed by Susrutas sutr. 38 to chik. 17: — A. excelsa was observed by Lush, and Gibson, from Broach "thinly scattered over the Deccan" (Graham); by Roxburgh cor. i. pl. 28, Ainslie, and Wight, as far as the Circars, its bark aromatic and used medicinally by the natives, its wood light but not durable, much used for sword-handles and sheaths for spears, also for catamarans (Drur.).

Putranjiva Roxburghii of Tropical Hindustan. A very elegant tree with dark green foliage, called in Sanscrit "pootrunjiva," in Telinga "putrajiva" or "putra-jivi-chettu" (J. F. Wats.) or "kuduru-juvee," in Malabar "pongolam" (Drur.); in which we recognize the "putranjiva" or "putranjivaka" prescribed by Susrutas chik. 19: — P. Roxburghii was observed by Rheede vii. pl. 59 in Malabar; by Law, Nimmo, and Graham, in the Concans and environs of Bombay; by Royle, common along the foot of the Himalayas; by Roxburgh, Ainslie, Wallich, and Wight, as far as Coromandel, Oude, and Nepaul, its wood used for house-building and agricultural implements, its leaves for fodder, and its fruit made into necklaces by the Bramins (Drur.).

Celastrus montanus of Tropical Hindustan. A thorny shrub called in Telinga "danti" or "danti-chettu" (J. F. Wats.); and the "danti" whose root is prescribed by Susrutas sutr. 36 to chik. 2, — may be compared: C. montana was observed by Graham "exceedingly common on hills

Flacourtia Ramontchi of Madagascar. The *Madagascar plum* is a small tree called in Sanscrit "swadoo-kuntuka," in Bengalee "booinch" (J. F. Wats.), in Telinga "kanregu" (Drur.), in the environs of Bombay "panawla" (Graham); in which we recognize the "svadukantaka" of Susrutas

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in the Deccan," also by myself; by Roxburgh, Wight, Elliot, and Balfour, farther South in the peninsula.

Uraria lagopodioides of Tropical Hindustan and Burmah. Called in Sanscrit "prishnipurnee" (J. F. Wats.); in which we recognize the "prisniparni" prescribed by Susrutas sutr. 16 to chik. 37 and kalp. 8: — the "nagabalas" of Harivansa 112 is referred here by Langlois: U. lagopodioides was observed by N. L. Burmann pl. 53 in Hindustan; by others, as far as Bengal; and by Mason, in Burmah.

Desmodium Gangeticum of Tropical Hindustan and Burmah. Shrubby, and called in Sanscrit "shala-purnee," in the Taleef Shereef "saloom," in Hindustanee and Bengalee "shalpani" (J. F. Wats.); in which we recognize the "salaparni" of Susrutas sutr. 38 to chik. 8 and kalp. 8: — D. Gangeticum is described by Rumphius vi. pl. 66 (Pers.); was observed by Graham in the environs of Bombay, "common in the rains;" by Wight, in other parts of the peninsula; by Burmann z. pl. 49, on Ceylon; is enumerated by Irvine among the medicinal plants of Patna; and was observed by Mason in Burmah.

Glycine labialis of Tropical Eastern Asia. Twining and bean-like, called in Sanscrit "masha-purnee," in Bengalee and Hindustanee "mashanee" (Pidd.); in which we recognize the "masha-parni" prescribed by Susrutas chik. 19 to 25: — G labialis is known to occur in Bengal (hort. beng. 55, and Voight 214); was observed by Mason indigenous in Burmah.

Mimosa rubricaulis of Tropical Hindustan. A large straggling thorny shrub with prickly legumes (Graham); and the "kavara" or "suvaha" prescribed by Susrutas sutr. 36 to sar. 10, — is referred here by Hessler: M. rubricaulis was observed by Graham "common" around Bombay; by myself, on the Deccan; by Roxburgh cor. pl. 200, and Wight, in other parts of the peninsula.

Indigofera enneaphylla of Tropical Hindustan and Burmah. Perennial and procumbent, called in Telinga "cherra-gaddaun," in Tamil "cheppoo-neringie" (Drur.); and possibly the second of its tribe prescribed by Susrutas chik. 8: — I. enneaphylla was observed in Hindustan by Burmann ind. pl. 55 (Pers.); by Roxburgh, Ainslie, and Wight, on the Dindigul hills, the juice and an infusion of the whole plant employed medicinally (Drur.); by Mason, in Burmah.

Indigofera aspalathoides of Tropical Hindustan. Erect and shrubby, called in Malabar "manneli" (Rheede), in Tamil "shevenar-vaymboo" (Drur.); and possibly the second species in question: — I. aspalathoides was observed by Rheede ix. pl. 37 in Malabar; by Graham, in the environs of Bombay; by Roxburgh, Ainslie, Wight, and Drury, common on waste lands in other parts of the peninsula, the leaves, flowers, root, and young shoots employed medicinally.

Lagerstroemia reginæ of Tropical Hindustan and Burmah. A large tree, when in flower one of the most showy of the Indian forests, in Bengalee called "jarool," in Tamil "kadali" (Drur.), in Sanscrit "cacubha" or "nadisarja" or "indradru" or "arjuna" or "virataru" (W. Jones); and the "virataru" of Susrutas, — may be compared: L. reginæ was observed by Rheede iv. pl. 20 in Malabar; by Graham, "in gardens" around Bombay, but "wild in the vale of the Nagotnah river near its source;" by W. Jones as. res. iv. 301, Roxburgh, and Wight, as far as Travancore and Bengal, its timber tough and under water very durable, much used for boats (Drur.); by Mason v. 538, and Brandis, in Burmah from Mergui to Toungoo, exceedingly "abundant on the low lands," valued "in ship-building" and used besides for a vast variety of purposes; is known to grow as far as Java (Pers.).

Alangium hexapetalum of Tropical Hindustan. Called in Sanscrit "nieo-chaka" or "nikochuka" or "unkola-nieochaka" or "unkotha" (J. F. Wats.), in Telinga "wooduga," in Malabar "kara-angolam" (Drur.); in which we recognize the "ankot'ha" prescribed by Susrutas sutr. 36 to chik. 17 and kalp. 1: — A. hexapetalum is known to grow from Malabar to Bengal, its wood considered valuable (Wight, and Drur.), and according to Royle, its root is aromatic and "said by the Malays to have a purgative hydragogue property."

Alangium decapetalum of Tropical Hindustan and Burmah. An allied species, a small tree called in Sanscrit "ankola" or "ankolamu," in Telinga "ankolamu," in Mahratta "ankulo" (J. F. Wats.), in Bengalee "bagh-ankra," in Tamil "alingie-marum," in Hindustanee "akola" or "akarkanta" (Drur.), in the environs of Bombay "ankool" (Graham); and the "ankot'ha" of Susrutas, — is referred here by Hessler: A. decapetalum was observed by Rheede iv. pl. 17 on the stony mountains of Malabar; by Gibson, Law, and Graham, from Guzerat to the Elephanta caves, its fruit "somewhat astringent" but "eaten by the natives;" by Roxburgh, and Wight, as far as Coromandel

sutr. 36 to chik. 19: — F. Ramontchi was observed by Graham "in gardens Bombay," its fruit eaten but "by no means good;" by Roxburgh cor. pl. 69, Wight, and Long, as far as Bengal, its thorns used by the native inoculators to break the pustules of the small pox. Westward, by European

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and Assam, its timber very beautiful and strong, its root employed medicinally and a reputed antidote in snake-bites (Drur.); was observed by Mason in Burmah.

Momordica myxa of Tropical Hindustan. The "ahinsra" or "kakarta" of Susrutas sutr. 36, — is referred here by Hessler.

Ophiorhiza mungos of Tropical Asia, from Hindustan to Java. A Rubiaceous perennial called in Sanscrit "sarpakshi" (Ell.); in which we recognize the "sarpakshim" of Susrutas kalp. 7: — O. mungos was observed by Roxburgh, Ainslie, Wallich, Wight, and Elliot, from Travancore to Dindigul and the valleys of Nepal; is used against snake-bites on Ceylon (Drur.); was observed by Kaempfer 573 to 577 as far as Sumatra and Java, called "earth gall" by the Malays, intensely bitter, in taste resembling "gentian, but is more penetrating and less unpleasant" (Lindl.).

Paederia foetida of Tropical Eastern Asia. A climbing shrub called in Sanscrit "prubhudra", or "prusarinee" or "prutanika" or "prutaninee" or "pruvula" (Roxb.), in Hindustanee "gundalee" or "gundha-bhudra," in Bengalee "gundha-badhulee" (J. F. Wats.), in Tagalo "cantotai," in Pampango "cantotai" or "dicuta maboloc" or "matabang dicut," in Bisaya "lilitan" (Blanco); in which we recognize the "prasarani" of Susrutas chik. 15: — P. foetida is planted in gardens according to the Canara inscription (transl. Colebr.); is described by Rumphius v. pl. 160; was observed by Nimmo in the Southern Concan (Graham); by Burmann ind. 71, Roxburgh, and Wight, as far as Bengal, the bruised plant having a fetid smell, and the root employed by the natives as an emetic; by Mason, indigenous in Burmah; by Blanco, on the Philippines, universally known to the natives from its vile odour and name. Probably carried to Japan, where it is called "pansa" or "panja and kusa" or "fakubokon," or usually "fekuso kadsura" or "fekuri kadsura" or "feifuri kadsura," and was observed by Kaempfer, and Thunberg, at Nagasaki. By European colonists, was carried to the Hawaiian Islands, observed in gardens there by myself; to Northeast America, where it continues in gardens.

Canthium parviflorum of Southern Hindustan. A thorny Coffeaceous shrub called in Sanscrit "naga-bulla," in Tamil "caray-cheddie," in Canara "kirni" (J. F. Wats.), in the Southern Mahratta country "keernee" (Marshal), in Malabar "kanden-khara," in Telinga "ballusoo-kura" (Drur.); in which we recognize the "nagabala" of Susrutas sutr. 16 to chik. 37 and kalp. 8: — C. parviflorum was observed by Rheede v. pl. 36 in Malabar; by Graham, "in hedges about Rosa near Ellora caves," and found by Marshal common in the Southern Mahratta country; by Roxburgh, Ainslie, and Wight, as far as Travancore and Coromandel, employed medicinally by the natives (Drur.).

Oldenlandia biflora of Tropical Hindustan and Burmah. A Rubiaceous annual called in Sanscrit "kshetra-purputea" (J. F. Wats.); in which we recognize the "kshetraparpati" prescribed by Susrutas sutr. 46 to chik. 37: — H. biflora was observed by Rheede x. pl. 35 in Malabar; by Graham, "common" around Bombay; by Roxburgh, and Wight, in other parts of Hindustan; by Burmann z. pl. 11, on Ceylon; by Mason, indigenous in Burmah.

Hedyotis scandens of Eastern Hindustan. Called in Silhet "gujee," in Bengalee "guji" (J. F. Wats.); and the "goji" of Susrutas sutr. 8 to chik. 18 — may be compared: H. scandens was observed by Roxburgh, hort. beng. 10, and Piddington 139, in Eastern Hindustan.

Loranthus longiflorus of Tropical Hindustan. A parasitic mistletoe-like plant called in Sanscrit "vunda" or "vrikshurooka" or "vrikshubhuksha" or "vrikshadunee" (J. F. Wats.); in which we recognize the "vrikshadani" prescribed by Susrutas sutr. 38 to kalp. 8: — L. longiflorus was observed by Rheede x. pl. 4 in Malabar; by Graham, "common on mango trees" throughout the Concans, "a pretty plant with honeysuckle-looking flowers;" by Roxburgh cor. pl. 139, and Wight, in other parts of Hindustan.

Aerides multiflorum of Tropical Hindustan. Orchideous and with other epiphytes called in Sanscrit "vanda" or "jivantica" or "vricsharura" or "vricshadani," in Bengal "banda" or "persara" or "perasara" (W. Jones); and possibly the "vrikshadani" in question: — A. multiflorum was observed by Graham "in the South Concan;" by W. Jones as. res. iv. 302. and Roxburgh, as far as Bengal, chiefly on "the highest Aegle and mango trees," its flowers "exquisitely beautiful."

Diospyros (*Embryopteris*) *glutinosa* of Tropical Hindustan and Burmah. A shrub or small tree called in Sanscrit "timbiri" or "tinduka" or "gab," in Cingalese "timberri" (J. F. Wats.), in Telinga "tumika," in Tamil "panichekai toombika," in Bengalee "gab," in Hindustanee "gaub" (Drur.), in the environs of Bombay "timbooree" (Graham): the "paravata" of Susrutas sutr. 46 to chik. 21 — is referred here by Hessler; and the "tindouca" is mentioned in Harivansa 96: D. glutinosa was observed by Rheede iii. pl. 41 in Malabar, the pulp around the seeds "much employed by carpenters as

colonists was carried to the Mauritius Islands, where it is called "prunier de Madagascar," and is planted near dwellings.

Mollugo cerviana of Tropical Africa and Hindustan. A small annual called in Sanscrit "par-

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an excellent glue," and being also obnoxious to insects, used by Jews and Portuguese in book-binding (Graham, and Drur.); by Graham, "pretty common on the hilly parts of Salsette" near Bombay; by Roxburgh, Ainslie, and Wight, as far as Travancore and Bengal, the fruit eaten by the natives, used also medicinally, the juice for paying the bottom of boats, and the infusion for steeping fishing-nets (Drur.); was observed by Parish near Maulmain in Burmah (Mason v. 542).

Wrightia tinctoria of Tropical Hindustan and the Siamese countries. A small Apocynous tree called in Sanscrit "hayamaraka" (Ainsl.), in Tamil "chite-ancaloo" (Drur.), in the environs of Bombay "bhoorcooree" or "kala-kooda" (Graham); in which we recognize the "hayamaraka" of Susrutas sutr. 36 to chik. 18: — W. tinctoria was observed by Buchanan in the jungles South of Bangalore, the leaves according to Graham "deciduous in the cold weather;" by Roxburgh, Ainslie, and Wight, as far as Coromandel, the fresh leaves chewed said to remove toothache, the close-grained wood resembling ivory and much used for ornamental and useful purposes (Drur.); was observed by Burmann z. pl. 77 on Ceylon; by Loureiro i. 116, in Anam.

Monetia barlerioides of Tropical Hindustan? A thorny furze-like Apocynous shrub called in Sanscrit "kundali" (Pidd.); and the "kundali" prescribed by Susrutas sutr. 16, — may be compared: M. barlerioides was observed by Law "in abundance about Dharwar Fort" (Graham); by Roxburgh, and Ainslie, in other parts of Hindustan. Possibly by European colonists was carried to Austral Africa (see Pers.). Transported to Europe, is described by Seba i. pl. 13, and L'Heritier. (See Clerodendron inerme).

Ophioxylon serpentinum of Tropical Hindustan and the Siamese countries. An ornamental Apocynous shrub called in Sanscrit "karuvee" or "vasoopooshpa" or "chundruka" or "chundrushoora" or "bhudra" or "nundunee" (J. F. Wats.), in Tamil "chivan-amelpodi," in Telinga "patalganni," in Bengalee "chandra," in Hindustanee "chotachand" (Drur.); in which we recognize the "karavi" or "vishapushpa" prescribed by Susrutas kalp. 8: — O. serpentinum was observed by Rheede vi. pl. 47 in Malabar; by Lush in "Goa jungles," by Nimmo in "the Concans," and by Graham "in gardens Bombay;" by W. Jones as. res. iv. 308, Roxburgh, and Wight, as far as Bengal, the root used against the bites of poisonous animals and for other medicinal purposes (Drur.); by Burmann z. pl. 64, on Ceylon; by Mason, in Burmah; and by Blume bydr. 1034, as far as the Malayan archipelago.

Gymnema sylvestre of Tropical Hindustan. A large twining Apocynous plant (Graham): the "vishanika" or "mesharingi" prescribed by Susrutas chik. 2 to kalp. 1, — is referred here by Hessler: G. sylvestre was observed by Law on hills in the Southern Mahratta country (Graham); by Retz, Roxburgh, and Wight, in other parts of the peninsula.

Agathotes chirayta of the Eastern Himalayas. The *chiretta* is a Gentianaceous annual, imported in the dried state and called in Sanscrit "chirataka" or "chirata-tikta" or "kirata-ticta" or "kairata," in Bengalee and Hindustanee "chirata" (J. F. Wats.); in which we recognize the "kiratatikta" or "kairata" prescribed by Susrutas sutr. 46: — A. chirayta is known to grow in Nepal, is described by Roxburgh, Wallich, and Royle, is imported Southward and much used medicinally, being "an excellent tonic bitter" (Lindl.); is imported also into Burmah, and was found by Mason v. 494 "a common Burman medicine."

Bignonia (*Calosanthes*) *Indica* of Tropical Hindustan. A tall tree with very large supradecompound leaves, called in Sanscrit "shyamaka" (Pidd.), in the environs of Bombay "taetoo" (Graham); the "tuntuka" or "katvanga" or "kutannata" or "g'hantapatali," or "mushkaka" or "suka" or "syonaka" of Susrutas sutr. 33 to chik. 17, — is referred here by Hessler: C. Indica was observed by Rheede i. pl. 43 in Malabar; by Auld in "jungles in Kandeish," and by Graham on "hills throughout the Concans;" by Buchanan, and Roxburgh, in other parts of Hindustan; by Mason v. 411, around native dwellings in Burmah, planted for ornament; by Loureiro ii. 460, in Anam.

Tiaridium Indicum of Tropical Hindustan. A hairy annual called in Sanscrit "bhooroondee" or "srihastini" (J. F. Wats.), in Tamil "tayl-kodukhoo," in Telinga "tayl-munnie," in Bengalee "hatee-shooro" (Drur.), in the environs of Bombay "hatti soora" or "bhooroondie" (Graham); in which we recognize the "b'hurundi" or "srihastini" prescribed by Susrutas chik. 17: — T. Indicum was observed by Rheede x. pl. 48 in Malabar; by Graham, "common" in waste places "during the rains;" by Roxburgh, Ainslie, and Drury, as far as Travancore and Chittagong, employed medicinally by the natives. By European colonists, was carried to Tropical America, where also it is employed for medicinal purposes (Pluk. alm. pl. 64, Browne jam., Pers., and Martius).

Solanum Jacquini of Tropical Hindustan. A prickly trailing species called in Sanscrit "kuntu-

pata" or "parpataka" (J. F. Wats.), in Telinga "parpatakum," in Tamil "parpadagum," in Bengalee "ghimashak" (Drur.); in which we recognize the "parpata" prescribed by Susrutas sutr. 46 to chik. 37: — M. cerviana was observed by Elliot among the Northern Circars; by Ainslie, Pidding-

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karee" or "kunthukarika" or "kunthalika" or "kunthakinee" or "kshoodra" or "vrihutee" or "vyaghree," in Bengalee "kanta-karee" (J. F. Wats.), in Tamil "cundunghatrie," in Telinga "vankuda" or "nella mollunga," in Hindustanee "kootaya" (Drur.); in which we recognize the "kantakari" or "kantakarika" or "kshudra" prescribed by Susrutas sutr. 44 to chik. 37: — S. Jacquini was observed by Nimmo, and Graham, "common" around Bombay and on the Deccan, "a native official article of some importance;" by Roxburgh, Ainslie, and Wight, as far as Travancore and Bengal, its fruit considered expectorant by the natives, also eaten by them in curries, and cultivated for this purpose in the Circars (Drur.).

Solanum Indicum of Tropical Eastern Asia. A prickly-leaved branching shrub called in Sanscrit "kakamachi" or "vributee" (J. F. Wats.), in Tamil "moollie," in Telinga "tella mulaka," in Bengalee "byakoor" (Drur.); in which we recognize the "kakamachi" prescribed by Susrutas sutr. 46 to chik. 1: — S. Indicum was observed by Rheede ii. pl. 36 in Malabar; by Graham, "common in the Deccan," and around Bombay; by Roxburgh, Ainslie, and Wight, "all over India," the root employed medicinally; by Burmann z. pl. 102, on Ceylon; by Mason, in Burmah, enumerated as indigenous; by Loureiro i. 131, in Anam.

Ocymum villosum of Tropical Hindustan. A species of *basil* called in Telinga "arjakam," in Bengalee and Hindustanee "toolusee" or "toolsi" (J. F. Wats.), and possibly the "arjaka" in question: — O. villosum was observed by Powell in the Punjaub, by the author of hort. beng., Piddington, and Long, in Bengal, the seeds and juice of the leaves employed medicinally (Drur.).

Stemodia viscosa of Tropical Hindustan. A small hairy glutinous annual called at Patna "nukachoonie" (Irv.); and the "nikochana" prescribed by Susrutas sutr. 36 to chik. 17 and kalp. 1. — may be compared: S. viscosa was observed by Graham in the environs of Bombay; by Roxburgh, cor. ii. pl. 163 as far as Coromandel (Pers.); and is enumerated by Irvine 279 among the medicinal plants of Patna (J. F. Wats.).

Clerodendron inerme of Tropical shores from Hindustan to the Samoan Islands. A flowering shrub called in Sanscrit "kundali" (Pidd.); in Tagalo "casopangil" or "laroan anito" or "macalalauang" or "igiñga," in Bisaya "asuangai" or "pacapis" or "colocolog" or "alocasoc" (Blanco); and the "kundali" prescribed by Susrutas sutr. 16, — may be compared: C. inerme was observed by Rheede v. pl. 49 in Malabar; by Graham, "common" on "the verge of high water mark" in the vicinity of Bombay, and found by Law used for hedges at Madras; by Roxburgh, and Ainslie, in Eastern Hindustan, occasionally employed in medicine (Lindl.); by Mason, indigenous in Burmah; by Blanco, on the Philippines, employed medicinally by the natives; is termed "jasminum littoreum" by Rumphius v. pl. 46; and was observed by myself, submaritime on the Feejeean, Tongan, and Samoan Islands. (See Monetia barlerioides.)

Clerodendron siphonanthus of Tropical Hindustan and Burmah. Suffruticose and tall, called in Sanscrit "brahmunæ" or "brahmunayustica" (J. F. Wats.), in the environs of Bombay "barungee" (Graham): the "b'hargi" or "bahmi" or "p'hanjika" or "vajra" of Susrutas sutr. 16 to chik. 37, — is referred here by Hessler: C. siphonanthus was observed by Gibson, and Graham, "common in Bombay gardens, said to grow wild on the hills east of Ahmednuggur;" by Burmann ind. pl. 43, and Roxburgh, in other parts of Hindustan; by Mason, in Burmah, enumerated as indigenous; and is known to grow as far as Java (Pers.).

Clerodendron phlomoides of Tropical Hindustan. A large shrub called in Telinga "tilaka" (Ell.), in the environs of Bombay "irun" (Graham); in which we recognize the "tilaka" tree of Susrutas kalp. 7, — Jay adevas ii. 6, its flower according to Kalidasa kum. iii. 30 to ragh. ix. 40 the beauty of spring, mentioned also in the Canara Inscription; C. phlomoides was observed by Graham very common "in hedges and about villages in the Deccan," its "white fragrant flowers in terminal panicles" appearing "in the cold weather;" by Burmann ind. pl. 45, Ainslie, and Roxburgh, in other parts of Hindustan.

Asteracantha longifolia of Tropical Hindustan and Burmah. A Ruellioid annual called in Sanscrit "vanasrnigata" or "gocshuraca" or "gocantaca" (W. Jones) or "gokantuka" or "ikshugandha," in Hindustanee "gokshura" (J. F. Wats.), in Tamil "neer-moollie," in Telinga "neer-goobbie," in Bengalee "kanta-koolika" (Drur.); in which we recognize the "ikshugand'ha" or "gokshura" prescribed by Susrutas sutr. 46 to chik. 30: — A. longifolia was observed by Rheede ii. pl. 45 in Malabar; by Gibson and Graham, in the environs of Bombay, "a very common herbaceous plant," its seeds prescribed medicinally under the name of "tal-mugami;" by W. Jones as. res. iv.

ton, and Wight, in other parts of Hindustan, and in medicinal use (Drur.). Westward, is known to occur in Guinea; but clearly through human intervention was carried to Spain (Pers.) and Rostock in Russia (Gmel. sib. iii. pl. 20).

291, Buchanan, Roxburgh, Ainslie, and Wight, as far as Bengal, in damp situations and by the side of rice-fields, its roots and leaves employed medicinally; by Mason, indigenous in Burmah.

Barleria coerulea of Tropical Hindustan and Burmah. The "artagala" or "karbudara" of Susrutas sutr. 6, — is referred here by Hessler: B. coerulea was observed by Roxburgh in Eastern Hindustan; and by Mason, in Burmah: the "wahitee" of the environs of Bombay, "an unarmed shrub" with large beautiful blue flowers, is regarded by Graham as perhaps identical.

Justicia (*Gendarussa*) *vulgaris* of Tropical Eastern Asia. A shrub called in Bengalee "jugut-mudum," in Telinga "nulla-vavali," in Tamil from the dark-purple bark of its young parts "caroo-nochie" (Drur.), in Burmah "ba-wa-net" (Mason), in Tagalo "limang-sugat" or "silisilihan," in Bisaya "mopio" or "panaptun" or "alyopyop" (Blanco); and the "rushaka" or "vasaka" or "vrisha" prescribed by Susrutas sutr. 44 to chik. 37, — is referred here by Hessler: J. vulgaris was observed by Rheede ix. pl. 42 in Malabar; by Nimmo, and Graham, in the Northern Concan as far as Bombay, strong scented, the leaves preserving clothing from insects, used also by the natives in intermittent fevers; by Roxburgh, Ainslie, and Wight, as far as Travancore, the leaves employed for various medicinal purposes (Drur.); by Mason v. 434, "indigenous" in Burmah, but "often planted for borders in gardens;" in Java is considered a good emetic (Drur.); is known to occur also on Amboyna (Rumph. iv. pl. 28, and Lindl.); was observed by Blanco frequent on the Philippines, employed in wounds and diseases of the throat, and on Zebu called "mandalusa" from being eaten by the "usa," a species of deer.

Plumbago rosea of the Malayan archipelago. Perennial and shrubby, called in Sanscrit "lal-chitra," in Hindustanee "lal-chita" (J. F. Wats.), in Bengalee "rukto chita," in Telinga "yerra-cithra moolum," in Tamil "shencodie vaylie" (Drur.), in the environs of Bombay "lal-chitra" (Graham), in Burmah "ken-khyoke-nee" (Mason); and according to Hessler, one of the two kinds of Plumbago mentioned by Susrutas chik. 17: — P. rosea was observed by Rheede xii. pl. 9 in Malabar; by Graham, "in gardens common, and in flower throughout the year;" by Roxburgh, Ainslie, and Drury, common in gardens, the root acrid and stimulating, sometimes employed in Bengal as an acro-narcotic poison; by Mason v. 432 to 789, "exotic" in Burmah, cultivated for the vesicatory power of its root; by Horsfield, on Java, employed by the natives for blistering, also in ulcers, cutaneous diseases, and rheumatism, is termed "radix vesicatoria" by Rumphius v. pl. 168 as observed on Amboyna (Lindl.).

Aristolochia Indica of Tropical Eastern Asia and the Malayan archipelago. A twining shrubby plant called in Bengalee "eeshwur-mool" (Lindl.), in Hindustanee "isharmul," in Telinga "ishvara-veru" or "dula-govela," in Malabar "ishvaramuri," in Tamil "ich-churamuli" or "peru-marindu" or "perum-kizhangu" (Drur.), in Tagalo "malaubi" or from its balance-shaped old capsules "timbagan" (Blanco); in which we recognize the "isvara" prescribed by Susrutas chik. 8 to kalp. 8: — A. Indica was observed by Rheede viii. pl. 25 in Malabar; by Graham, on "hills throughout the Concan, not very common;" by Roxburgh, Ainslie, and Wight, as far as Travancore and Bengal, its root nauseously bitter, employed medicinally and as an antidote in snake-bites (Drur.); by Loureiro ii. 528, in Anam; by Blanco, on the Philippines, employed medicinally; and is termed "radix pulonorica" by Rumphius v. pl. 177.

Basella alba of Tropical Eastern Asia. A twining herbaceous plant called in Sanscrit "poo-tika" or "oopodaki" (J. F. Wats.), in Hindustanee "pol," in Bengalee "rukhto-pooi," in Telinga "alla-batsalla" (Drur.), in the environs of Bombay "doodee" or "wahlea" or "myal-ke-bajee" (Graham), in Burmah "gyen-baing" (Mason), in Tagalo "libato," in Ylocano "ylaibaquir" (Blanco); in which we recognize the "potika" or "upodika" enumerated among potherbs by Susrutas sutr. 46, — mentioned also by Harivansa 137: B. alba was observed by Rheede vii. pl. 24 in Malabar; by Graham, "generally cultivated as spinage by the natives;" by Roxburgh, Wight, and Drury, as far as Bengal, "cultivated in almost every part of the country," and according to Faulkner sometimes employed medicinally; by Mason v. 472 to 780, "exotic" in Burmah, cultivated by the Burmese for spinage; by Loureiro, in Anam; is known to occur in China (Pluk. alm. pl. 63, and Pers.); was observed by Kaempfer, and Thunberg, in Japan, used for dyeing; by Blanco, seemingly wild on the Philippines and eaten by the natives; by Rumphius v. 417 and pl. 154, on Amboyna (Pers.). "B. rubra, B. lucida," and "B. cordifolia," are regarded as not distinct.

Tetranthera Roxburghii of Tropical Hindustan and the Siamese countries. A Lauraceous tree called in Telinga "meda" (Ell.), in the environs of Bombay "chickna" or "warus" (Graham); and the "meda" of Susrutas chik. 17 to 37 — may be compared: T. Roxburghii was observed by Graham

Sida cordifolia of Tropical climates from the Atlantic to Burmah. Suffruticose, having a Sanscrit name (Roxb., and Pidd.), and called in Bengalee "baryala," in Hindustanee "bariala" (Pidd.): the "atibala" or "vatya" of Susrutas chik. 15 to kalp. 8, — is referred here by Hessler: S. cordifolia

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in "Parell garden" near Bombay, and "wild" on Parell hill; by Retz obs. vi. 27, Roxburgh cor. ii. pl. 147, Wallich, and Elliot 114, as far as the Circars, Sylhet, Goalpara, Monghir, Chittagong, and Java (Lindl.); by Loureiro ii. 783, in Anam, the leaves and branches full of glutinous matter, the fruit yielding a greasy exudation manufactured into candles of bad quality, and serving as the basis of salves (Pers., and Lindl.).

Epicarpurus asper of Tropical Hindustan and the Siamese countries. A small Urticoid tree called in Sanscrit "sakotuka" (Pidd.) or "sacotaca," in Bengal "syaura" or "syura" (W. Jones) or "sheora," in Hindustanee "seeura," in Telinga "pukkie," in Tamil "peerahi" (Drur.): the "sak'-hota" yielding oil according to Susrutas chik. 18, — is referred here by Hessler: E. asper was observed by Rheede i. pl. 48 in Malabar; by Graham, "generally throughout the Concans;" by Retz obs. v. 30, W. Jones, Roxburgh, Wight, and Drury, "common all over India," employed medicinally, a fibre procured from the stem, and the rough leaves used by the natives for polishing ivory; is termed "streblus aspera" by Loureiro, as observed by him in Anam.

Artocarpus lakoocha of Eastern Hindustan. A species of *bread-fruit* called in Sanscrit "lacoocha," in Telinga "lakuchamu" or "laku-chamma" (J. F. Wats.), in the environs of Bombay "lowi," in Burmah "myouk-loke" (Mason); in which we recognize the "lakucha" of Susrutas sutr. 16 to 46, — and Harivansa 126: A. lakoocha was observed by Nimmo, and Graham, under cultivation only in the environs of Bombay, the leaves "deciduous in the cold weather," and the yellow edible fruit of the "size of a large orange;" by W. Jones, and Roxburgh, wild in Bengal, the male spadix eaten by the natives in their curries, and the roots used for dyeing yellow (Drur.); by Mason, "exotic" in Burmah, occasionally "raised near native" dwellings, and regarded by European residents as "a kind of fig."

Ficus (*Covellia*) *oppositifolia* of Tropical Eastern Asia. A small tree called in the environs of Bombay "kurwut" (Graham), in Tagalo "as-is" or "is-is" or "issio" or "isioisio" (Blanco): the "p'halgu" or "malapu" or "vayasi" of Susrutas sutr. 46 to chik. 8 — is referred here by Hessler: F. oppositifolia was observed by Graham in the environs of Bombay; by Roxburgh, Wight, and Drury, on the banks of rivulets as far as Bengal, the fruit having several equidistant ridges, and with the seeds and bark employed medicinally; by Blanco, on the Philippines, "F. hispida" being regarded as not distinct (Pers., and Steud.).

Colocasia Indica of the Siamese countries. The "st'hulakanda" whose root is enumerated as esculent by Susrutas sutr. 46, — is referred here by Hessler: C. Indica according to Drury "is cultivated in Bengal for its esculent stems and small pendulous tubers," one variety having "dark-coloured petioles, but they seldom produce ripe seeds;" is described by Loureiro, as observed in Anam (Steud.); and the "seet-tung" of Burmah is regarded by Mason as perhaps identical.

Arum (*Amorphophallus*) *campanulatus* of Tropical Hindustan. Called in Sanscrit "kanda" or "kunda" (J. F. Wats.), in Telinga "muncha konda," in Malabar and Tamil "karuna," in Hindustanee "ol" (Drur.), in Burmah "wa" (Mason); in which we recognize the "kanda" having an esculent root according to Susrutas sutr. 46, — and the "karuna" compared with laughing by Jayadevas i. 31: A. campanulatus was observed by Rheede xi. pl. 18 in Malabar; by Gibson, and Graham, cultivated "to a considerable extent about Surat," also in the environs of Bombay, and "its large tuberous roots" eaten by the natives; by Powell, in the Punjaub; by Roxburgh, Wight, and Drury, as far as Bengal, the flowers small, sessile on the ground, exhaling a carrion-like odour, and appearing when there are no leaves, roots very nutritious, and in the crude state employed medicinally; by Mason, "exotic" in Burmah, very generally cultivated by both Karens and Burmese for its "much esteemed" root which is "like a yam." The same figures of Rheede and Rumphius are quoted by Graham 1624 for "a very common plant" throughout the Concans, "stemless" with leaves appearing "in July," supra-decompound and on long petioles, the scape "at the commencement of the rains, and has a most unpleasant smell."

Pothos (*Scindapsus*) *officinalis* of Eastern Hindustan and Burmah. A rooting epiphytic perennial called in Sanscrit "vushira" or "shreyusee" or "kupi-vullee" or "kolu-vullee" or "kuri-pippulee" or "guja-pippulee" (Lindl.), in Bengalee "guj-pippul," in Tamil "attie-tippilie," in Malabar "auna tippilie" (Drur.); in which we recognize the "sreyasi" or "kapivalli" or "kolavalli" or "karipippali" or "gajapippali" of Susrutas chik. 2 to 15: — S. officinalis was observed by Roxburgh, and Wight, from Calicut to Bengal, and at Midnapore cultivated for its fruit, which is cut into transverse pieces, dried, and used medicinally (Drur.); by Mason v. 505, wild in the forests of Burmah.

Maranta dichotoma of Tropical Eastern Asia and the Malayan archipelago. A Scitamineous

was observed by Rheede x. pl. 54 in Malabar; by Graham, in "the Concans;" by Fleming as. res. xi. 178, and Wight, in other parts of Hindustan, its velvety leaves mixed with rice "to alleviate the bloody flux" (Lindl.); by Mason, indigenous in Burmah. Westward, is known to grow in Austral Africa (Pers.) and in dry and sandy situations as far as Senegal (tent. fl. Seneg., and Benth. fl. nigr.); was on the West Indian seashore before the visit of Sloane i. 218; was observed by Macfadyen in dry situations on the lower portion of Jamaica (A. Dec.).

Euphorbia tirucalli of Tropical Hindustan. The *Indian tree-spurge*, a small tree with swollen green branchlets in place of leaves, is called in Bengalee "lunka-sij" or "lunka-shij," in Tamil "tirucalli" (J. F. Wats.), in Tagalo "catuit" (Blanco): the "amara" of Susrutas chik. 25 to 37, — is referred here by Hessler: E. tirucalli was observed by Rheede ii. pl. 44 in Malabar; by Graham, used for hedges in Guzerat and "common about villages in the Deccan and Concan," also by myself; by Buchanan, Roxburgh, and Ainslie, as far as Bengal, employed medicinally, and on the Coromandel coast for hedges (Drur.); by Blanco, on the Philippines, supposed to unite broken bones; but flowers not met with, by myself in wild situations there; is termed "ossifraga lactea" by Rumphius vii. pl. 29. Westward, was observed by Delile in a garden at Cairo.

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plant called in Sanscrit "vula" or "vula-hwa" or "ghata" or "godunika" or "kulyaninee" (J. F. Wats.), in Bengalee "mookto-patee" or "madarpatee" or "pattee patee" (Drur.), in Burmah "then" (Mason), in Tagalo "tagbactagbac" (Blanco); in which we recognize the "g'hata" or "godanika" or "kalyanini" of Susrutas chik. 16 to kalp. 6: — M. dichotoma was observed by Colebrooke as. res., and Roxburgh, from Coromandel to Bengal, the mats called "sital-pati" made of the split stems; by Mason v. 521, indigenous in Burmah, and mats made of the split stems by the natives; by Loureiro i. 11, in Anam; by Blanco, on the Philippines; by Forster prodr. 3, as far as Mallicollo in the New Hebrides (Pers., and Steud.). By Nimmo, was brought from Bengal to the environs of Bombay (Graham).

Asparagus racemosus of Tropical Hindustan. A straggling scandent shrub called in Sanscrit "satavari" (Ell.), in Telinga "satavari" or "pilli-tega" or "pillipichara," in Tamil "shadavari" or "tannir-muttan," in Malabar "shatavali," in Bengalee "sat-muli," in Hindustanee "shakakul" (Drur.); in which we recognize the "satavari" whose root is prescribed by Susrutas sutr. 16 to chik. 26: — A. racemosus was observed by Roxburgh, Ainslie, Wight, and Drury, from the Deccan to Travancore, perfuming the air with its fragrant flowers, and the bark and leaves employed medicinally.

Asparagus sarmentosus of Southern Hindustan. A scandent armed shrub called in Bengalee "sooti-mooli" (J. F. Wats.), in the environs of Bombay "satawree" (Graham); and possibly the "satavari" in question: — A. sarmentosus was observed by Rheede x. 10 in Malabar; by Graham, "in gardens as an ornamental plant, Deccan and Concans;" by Burmann z. 124, on Ceylon; its roots according to Ainslie are pickled, also boiled in oil, and employed medicinally, and according to Modeen Sheriff, when dried and split are the "sufed mush" of the bazaars of Southern India (Drur.): in the candied "state they are often brought from China" (Graham).

Scirpus kysoor of Hindustan. A rush called in Bengalee and Hindustanee "kesoor" or "kesooree" or "kesooriya" (J. F. Wats.); and the "kaseru" whose root is commended by Susrutas sutr. 46 to chik. 22, — is referred here by Hessler: S. kysoor was observed by Graham "in the beds of rivers both Concans;" by Roxburgh, hort. beng. 6, Piddington, and Birdwood 78, as far as Madras and Bengal. (Compare the "kuseeroo" Cyperus rotundus, J. F. Wats.)

Andropogon (Lipeocercis) serratus of Tropical Hindustan. A grass called in Sanscrit "uguree" or "guree" or "guraguree" or "khuraguree" or "khura" or "venee" (J. F. Wats.); in which we recognize the "agari" or "gari" or "garagari" or "k'haragari" or "k'hara" or "veni" of Susrutas chik. 18: — A. serratus was observed by Law, Nimmo, and Graham, "near Dharwar," also in the Concans; by Retz obs. v. 21, and Roxburgh, as far as Bengal.

Marsilea dentata of Tropical Hindustan. The "chuchu" of Susrutas sutr. 46, — is referred here by Hessler.

Salvinia cucullata of Tropical Hindustan and Burmah. A Cryptogamous leafy aquatic: the "talapatri" or "putrasreni" or "mushika" or "mushikaparni" of Susrutas sutr. 36 to chik. 18, — is referred here by Hessler: S. cucullata was observed by Graham in the environs of Bombay; by Roxburgh, in Eastern Hindustan; and by Mason, in Burmah.

Lycopodium imbricatum of Hindustan. The "grishti" or "mad'huparnika" of Susrutas sar. 10, — is referred here by Hessler.

Heinionitis cordifolia of Eastern Hindustan and Burmah. A fern: the "atiguha" or "kalasi" or "prit'hakparni" of Susrutas sutr. 36 to chik. 21, — is referred here by Hessler: H. cordifolia was observed by Roxburgh in Eastern Hindustan; and by Mason, in Burmah.

Spondias acuminata of Tropical Hindustan. A species of *hog-plum*, a middle-sized elegant tree called in the environs of Bombay "ambut" or "ambada" (Graham), in Bengal "amra" or "amla," in Sanscrit "amrataca" or "pitana" or "capitana" (W. Jones); and the "amrata" or "pitana" or "kapitana" of Susrutas, — may be compared: S. acuminata is perhaps the tree bearing fruit of the size of a large Damask prune seen by Ebn Batuta 9 in Hindustan; was observed by Graham "on the hills near Kennery caves, not common," its fruit "about the size of a chicken's egg;" by Roxburgh, in Eastern Hindustan.

Sesbania grandiflora of the Hawaiian Islands. Called in Sanscrit "agastia" or "buka" or "vuka," in the Taleef Shereef "agust" or "agusti," in Bengalee "augusta" or "buko," in Hindustanee "agast," in Tamil "agathi" or "agati" (J. F. Wats.), in Telinga "anisay" (Drur.) or "tella-avisi" (Ell.), in Burmah "pouk-ban" (Mason), in Tagalo "caturai" (Blanco); in which we recognize the "agasti" or "vaka" of Susrutas sutr. 46; — S. grandiflora was observed by Rheede i. pl. 51 in Malabar; by Graham, in the environs of Bombay, "generally found" about temples and villages, cultivated for "its large flowers and pods, both of which are eaten by the natives;" by Roxburgh, and Wight, in gardens as far as Travancore and Bengal, employed medicinally by the natives (Drur.); by Mason, "exotic" in Burmah, "seen in perhaps every town and village," its pods "a favourite vegetable with the natives;" by Blanco, on the Phillippines, cultivated by the natives and its flowers cooked and eaten; is described by Rumphius i. pl. 77; was observed by myself under cultivation in Hindustan and throughout the Malayan archipelago, indigenous only on the Hawaiian Islands, where I found it usually trailing, but sometimes a small tree like the cultivated form. By Polynesian colonists, was carried to the Society and "Botanices" Islands (Pers.); and by European colonists has been carried back to the Hawaiian Islands, observed by myself in the gardens of residents. Westward from Hindustan, the "dolichos arboreus" or "seseban" seen by Forskal p. 134 under cultivation in Yemen, is referred here by Steudel.

Mucuna prurita of Tropical Eastern Asia. The *cowitch* is an annual twining bean-like plant called in Sanscrit "atmagupta" or "alkushee," in Bengalee "alkushee," in Tamil "poonaykali" or "peelia-dooghoo-kaila," in Telinga "peeliadagoo-kaila," in Hindustanee "kiwach" (J. F. Wats.), in Burmah "khwæ-læ" (Mason), in Tagalo "lipai" or "buquitquit" (Blanco); in which we recognize the "atmagupta" of Susrutas sutr. 36 to chik. 26; — M. prurita was observed by Rheede viii. pl. 35 in Malabar; by Graham, in the environs of Bombay, "one of the commonest plants in hedges and jungly tracts during the rains," the "pod shape of the letter S, clothed with stinging hairs;" by Roxburgh, Ainslie, and Wight, as far as Bengal and Dheyra Dhoon, employed medicinally by the natives, sometimes as a mechanical anthelmintic (Drur.); by Mason v. 490, in Burmah, "very common in the Karen jungles from Mergui to Toungo;" by Blanco, on the Philippines.

Adenanthera pavonina of Tropical Eastern Asia. A Leguminous tree called in Sanscrit "kambhoji," in Bengalee "ranjuna," in Hindustanee "ranjana" (J. F. Wats.), in Telinga "bandi gooroovinza," in Tamil "anai-kundamunie" (Drur.), in Burmah "rwæ-gyee" (Mason); in which we recognize the "kamboji" prescribed by Susrutas chik. 19 to 25, — and the "rochana" pigment of Kalidasa ragh. xvii. 24: A. pavonina was observed by Rheede vi. pl. 44 in Malabar; by Gibson, and Graham, in gardens around Bombay, but said to grow "wild in some parts of Guzerat and Kandesh," its scarlet seeds "used as weights" and "worn by women as beads," its wood yielding a dye used by "Bramins for marking their foreheads runjuna;" was observed by Roxburgh, Ainslie, and Wight, as far as Travancore and Bengal, the inner wood of the larger trees of a deep red colour (Drur.); by Mason v. 511 to 522, indigenous in Burmah, its wood hard and valuable, and its seeds "in common use by the Burmese" for weights.

Jambosa vulgaris of Tropical Eastern Asia. The *rose apple* has Arabic and Persian names (A. Dec.), is called in Sanscrit "jambu," in Tamil "jambu-nawel-marum" (J. F. Wats.), in the environs of Bombay "jamblee" or "gulab jamb" (Graham), in Hindustanee "gulab jamun" (Drur.); in Tagalo "yambo" or "macupa" (Blanco); in which we recognize the "jambu" of Susrutas sutr. 16 and nid. 14 to chik. 18, — having according to Kalidasa vicram. 4 shady branches and luscious roseate fruit: J. vulgaris was observed by Rheede i. pl. 17 in Malabar; by Graham, "commonly cultivated" around Bombay; by Roxburgh, Wight, and Ouseley, as far as Bengal; and by Moon, on Ceylon. Farther East, a "kind of apple very similar to a pomegranate full of juice and sweet" was seen in the country around Ava by Nicolo Conti, but as known to Mason v. 450, J. vulgaris is enumerated as "exotic" in Burmah and not cultivated by the natives; was observed by Wallich on Penang; by Blume, under cultivation on Java; by Loureiro, in Anam and the adjoining countries; by Navarrete in 1653, the "xambos of Malacca having the taste and smell of a fragrant rose" at Manila, by Blanco also on the Philippines, a tree nine to twelve feet high. Westward, was observed by myself under cultivation on Zanzibar. By European colonists, was carried to the Mauritius Islands (Boj.); to the West Indies (Descourtilz), to Brazil, observed there by myself; and to the opposite African coast (Hook. p. 359).

Mukia scabrella of Equatorial Africa. A climbing Cucurbitaceous vine called in Burmah "thabwot-kha" (Mason); and the "gavakshi" prescribed by Susrutas sutr. 36 to kalp. 7, —is referred here by Hessler: M. scabrella was observed by Rheede viii. pl. 13 in Malabar; by Graham, "common about Bombay in the rains," the "fruit size of a pea, smooth;" by Roxburgh, and Wight, in Eastern Hindustan; and by Mason, in Burmah. Westward, was observed by Grant on the banks of the Nile below Lat. 5°. Transported to Europe, is termed "cucumis maderaspatanus" by Linnæus (Graham).

Foeniculum panmorium of Northern Hindustan. A species of *fennel* called in Persian "badian," in Hindustanee "sonf" (Royle), in Arabic "razeeanuj." in Sanscrit "mudhoorika" or "mudoorika," in Bengalee "pan-muhoree" or "panmuhori" (J. F. Wats): the "misi" or "mishi" of Susrutas chik. 38, — is referred here by Hessler: F. panmorium was observed in Hindustan by Roxburgh ii. 95, Piddington, and Royle him. 229, having fruit "exactly as in F. vulgare and with the same taste," and employed medicinally "as a warm aromatic and carminative" (Lindl.). Westward, the "razianadsh" is mentioned by Ebn Baitar, and other Arab writers.

Anethum sowa of Northern Hindustan. A species of *dill* called in Sanscrit "misreya" or "missreya" or "shaleya," in Hindustanee "sowa" (J. F. Wats.) or "suva soyah," in Bengalee "soolpha," in Telinga "sompa," in Tamil "satha-cooppa" (Drur.), in Burmah "sa-myeik" (Mason); in which we recognize the "saleya" of Susrutas sutr. 38 to chik. 17: — A. sowa was observed by Graham p. 248 at Bombay, "extensively used in native cookery and medicine;" by Roxburgh ii. 96, Ainslie, and Wight, under cultivation in the peninsula as far as Bengal, the seeds sold in every bazaar, forming one of the chief ingredients in curry-powder, yielding besides a valuable oil; by Mason, "exotic" in Burmah, often cultivated by the natives, and "possessing similar aromatic and carminative properties" with dill.

Hydrocotyle Asiatica of Tropical Africa and Asia. A species of *penny-wort* called in Sanscrit "bheka-purni" or "manduka-parni" (Pidd.), in Telinga "babassa," in Tamil "vullarei," in Bengalee "thulkuri" (Drur.), in Tagalo "taquip suso" or "taquip cohol" (Blanco); in which we recognize the "b'hekaparni" or "mandukaparni" prescribed by Susrutas sutr. 46: — H. Asiatica was observed by Rheede x. pl. 46 in Malabar; by Graham, "in moist shady places" in the environs of Bombay; by Roxburgh, Wight, and Drury, as far as Travancore, the leaves employed medicinally by the natives; by Horsfield, on Java and considered diuretic; by Loureiro, in Anam (Spreng.); by Blanco, on the Philippines and well known to the natives; by Rumphius v. pl. 169, also in the Malayan archipelago; is known to grow in Australia West and East, and as far as Tasmania and New Zealand (J. D. Hook., and A. Dec.). Westward from Hindustan, in Abyssinia (A. Rich.), the Mauritius Islands, Austral Africa (herb. Dec.), and as far as Guinea and Senegal (fl. Nigr.). Probably by European colonists, was carried to Rio Janeiro and Chili (Schlecht.).

Vangueria edulis of Madagascar. A small Coffeaceous tree called on Madagascar "voua-vanga" (Boj.), in Sanscrit "kurahata" or "kurahatuka" or "grunthiphula" or "chhurduna" or "pindeetuka" or "shulya" or "shulyuka" (J. F. Wats.), in the environs of Bombay "aloo" (Graham); in which we recognize the "karahata" or "grant'hip'hala" or "ch'hardana" or "pinditaka" or "salya" or "salyaka" of Susrutas sutr. 36 to chik. 18: — V. edulis was observed by Gibson, Law, Auld, and Graham, seemingly wild and "very common" on "the Ghauts and throughout the Concan," the Southern Mahratta country, and Kandesh, its fruit size of an apple "eaten both raw and roasted, but" far from palatable; is known to occur also in China (Rohr., and Steudel). Westward, was observed by Bojer on Madagascar, and was carried to the Mauritius Islands where it has become naturalized.

Eclipta prostrata of Tropical Africa? A weed called in Egypt "sa'deh" (Del.), in Yemen "tolak" (Forsk.), in Sanscrit "brinraj," in Hindustanee "brinraj" or "bhringraj" (J. F. Wats.) or "brinraj bungrah," in Bengalee "keshooryia," in Tamil "kaiantagarie" or "kursalenkunnie," in Telinga "goontagelinjeroo" (Drur.), in the environs of Bombay "hungrah" or "maaka" (Graham), in Japan "takasabro" or "kavatisó" (Thunb.); in which we recognize the "b'hringa" or "b'hringaraja" of Susrutas chik. 25 to kalp. 8, — and "bhringaras" of Harivansa 78: E. prostrata was observed by Rheede x. pl. 41 in Malabar; by Graham, "a common weed" in the environs of Bombay, sometimes eaten by the natives "as a potherb;" by Roxburgh, Ainslie, and Wight, in other parts of Hindustan, and employed medicinally by the natives (Drur.); by Loureiro, in Anam, employed for blackening the hair; by Beechey's Expedition, in China (Hook. and Arn.); by Thunberg, in Southern Japan; is known to occur on the Moluccas and the Ladrone Islands (Endl., and A. Dec.); was observed by myself in the Malayan archipelago, and carried by the natives as far as the Feejeean Islands. Westward from Hindustan, was observed by myself on Zanzibar; by Drège, in Austral Africa; by Forskal, in Yemen; by him, and Delile, in Egypt; and by Aucher, in Palestine. By European colonists, as verified by myself, was carried to the Hawaiian Islands; probably also to Peru and Southern Brazil, seen by myself only in cultivated ground; and to the West Indies (Pers.). "E. erecta" is regarded by Roxburgh as not distinct.

Convolvulus (*Batatas*) *paniculata* of Tropical shores from the Atlantic to the Malayan archipelago. A twining perennial called in Sanscrit "vidaree" or "kroshtree" or "ksheeruvidaree" or "ksheerushookla" (J. F. Wats.), in Telinga "matta-paltiga," in Bengalee "bhoomi-koomra" (Lindl.), in Tagalo "puntaspuntas" (Blanco); in which we recognize the "vidari" or "kroshtri" or "kshiravidari" or "kshirasukla" whose root is prescribed by Susrutas sutr. 46 to chik. 30: — B. paniculata was observed by Rheede xi. pl. 49 in Malabar; by Graham, around Bombay, flowering "in the rains;" by Roxburgh, in Eastern Hindustan, its large turnip-shaped roots eaten by cattle, and employed medicinally by the natives (Drur.); by Mason, indigenous in Burmah; is known to grow on Java and as far as Australia (Lindl.); was observed by Blanco frequent on the Philippines, the root employed by the natives as a purgative. Westward from Hindustan, was received by Jacquin from Mauritius (Steud.); is known to grow also in Tropical Africa and America (Lindl.).

Solanum verbascifolium of Madagascar and the Mauritius Islands? A mullein-leaved shrub called in Sanscrit "lavana-bhantaca" or "samasht'hila" or "gandira," in Bengal "lona-bhant" or "sulatiya" (W. Jones); in which we recognize the "gandira" prescribed by Susrutas chik. 46: — S. verbascifolium was observed by Lush near Dharwar, and is probably the unarmed species seen by Gibson "in Deccan gardens" (Graham); was observed in Bengal by W. Jones as. res. iv. 259, but by Roxburgh in gardens (Pers.); by Mason, in Burmah, enumerated as though indigenous; by Loureiro i. 128, in Anam; by Blanco, sparingly on the Philippines and not known to the natives, with the slight exception that it is called "noog noog" on Zebu. Westward, is known to grow on Madagascar and the Mauritius Islands (Scop., and Pers.). By European colonists, was carried to Tropical America (Pluk. alm. pl. 316, and Pers.).

Ocymum gratissimum of Tropical Arabia. The *shrubby basil* is called in Yemen "hobokbok" (Forsk.), in Malabar "cattu tirtava" (Rheede), in Bengalee "ram-tulsee" (J. F. Wats.), in the environs of Bombay "ram-toolsee" (Graham): the "kut'heraka" or "k'harapushpa" prescribed by Susrutas sutr. 36 to chik. 17, — is referred here by Hessler: O. gratissimum was observed by Rheede x. pl. 86 in Malabar; by Graham, "common in gardens" in the environs of Bombay, "flowering chiefly in the rains, very fragrant;" by Roxburgh, Piddington, and Voight, as far as Bengal; and by Burmann z. pl. 80, on Ceylon. Westward, was observed by Forskal wild among the mountains of Yemen.

Ocymum canum of Tropical Hindustan and Burmah. The *hoary basil* is annual and called in Sanscrit "arjaca" (Ainsl., and Pidd.); and the "arjaka" prescribed by Susrutas sutr. 36 to chik. 17, — may be compared: O. canum was observed by Graham in the environs of Bombay; by Roxburgh iii. 15, in Eastern Hindustan; by Mason, in Burmah, enumerated as indigenous. Westward, was observed by Grant near cultivated ground in Lat. "2° N." on the Nile.

Barleria prionitis of Tropical Asia, from Arabia to Burmah. Shrubby with stellate thorns and large yellow flowers, called in Sanscrit "kuruntuka" (Pidd.), in Bengalee "kantha-jathi," in Tamil "shem-muli," in Telinga "mullu-gounta," in Malabar "coletta-veetla" (Drur.), in the environs of Bombay "kholeta" (Graham); in which we recognize the "kurantaka" or "kuruntaka" prescribed by Susrutas sutr. 46 to chik. 25: — B. prionitis was observed by Rheede ix. pl. 41 in Malabar; by Graham, "every where" in the environs of Bombay; by Roxburgh, Ainslie, and Wight, as far as Bengal, employed medicinally by the natives (Drur.); by Mason, in Burmah; and Westward, by Forskal p. 6 among the mountains of Yemen.

Boerhaavia diffusa of Tropical America? A diffuse annual called in Tamil "mookaretti," in Telinga "ataka-mamidi," in Bengalee "gada-poorna" or "swhet-poorna," in Malabar "tameerama" or "taludama," in Hindustanee "tikri" (Drur.), in Tagalo "paan balivis," in Yloçano "tabtabocol ti Nuang" (Blanco); and according to Hessler, mentioned as a potherb by Susrutas sutr. 46 to chik. 38: — B. diffusa was observed by Rheede vii. pl. 46 in Malabar; by myself, in the environs of Bombay; by Graham "common every where but particularly abundant in the Deccan," sometimes eaten by the natives as greens; by Burmann ind. pl. 1, Roxburgh, Ainslie, Wight, and Drury, a weed "common in all parts of India," its pulverized root employed medicinally; by Blanco, on the Philippines, common around stone buildings in the province of Batangas, the dried root employed medicinally. Westward from Hindustan was observed by Forskal p. 3 in Tropical Arabia; by Delile, in Upper Egypt; by Baldwin, as far North as Anastatia Island Lat. 30° in Florida; is known to grow also on Jamaica and as far as Peru (Pers.); was observed by myself, exotic and clearly carried by the natives to Metia, Taheiti, the Samoan, Tongan, and Feejeean Islands.

Euxolus polygamus of Hindustan and Burmah. A diffuse herb called in Sanscrit "tundooleeya" (Pidd.), and is the *common bajee* of Bombay called "choolae" (Graham): the "tandula" of Susrutas sutr. 16 to chik. 27, — is referred here by Hessler: E. polygamus is termed "blitum indicum album" by Rumphius v. pl. 82; was observed by Graham "much cultivated" in the environs of Bombay; by Roxburgh, hort. beng. 67, and Piddington 218, as far as Bengal, according to Long

sometimes employed medicinally (Drur.); by McClelland, in Burmah (Mason v. 472). Westward, was received "from Africa" by Moquin and A. Decandolle.

Celosia cristata of Tropical Eastern Asia. The *cock's-comb* is called by the Greeks "sathōri" (Forsk.), in Sanscrit "deepya," in Bengalee "deepuk" or "lal-moorga," in Hindustanee "lal-moorga" (J. F. Wats.), in the environs of Bombay "lal-moorga" (Graham), in Burmah "kyet-mouk" (Mason), in Tagalo "palongpalongan" (Blanco); in which we recognize the "dipya" of Susrutas sutr. 29 to chik. 18: — C. cristata is described by Rumphius v. pl. 84; was observed by Graham "cultivated in gardens" in the environs of Bombay; by Roxburgh, in Eastern Hindustan; by Mason v. 431 to 780, indigenous in Burmah, cultivated besides "by the natives," and the "kyet-yet" variety or species, having a long drooping panicle either red or yellow, a highly "elegant plant when cultivated by the Karens;" by Blanco, in gardens on the Philippines; is known to occur in China (Royle him. 116); was observed by Kaempfer, and Thunberg, attaining superior size and beauty in Japan, and degenerating elsewhere. Westward, from Hindustan, by Forskal, in Yemen, and in gardens at Constantinople; and was cultivated in Europe before the days of Lobel, and Bauhin. By European colonists, was carried to Northeast America, where it has become a frequent garden flower.

Alternanthera sessilis of Tropical Asia and Africa. A depressed annual called in Egypt "hamel" (Forsk.) or "hamoul" (Del.), having a Sanscrit name (Pidd.), and called in Malabar "coluppa" (Rheede): the "pattura" prescribed by Susrutas chik. 19, — is referred here by Hessler: A. sessilis was observed by Rheede x. pl. 11 in Malabar; by Graham, "a common weed" around Bombay; by Roxburgh, in Eastern Hindustan; by Burmann z. pl. 4, on Ceylon; by Mason, in Burmah, enumerated as indigenous. Westward, the "kavar el abid" seen in Yemen by Forskal p. cii, may be compared: A. sessilis is known to occur as far North as the Caspian (A. Dec.); was observed by Hasselquist at Jerusalem; by Forskal p. 28, and Delile, in Lower Egypt; by Desfontaines, in Barbary (Steud.); and is known to occur in Western Equatorial Africa (Benth. fl. nigr.). By European colonists, was carried to the Mauritius Islands, Brazil, and the West Indies (Pluk. alm. pl. 133, and Moq.).

Marsilea quadrifolia of Tropical Eastern Asia? A Cryptogamous Oxalis-leaved annual called in Egypt "qouayeta" (Del.), in Sanscrit "chittoor-dulla" (J. F. Wats.), in Japan "ukingusa" (Thunb.): the "sunishannaka" of Susrutas sutr. 19 to 46, — is referred here by Hessler: M. quadrifolia was observed by Graham on the "margins of tanks" in the environs of Bombay; by Ainslie 252, in other parts of Hindustan; by Thunberg, frequent in the rice-grounds of Japan; by myself, on the Feejeean, Taheitian, and Hawaiian Islands, introduced with taro-culture and by Polynesian colonists. Westward from Hindustan, was observed by Delile in rice-grounds and moist situations in Egypt: the "lens palustris altera" sent to Matthioli by Cortusi, and "lemma" of Dalechamp 1014, are referred here by Sprengel.

"1132 A. D." (palm-leaf ann. Jag., and W. W. Hunter, Stirling giving 1131), Suvarna Kesari succeeded by Chorganga, now king of Orissa and head of the Ganga-Vansa or Gangetic dynasty.

Harivansa * is enumerated among the "five hundred" authors at the court of Sri Boja — (Langlois introd. p. vii).

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* *Ehretia serrata* of Eastern Bengal and Nepaul. A Cordia-like tree called in Bengalee "kala-oja," in Nepaul "nulshima" (Drur.); and from early times, its tough light durable wood used for sword-handles: the "caliyaca" of Harivansa 126 — may be compared: E. serrata was observed by Roxburgh, and Wallich, from Eastern Bengal to Chittagong, Dheyrah Dhoon, Nepaul, and Bhootan, growing "both on mountains and in valleys," the flowers emitting "a powerful honey-like smell" (Drur.).

Jasminum hirsutum of Tropical Hindustan. A climbing shrub called in Bengalee "koondo," in Sanscrit "koonda" or "koondum" (J. F. Wats.); in which we recognize the "cunda" of Harivansa 137, — teeth compared with its flowers by Jayadeva; J. hirsutum was observed by Nimmo, and Graham, in the "Southern Concan," and besides "in gardens," its flowers "in terminal umbels, large, pure white;" by Burmann pl. 3, Retz (Pers.), and Roxburgh, as far as Calcutta.

Phoenix paludosa of Bengal and Burmah. The *marsh date-palm*, slender-stemmed and elegant-looking, is called in Burmah "then-boung" (Mason): the "hintala" of Harivansa 96 — is referred here by Langlois: P. paludosa was observed by Roxburgh "characteristic of the Sunderbunds" or mouths of the Ganges, the smaller trunks used for walking-sticks, larger ones for rafters, and fronds for thatch (Drur.); was observed by Mason, as far as Burmah.

Barleria buxifolia of Tropical Hindustan. A shrubby spreading plant with large beautiful pink flowers: the "couravaca" rouge of Harivansa 126 — may be compared: B. buxifolia was observed by Rheede ii. pl. 47 in Malabar; by Nimmo, in "the Concans" as far as Bombay; by Buchanan, and Roxburgh, in other parts of Hindustan.

Barleria ciliata of Tropical Hindustan. Called in Sanscrit "kuruvuka" (Pidd.), and this or

Ipomoea reptans of Tropical Africa and Asia. The *water convolvulus* is called in Tagalo and Pampango "cangcong," in Bisaya "tancong" (Blanco), in Malabar "ballel" (Rheede); and the "calambica" of Harivansa 137 — is referred here by Langlois: I. reptans was observed by Rheede xi. pl. 52 in Malabar; by Graham, "margins of tanks and other moist places throughout the Concans" to and beyond Bombay, the "flowers rose-coloured;" by Roxburgh, in other parts of Hindustan, and is termed "olus vagum" by Rumphius v. pl. 155; was observed by Loureiro, in Anam; by Blanco, on the Philippines, slightly purgative but cooked and eaten by the natives, the flowers white. Westward of Hindustan, by Forskal p. 44, in Yemen, "in rivulis repens" its flowers "violacei;" by Grant, from the "Equator and 2° N." to "Nile edges 18° N."

1133 A. D. (= 1082 + "50 yrs. 5 mo. 3 days" of Deccan records, Mackenzie, and Wilford as. res. ix. 157), end of the reign of raja Bhoja.

One hundred and sixty-third generation. May 1st, 1134, onward mostly beyond youth: the Jewish writers, Abraham ben David, R. Abraham Ibn Ezra, Moses Ibn Ezra, Jehuda Halevi, Jehuda ha-Abel Hedessi, Menahem ben Solomon: the Arab writers, Ebn-altalmidh, Mohammed Kaisi, Humenus, Abu'l Salt Omaya d. 1151, Albucasis, Abul Abbas Elhafits, and Artefius: the Greek writers Anna Comnena d. after 1137, Bryennius d. after 1137, Joannes Antiochenus, Manasses d. about 1150, Joannes Tzetzes d. about 1150, Aristenus d. 1166: William of Malmsbury; Geoffrey of Monmouth; Arnoldus Brixiensis, Elizabeth of Germany, Ekbertus Treverensis: the scholastic theologians, Hugo de S. Victore, Richardus de S. Victore, and Petrus Lombardus.

"1135 A. D. = 13th year of the 'thian-hoei,' the name being continued by Hi-tsoung of the Kin," ruler of Northern China — (Chinese chron. table).

"1136, October" (Nicol.), a synod at Burgos in Spain. For the introduction of the Roman ritual: and to reconcile the kings of Navarre and Castile.

"1138 A. D." (De Wailly pl. vi. 6), in manuscripts from this date, the full-stop or period (.) placed at the end of sentences.

"1139, April 20th" (Alst., and Nicol.), tenth general ecclesiastical Council. Assembled at the Lateran in Rome, "a thousand" bishops being present, "For the re-union of the church. Thirty canons were made, similar to those" adopted at Rheims: and excommunication decreed against whoever should strike a priest, removable only by the pope. Monks were forbidden to exercise the art of medicine (Humb. cosm. ii. note).

"Aug. 29th" (Nicol.), a synod convened at Winchester by the bishop Henry of Blois. Against his brother king Stephen, for requiring "the bishops of Ely, Lincoln, and Salisbury, to surrender their castles."

Maruta cotula of Europe and the adjoining portion of Asia. Called in the North of England *baldeyebrow* (E. Gillet), in some parts of Sweden "baldersbra" (Mallet), and the Anglo-Saxon baldar. herbe.* — is referred here by Cockayne: the "cotula" growing in towns and along

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other species in Bengal "curubaca" (W. Jones); the "kuravaka" trees of Harivansa 126, — Jayadevas vii. 23, with which according to Kalidasa ragh. ix. 32 to vikram. spring ornaments the woods with beauty, may be compared: B. ciliata as observed in Eastern Hindustan is described in hort. beng. 45 (J. F. Wats.).

Strobilanthus ciliata, perhaps not distinct from the preceding, is called in the environs of Bombay "karwee," is further described by Graham as an erect branchless shrub growing "in great abundance on the Ghauts, frequently covering acres of ground," its bright blue flowers appearing in October, a "most useful plant" to the natives, who employ the stems in "mud walls and for making fences," and "have a tradition that it flowers only once in ten years." Possibly was carried to the Mauritius Islands, for "Barleria lupulina" is suspected by Graham to be identical.

* *Centaurea nigra* of middle Europe. Called in Britain *knapweed* or *knob-weed* or *loggerheads*, in old manuscripts "clobbewed" (Prior): the Anglo-Saxon bolwes — is referred here by Cockayne: C. nigra is described by Linnæus; and is known to grow in meads in France and throughout middle Europe (Lam. fl. fr., Engl. bot. pl. 278, and Pers.), but according to Ledebour does not occur in Siberia (A. Dec.). By European colonists, was carried to Northeast America, where it continues in waste ground from Newfoundland throughout Eastern New England (Torr., and A. Gray).

Hippophae rhamnoides of Northern Europe and Asia and mountains farther South. A shrub called in Britain *willow-thorn* (Prior), in Norfolk (E. Gillet) by the Anglo-Saxon names wilgwilwle or wygywiwle — (Cockayne): H. rhamnoides is described by Linnæus; was observed by Scopoli in Carniolia; and is known to grow in stony mountainous situations in Central Europe, and farther North, only along the seashore in Sweden (Pers., Wahl., and A. Dec.). Eastward, is known to grow in Siberia (Hort. Belv., and Steud.).

Fucus nodosus of the North Atlantic. Called in Britain *tang*, in Danish "tag," in Frisian "mar-

roadsides, is mentioned by J. Jacobi de Manliis; the "cotula fetida," in the Ortus Sanitatis 81 as one of the two kinds of "butalmos" growing within cities; the "cotula," by Hermolaus Barbarus, and Matthioli: M. cotula is described by Brunfels i. 225, and Fuchsius 583 (Spreng.); is known to occur in waste places in Italy, Sicily, Barbary, the Canaries, Portugal, and throughout middle and Northern Europe nearly to Lapland (Ten., Boiss., Fries, and A. Dec.). Eastward, was observed by Chaubard, in the Peloponnesus; is known to occur in Abyssinia (A. Rich.), Persia (Dec.), around Caucasus and in the neighbouring portion of Siberia (Ledeb.). By European colonists, was carried to Madeira and the Azores (Dec., and Wats.); to Northeast America, where it has become frequent along roadsides; to Brazil and Buenos Ayres, occurring along the seashore (A. Dec.); to the Philippines, where it was found by Blanco hardly known to the natives, but called in Tagalo "higuis manoc," in Ylocano "tintatinta;" and to the Loo Choo, and the Bonin Islands (Hook. in Beech. voy. 265). Every part of the plant according to Lindley "is fœtid and acrid, blistering the skin when much handled."

Anthemis arvensis of Europe and the adjoining portion of Asia. Called in Britain *corn chamomile* (A. Gray), in Sweden "eckergras" or "balsebro" (Linn.), and probably the plant in question: — termed "chamæmelum inodorum" by C. Bauhin pin. 135, and Tournefort inst. 494, and known to occur in cultivated ground from Sweden throughout Europe (Gaertn. ii. pl. 166, engl. bot. pl. 602, and Pers.): observed by Linnæus in Sweden, as far as Scania; by Sibthorp, D'Urville, and Chaubard, in cultivated ground from the Peloponnesus to Cyprus. By European colonists, was carried to Northeast America, occurring according to A. Gray in "fields, New England and New York, sparingly introduced."

Bromus sterilis of Europe and the adjoining portion of Asia. Called in Greece "agriōvrōmōs" (Sibth.), and included among the weeds called in Britain *dravick* or *drake* or *drawk*, in Welsh "drewg," in Breton "draok," in Dutch "dravig," and perhaps the Anglo-Saxon ɛdroc of the Epinal glossary — (Prior p. 67 to 70): B. sterilis is termed "gramen avenaceum panicula sparsa locustis majoribus et aristatis" by Tournefort inst. 526; and is known to grow in Barbary and throughout middle and Northern Europe as far as Lapland and Iceland (Pers., and Wats.). Eastward, was observed by Sibthorp, and Chaubard, from the Peloponnesus to Constantinople.

Glyceria aquatica of Northern Climates. Called in Cambridgeshire *leed* or *white leed* (E. Gillet), and the Anglo-Saxon ʟɪd, — described by Camden as a sort of rank hay abounding in fens, is referred here by Cockayne: G. aquatica is described by Morison viii. pl. 6. f. 25; is termed "gramen aquaticum paniculatum latifolium" by Tournefort inst. 523; was observed by Savi in Italy; and is known to grow throughout middle and Northern Europe as far as Sweden (Pers., Dec., and Wats.). Eastward, was observed by Sibthorp around Constantinople; is known to grow in the Tauro-Caspian countries (Bieb.), and throughout Siberia (Gmel. ?, and Kunth). Farther East, is known to grow along the Saskatchewan to Lake Winnipeg (Hook.); and has been observed by myself in wet marshes from Lat. 46° near St. John to about 42° 30′ in New England. In the Southern Hemisphere, is known to occur in Australia (Kunth).

"The same year" (Blair), Lisbon captured from the Muslims by Alphonso earl of Portugal. Who was now proclaimed king.

"1142 A. D (= 1802d of Synmu," art de verif.), Sintoku succeeded by Konjei, eighth son of To-ba, and now dairo of Japan.

"1143 A. D." (Alst.), Joannes II. succeeded by his son Emanuel Comnena, fifty-third Byzantine emperor. Verses addressed to the emperor by Theodorus Ptochoprodromus are regarded as the earliest specimen of *modern Greek* (E. A. Soph.).

"Sept. 26th" (Nicol.), Innocentius II. succeeded by cardinal Guy de Castro of Tuscany, now Celestinus II., ninth pope. Conradus III. ruling Germany and Italy; and Louis VII., France.

"Oct. 1st" (Nicol.), a synod at Constantinople. Against the monk Niphon: — as also a second synod, on the ensuing "Feb. 22d."

"1144 A. D. = 14th year of the 'chao-king' of Kao-tsoung II., and 4th year of the 'hoang-tsoung' of Hi-tsoung" (Chinese chron. table), beginning of the Sixty-fourth cycle.

The Mangarevan or Gambier Islands colonized by Teatumoana, their first king, "twenty-five generations" before — the visit of Maigret (Hale ethnogr. expl. exp. 139). The first settlers are regarded by Hale as Rarotongans; — shown by examination of the language to this day spoken. The line of

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tag," corresponding to the German "dach" roof, and Anglo-Saxon thæcɛ thatch, from seaweed having formerly been used to cover houses — (Prior).

Porphyra laciniata of the sea-coast of Northern Europe. One of the seaweeds called in Britain *laver*, in Anglo-Saxon ʟæfɛr — (Prior).

Ulva latissima of Northern Europe. Included under the same names with the preceding seaweed — (Prior).

successive kings has been interrupted, Koa, the thirteenth on the list, becoming the head of a new dynasty: from him "the fourteenth in a direct line," Maputeva, was found reigning by Maigret.

Eleusine Indica of Equatorial Africa. A coarse weedy grass, having no Sanscrit name (A. Dec.), but called in Japan "smootali kusa" (Thunb.); carried to the islands of the Pacific as early possibly as this date: — observed by myself abundantly naturalized on Metia, Taheiti, the Samoan Islands, and Tongatabu; but on the Hawaiian Islands regarded by intelligent natives as introduced by the Whites (and admitted by residents to have increased within a few years). Westward, was received by Decaisne from Timor; was observed by Rumphius v. pl. 76 on Amboyna, and is known to occur on Luzon (Kunth); was observed by Thunberg in Japan; by Roxburgh, in Hindustan; used while young for feeding cattle; by Rheede xii. pl. 78, in Malabar; by Graham, as far as Bombay; by myself, at Muscat and on Zanzibar; by Forskal p. 18 (Steud.) among the mountains of Yemen; was received by Kunth from Egypt; was observed by Grant in Equatorial Africa, "as grazing for cattle the natives esteem it, though tough, more than any other species;" is known to grow as far as Guinea and the Cape Verd Islands (Benth. fl. nigr.). By European colonists, was carried to the Mauritius Islands (Boj.); to Southern Brazil (Nees fl. br.); to Northeast America before the visit of Michaux (Pers.), has become a frequent weed in our Middle and Southern States, was observed by Nuttall in gardens on the Arkansas, and seemingly indigenous along the Mississippi.

The remote island of Rapa also ascertained by Hale through the language, to have been peopled from Rarotonga: — and the intermediate islands, Raivaivai, Rurutu, and Rimatara, partly from Rarotonga and partly from Taheiti: the peopling of Tupuai having taken place within two centuries (see also Ellis res. Polynes. 281, and J. Williams miss. ent. 449).

The Paumotuan coral-archipelago is regarded by Hale ethnogr. expl. exp. p. 143 as more recently peopled than the surrounding high islands; otherwise, the Paumotuans would have taken possession of those high islands. Yet the language, though in part similar to the Taheitian, contains a peculiar element, "unlike any that we find elsewhere;" many of the words being "such as are usually original in a language." In the Western portion, the coral-islands are all inhabited as far as Hau or Bow; but on proceeding East, uninhabited ones are met with, increasing in number until the eight nearest the Mangarevan Group are all in that condition.

"March 12th" (Alst., and Nicol.), Celestinus II. succeeded by Gerard Caccianimico, cardinal of Santa Croce in Jerusalem and now Lucius II., tenth pope.

"In this year" (Neumann note to Vahram in Orient. transl. lond.), Edessa captured by the Turks. An elegy on the event composed by Nerses Clajensis, the Armenian patriarch.

"In or about this year" (Blair), the Aristotelian philosophy restored in Germany by Otho Frisingensis.

"1145, Feb. 27th" (Alst., and Nicol.), Lucius II. succeeded by abbot Bernard of Rome, or Eugenius III. eleventh pope.

As early possibly as this year (= 1225 + "3 + 3 + several years reign," addit. art de verif.), a *suspension bridge* six hundred feet long over the Apurimac, constructed of large woody vines by the Inca Mayta Capac; a novelty having great influence over the surrounding tribes.*

"1147, Feb. 26th" (Nicol.), a synod at Constantinople. The patriarch Comas was deposed.

"After Easter" (Nicol.), a synod at Paris. "On the errors of Gilbert bishop of Poitiers respecting the Trinity."

"The same year" (Blair), through the preaching of Bernard of Clairvaux, the Second crusade undertaken.

Carex paniculata of Europe and the adjoining portion of Asia. The natural tumps of this large sedge are called in Britain *hassocks* (Prior), in which we recognize the hassocum of the foundation-charter in the above year of Sawtrey abbey, — mentioned also in the attestation of Alex. Maufe, the "hassok" identified with the "ulphus" by Galfridus pr. pm., and the "hassokes" recorded respecting "the castle of Guysnes in 1465" (Way): C. paniculata is described by Linnæus; was observed by Savi in Italy; by Brotero, in Portugal; and is known to grow from Switzerland throughout middle and Northern Europe as far as Lapland (Pers., Dec., and Wats.; see C. Virginiana).

"December, or early in 1148" (Nicol.), in a synod at Treves, the writings of the abbess Hildegarde examined. — She died "in 1180" (Trithem., and Spreng.).

Polygonum persicaria of Europe and the adjoining portion of Asia. Called in Britain *peachwort* or *red-shanks* (Prior), in Greece "agria pipouria" or by the Turks "pere oti" (Sibth.): the

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* *Aristolochia fragrantissima* of the Eastern slope of the Peruvian Andes. A woody vine climbing to the tops of trees, and from early times employed by the Peruvians medicinally, applied bruised fresh to bites and stings of reptiles and insects, and its stems stripped of their bark used for ropes: — observed by Ruiz mem. pl., by Spanish colonists called "bejuco de la estrella" (Pers., and Lindl.).

razela of Hildegarde ii. 174—is referred here by Sprengel: the "cronesanke" of gloss. Harl. 978, is referred here by Cockayne; and the "persicaria" with a fuscous spot in the middle of the leaf is mentioned in Ortus Sanitatis 379: P. persicaria is described by Ruellius, Fuchsius, Lacuna, Dodoens, Lobel, and Gerarde; is termed "persicaria mitis maculosa et non maculosa" by Tournefort inst. 509; and is known to occur throughout middle and Northern Europe as far as Lapland (fl. Dan. pl. 702, Pers., and Wats.). Eastward, was observed by Forskal, and Sibthorp, frequent in moist places in Crete and around Constantinople; by Forskal, and Delile, at Alexandria and Rosetta on the Mediterranean border of Egypt; and is known to occur in the Tauro-Caspian countries (Bieb.). By European colonists, was carried to Iceland (Hook.); and prior to 1547, the "persicaria" or "herba maculata" to the West Indies (Ovied. gen. hist. xi. 2); thence perhaps to Florida (Chapm.) and throughout our Atlantic States, where it has become naturalized; was observed by Short in Kentucky; by Drummond, at Cumberland House in Central North America; and by myself, accompanying the introduction of cultivation at the Kooskoosky mission-station in Oregon; was also carried to Southeast Australia (Corder, and A. Dec.).

Cicuta virosa of Subarctic Climates. Called in Britain *cowbane* or *water-hemlock* (Prior): the cicula of Hildegarde ii. 159—is referred here by Sprengel; and the Anglo-Saxon "brocthung" of gloss. Laud. 576, is referred here by Cockayne: C. virosa is termed "sium alterum" by Dodoens 589, is described also by Thalius 33 (Spreng.); and is known to grow in Switzerland, and from France throughout Northern Europe as far as Lapland (Blackw. pl. 574, Hall. fl. Dan. pl. 208, Pers., and Wats.). Eastward, is known to grow in Siberia (Dec.). And farther East, in North America, in the wooded country from "Lat. 64° to 54°" (Hook.). The plant is a dangerous poison, causing according to Christison "true tetanic convulsions" and death (Lindl.).

Erodium cicutarium of Europe and the adjoining portion of Asia. A *stork's-bill* called in Germany "storcken schnabel" (Trag.), in Greece "kalōgĕrō" (Sibth.); in which we recognize the storckenschnabel of Hildegarde ii. 160:—E. cicutarium is described by Tragus i. pl. 113; is termed "g. cicutæ folio minus et supinum" by Tournefort inst. 269, "g. chaerophyllum" by Cavanilles iv. pl. 95; and is known to occur in waste and cultivated ground from Sweden and Russia throughout Western Europe (Curt. lond. i. pl. 51, Pers., and Wats.); was observed by Sibthorp, and Chaubard, from the Peloponnesus throughout the Greek islands; by Delile, seemingly wild near Cairo. By European colonists, was carried to Chili, where it has become naturalized (Hook., and myself); to California, where it is called *pin-grass* or by the Spaniards "alfilerilla," and its stem eaten (R. Brown jun.), has also become naturalized as far as the Great falls of the Columbia and the Rocky mountains (Hook.); to Northeast America, observed by Knieskern on the "shore of Oneida Lake" (A. Gray).

In or about 1148 A. D. (= 1648—"500 yrs." of Flacourt præf. and i. 16), Zaffe-Ramini or Zaffer-Amini, from the region around Mecca, settling at the Southern extreme of Madagascar;—where they continued to rule a province until conquered by the French.

Nymphæa Madagascarensis of Madagascar. A water-lily called "tantamou," the root esculent and well-flavoured,—and according to Flacourt i. 36 the flower "violette." This is doubtless the beautiful species with dentate leaves observed by myself in the pool or pond near the city of Zanzibar. By European colonists, carried to the Mauritius Islands and cultivated there (Boj., and Dec. syst. p. 50.

Voandzeia subterranea of Madagascar and the Comoro Islands. An annual Leguminous plant, called "voua-hanzou" in Madagascar, and cultivated there as early probably as this date:—observed there by Flacourt, and Bojer; and the exported pods containing esculent beans known in commerce as *African groundnuts*. By European colonists, the living plant carried to the Mauritius Islands (Boj.); "from Africa" to Brazil prior to 1658, under the name of "mandobi" and distinguished by Piso pl. 256 from the Brazilian kind (A. Dec. geogr. bot. p. 964); and thence to Surinam (Linn. jun. dec. xxxvii. pl. 17, and Pers.).

Cerbera tanghin of Madagascar. A tree called "voua-tanghine," the kernel of the fruit not larger than an almond but sufficient to destroy twenty persons, used in Madagascar as an ordeal,—but the practice is now discontinued (Lindl.): the tree was observed by Bojer everywhere in the forest, but on the Eastern side of the island only. Carried to the Mauritius Islands and cultivated there. But according to Lindley, "it is very doubtful whether this is" a distinct species from C. manghas.

Canarium harami of Madagascar. A tree called "harami,"—described by Flacourt i. 36. 97 as very large, yielding the fragrant balsamic resin called *tacamahaca* which is employed medicinally, and may even form a substitute for pitch; the timber besides suitable for ship-building. By European colonists, carried to the Mauritius Islands and cultivated there (Boj.).

Hydrogeton fenestralis of Madagascar. An aquatic perennial called "ouvirandran," the root as large as the thumb, esculent,—and commended by Flacourt i. 36. 4: observed by Bojer in rivers

and marshes around Tamatave and Ivoundrou. By European colonists, carried to the Mauritius Islands and cultivated there.

Strychnos spinosa of Madagascar. A bush called "voua-vountaka,"—the fruit according to Flacourt i. 36. 13 as large as a quince, with a gourd-like shell full of large flat seeds resembling those of nux-vomica and smaller, the juice and watery pulp agreeable when ripe: observed by Bojer on the margin of the forest throughout the Eastern coast and in the plain at Foulepointe. By European colonists, carried to the Mauritius Islands and cultivated there: and from transported specimens, described by Lamarck.

Agathophyllum aromaticum of Madagascar. A tree called "ravinsara;"—described by Flacourt i. 36. 24 as taller than the European laurel, the fruit, leaves, and young bark having the taste of cloves, and one of the best spices of the island, producing fruit only once in three years, when the tree is cut down by the natives to save the trouble of climbing. By European colonists, carried to the Mauritius Islands and cultivated there (Sonnerat, and Boj.); and from transported specimens, described by Jussieu, and Gaertner.

Buddleia Madagascarensis of Madagascar. Called there "seva,"—and described by Flacourt i. 36. 98 as a shrub or small tree, the leaves brownish-green above, cottony and white beneath, astringent and good to foment contusions and sprains, and boiled with "vin de miel" to stop diarrhœa. By European colonists, carried to the Mauritius Islands and cultivated in gardens (Boj.); to Ceylon, observed by Gardner escaping from cultivation (A. Dec.). From transported specimens, described by Vahl (Lam. pl. 69, and bot. mag. pl. 2824).

Terminalia fatræa of Madagascar. A small tree called "voua-fatré,"—described by Flacourt i. 36. 65 as yielding "la litemente ou le benjoin;" observed by Bojer at Tamatave and Foulepointe. By European colonists, carried to the Mauritius Islands and cultivated there: and from transported specimens, described by Decandolle prodr.

Terminalia badamia of Madagascar. A tree called "hatafang,"—observed by Bojer along the river Ivoundrou near Tamatave. By European colonists, carried to the Mauritius Islands and very generally cultivated: and from transported specimens, described by Decandolle prodr.

Alafia Thouarsii of Madagascar. A shrubby Apocynaceous vine called "voua-laffi."—The "laffa" is described by Flacourt i. 36. 120 as an "arbre" yielding very strong filaments, used by the Negroes for making fishing-lines. By European colonists, carried to the Mauritius Islands and cultivated there (Boj.).

Intsia Madagascarensis of Madagascar, the Seychelles, and Galega Island. A Leguminous tree called in Madagascar "intsi:"—the "marointsi" is described by Flacourt i. 36. 148 as good for stanching blood and stopping diarrhœa. I. Madagascarensis is described also by Petit-Thouars; by European colonists was carried to the Mauritius Islands (Boj.); and from transported specimens, is termed "tamarindus intsia" by Sprengel.

Mithridatea tambourissa of Madagascar and the Comoro and Mauritius Islands. An evergreen tree called in Madagascar "ambora:"—the "tamboure eissa" is described by Flacourt i. 36. 69 as bearing apples that open in fours, the pulp full of seeds covered with a thick orange-coloured skin that affords a dye like arnotto. M. tambourissa was observed also by Commerson; by Bojer, throughout Mauritius, in the dense and humid forest. From transported specimens, described by Jussieu gen., and Lamarck ill. pl. 784.

Ampalis Madagascarensis of Madagascar. An Urticaceous tree called "ampali,"—observed by Bojer in the forest around Tamatave: the "ampalatanghvari" or "fitourauen" described by Flacourt i. 36. 129 as a large tree with astringent leaves, may be compared. By European colonists, A. Madagascarensis was carried to the Mauritius Islands (Boj.): and from transported specimens, is described by Jacquin rar. iii. pl. 617, and termed "morus mauritiana" by Poiret.

Alpinia? magnifica of Madagascar. Also perennial and called "longouze."—By European colonists carried to the Mauritius Islands, where it was observed by Bojer under cultivation, and besides growing spontaneously. From transported specimens, described by Roscoe scit.

Nepenthes Madagascarensis of Madagascar. The "anramitaco"—is described by Flacourt i. 36. 43 as two cubits high, having at the end of the leaves a sort of hollow flower covered with a lid and containing water after rain, the plucking of this flower avoided by the natives and supposed to induce rain. From transported specimens, N. Madagascarensis is described by Poiret (Steud.).

"1149 A. D. = 1st year of the 'thian-te' of Tchou-liang, of the Kin," ruler of Northern China —(Chinese chron. table).

"1149 to 1150 A. D." (. . . .), El-Hafez succeeded by Dhafer of the Fatimite dynasty, ninth sultan of Egypt. A coin issued by Dhafer at Alexandria, is figured in Marcel p. 128.

"1150 A. D." (Blair), the *Civil law*, for the first time after Justinian, restored in Germany by Irnerius Wernerus.

"In the Twelfth century" (Pouchet), Adelard of Bath visiting Greece and Egypt.

"1151 A. D." (Blair), "after twenty-four years labour," the composition of the *Canon law* by Gratian of Tuscany.

"1152 A. D. (= 547 A. H." of Ferisht., Elph.), Behram having put to death his son-in-law, prince of the dependent territory of Ghor, and afterwards a brother of the deceased, Ghazni, now perhaps the greatest city in Asia, was captured and destroyed by a third brother Ala-u-din Ghori: Behram was driven across the Indus, where dying, his son Khusru continued the retreat and established his seat of government permanently at Lahore.

"In this year" (palm-leaf ann. Jag., and W. W. Hunter, Stirling giving 1151), Chorganga succeeded by Gangeswar, now king of Orissa. His territories are said to have extended from the Ganges to the Godaveri. — He excavated a splendid tank between Pippli and Khurdha.

"After September" (Nicol.), a synod at Mellifont in Ireland. The archbishoprics of Armagh, Dublin, Cashel, and Tuam, were appointed.

"1153 A. D. (= 548 A. H." of Ferisht., Elph.), after capturing and reinstating Ala-u-din Ghori, the Seljuks under Sanjar overwhelmed by the Uses, a hitherto unknown tribe of Tartars.

"July 9th" (Nicol.), Eugenius III. succeeded by Conrad cardinal-bishop of Sabino, now Anastasius IV., twelfth pope. Fredericus Barbarossa ruling Germany and Italy; and Malcolm IV., Scotland.

"In this year, in the time of Fred. Barbarossa" (Galvan.), arrival at Lubec of a small barge propelled by oars containing strangers whose language the Germans could not understand, nor could they ascertain from what country — (probably aboriginal North Americans).

"The same year" (Lubke and Lutrow), the Baptistery at Pisa built by Diotisalvi.

"1154, Jan. (= 548 A. H. chewal," Jaubert), the geographical work of Edrisi completed.

Ficus salicifolia of Tropical Arabia. Called in Yemen "thaab" (Forsk.); the "talhat el-melik" tree marking the boundary between Mecca and Yemen, and described by Edrisi ii. 5 as resembling the willow but larger, — may be compared: F. salicifolia was observed by Forskal p. 179 frequent among the mountains of Yemen, a very large tree with pendent branches, its bark furnishing igniting-cords for matchlock muskets.

Cynosurus? durus of Syria and Egypt. A grass called in Nubia "anbarfeh," in Egypt "halfeh" (Del.), and the "halfa" growing according to Edrisi v. 7 on mountains on the East side of the Caspian, collected and sold by the inhabitants and their principal resource, — may be compared: the "halfa" is also mentioned by Ebn Baitar: C. durus is known to grow in Palestine (Linn. fl. pal.); was observed by Forskal as far as Ghomfude in Arabia; by Lippi, Forskal p. 21, and Delile, in Egypt, used to heat ovens and made besides into coarse cordage; by myself, frequent throughout on the river-flat, especially towards its margin. Eastward from the Caspian, is said to grow in Hindustan (Roxb. i. p. 333, and Graham).

"In this year = 10th year of the seventy-sixth dairo Konjei" (Kaempf. ii. 5), birth of Joritomo at the court of Japan. The dragon at this time infesting the palace, — in the accounts of Japanese historians (art de verif.), seems an allusion to internal dissensions and the change in form of government eventually effected by Joritomo.

"During Lent" (Nicol.), a synod in London. "The ancient customs contained in the charter of king Edward, and the privileges of the clergy" were revived.

Beginning of "the party names of Guelfs and Gibbelines" (Blair): the Guelfs siding with the pope; and the Gibbelines, with the German emperor (Alst. p. 184).

"Dec. 3d" (Alst., and Nicol.), Anastasius IV. succeeded by cardinal Nicolas Breakspeare, now Hadrianus IV., thirteenth pope: the only Englishman ever placed at the head of the Catholic church.

"1155 A. D." (Alst. p. 393), Ireland ceded by the English pope Hadrianus IV. to Henry II. of England: on condition, That tithes should be exacted annually, and the ecclesiastical rights maintained intact.

"The same year" (art de verif.), Dhafer succeeded by Fayez of the Fatimite dynasty, tenth sultan of Egypt.

Berberis aristata of the mountains of Hindustan. Called in Arabic "aarghees" (J. F. Wats. index); in which we recognize the "aargis" of Gafeki, — and Ebn Baitar: B. aristata is mentioned in the Ulfaz Udwiyeh 1, and by Birdwood cat. bomb. 5.

Geranium nodosum of Europe and Northern Asia as far as Cashmere. Called at Lahore "ibrat-ut-rai" (Honigb. 393, and J. F. Wats. index), in which we recognize the "ibrat alrai" of Gafeki, — and Ebn Baitar. G. nodosum was observed by Sibthorp on the mountains of the Peloponnesus: and farther West, is described by Tournefort inst. 267; and is known to grow in Southern France, and even in England (Cav. iv. pl. 88, Pers., and Engl. bot. pl. 1091).

"1156 A. D. (= 551 A. H." of Ferisht., Elph.), Ala-u-din Ghori succeeded by his son Seif-u-din Ghori, now sultan of Ghor and Ghazni.

"In this year" (ann. Jap., and art de verif.), Konjei succeeded by Go-sijrakawa, fourth son of To-ba, and now seventy-seventh dairo of Japan. In the first year of his reign, a revolt.

"In or about this year" (Garc. de la Vega), Mayta Capac succeeded by his son Capac Yupanqui, fifth inca of Peru. — He built a floating bridge across the outlet of Lake Titicaca, vine-bridges across rivers, also roads, extensive canals of irrigation, and extended the empire Northward, beyond its limit of "seven leagues" from Cuzco. He commenced the fortress of Sacsahuaman near Cuzco (Salcam. edit. Markh. 88).

Galipea officinalis of the Upper Orinoko. A Xanthoxyloid tree called there "orayuri" (Lindl.), its bark from early times bruised and employed to intoxicate fishes;* — being *carony* or true *angostura bark*, one of the most valuable febrifuges known: observed by Hancock (med. bot. trans. 1829 pl. 2) on the higher lands "of Carony between 7° and 8° N.," well known also in "the Southern and back missions of the Orinoko."

"1157, Jan. 26th" (Nicol.), a synod at Constantinople. "On the celebration of divine service."

"In this year (= 552 A. H." of Ferisht., Elph.), Seif-u-din Ghori succeeded by Gheias-u-din Ghori, now sultan of Ghor and Ghazni. He associated his brother Shahab-u-din in the government, and left to him the chief conduct of military operations.

1159 A. D. = "1084 an. jav." (Madura trad., Nata Kasum., and Raffles x.), Muda Sari succeeded by his son Raden Pankas, now king of Java. Who removed the seat of government to Pajajaran. — The site of Pajajaran, marked by a heap of stones, and lines of fortification, continues to be pointed out.

"In this year" (ann. Jap., and art de verif.), the revolt and civil war continuing, abdication of Go-sijrakawa or Go-ziro-kawa, who retired among the bonzes or priests. He was succeeded by his eldest son Nidsioo, now at the age of sixteen years dairo of Japan.

"Sept. 7th" (Nicol.), Hadrianus IV. succeeded by cardinal Roland, now Alexander III., fourteenth pope.

"1160 A. D." (Elph.), Khusru succeeded by his son Khusru Malik, now second sultan of Lahore, — and as it proved the last.

"In this year" (Nicol.), in a synod at Oxford, thirty heretics condemned.

"The same year" (Alst.), at Lyons in France, the Waldenses, an association for moral and religious reform, commenced by Waldus.

"The same year" (Crawfurd vii. 11), the city of Singhapura founded by a Malay colony under Sri Turi Buwana, from the original country of that people by the way of Palembang in Sumatra. (According to Malay annals, by Sang Nila Utama son of Sang Sapurba chief of Menangkabau, Raffles x.).

"The same year" (art de verif.), Fayez succeeded by Adhed, of the Fatimite dynasty, eleventh sultan of Egypt.

"In this year" (Clavig. i. 112, Holmes suppl., see also Humb. iii), commencement of the Aztec migration: the Aztecs leaving Aztlan on their way South, — removing during several years from place to place towards Mexico.

Cucurbita maxima of Tropical or Subtropical America. The *pumpkin* called in Brazilian "jurumu" (Marcgr. 44), in Carib "jujuru" or "babora" (Desc.), and cultivated from early times: † —

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* *Galipea cusparia* of Eastern Equatorial America. An evergreen forest-tree sixty to eighty feet high, — and erroneously supposed to yield angostura bark: observed by Humboldt ii. pl. 57 and termed "cusparia febrifuga;" observed also by A. Saint-Hilaire (Dec. prodr. i. 731, and Lindl.).

Galipea? sp. of Columbia. A tree furnishing *malambo bark*, aromatic — "with very active bitter astringent and febrifugal properties" (Lindl.): supposed by Bonpland to be furnished by some tree allied to Galipea; and described by Wm. Hamilton (med. bot. trans. 1834).

Aydendron laurel of Venezuela. A Lauroid tree with olive-like fruit, and aromatic seeds — erroneously supposed to be pichurim beans: observed by Humboldt and Bonpland ii. 126 in marshy grounds by Calabozo (Lindl.).

† *Ambrosia artemisifolia* of Northeast America. A weed called in Carib "atyonaragle" (Desc.), and known from early times: — observed by Descourtilz in the West Indies; by Baldwin in Florida in Lat. 31°, in "cultivated ground everywhere" according to Chapman; by Michaux, among the Alleghany mountains of Carolina; by Nuttall, in Arkansas. Probably accompanied the native tribes beyond its natural limits, for it now occurs abundantly in cultivated ground as far as Lat. 45°.

Amaranthus spinosus of the West Indies and neighbouring portion of North America. An herb called in Carib "coety" (Desc.), and known from early times: — termed by Sloane in 1707 "blitum americanum spinosum," and described as occurring along roadsides in the West Indies, and abounding in Mexico and Louisiana; observed also in the West Indies by Descourtilz; by Chapman, in

"pompions" were seen by Columbus in 1493 on Guadalupe (F. Columb. 47): "melones" too large for a man to lift, some of them internally yellow, by Oviedo nat. hyst. 80 in the West Indies; and a furrowed variety resembling a huge muskmelon, by myself in Peru: C. maxima was observed by De Soto in 1542 in Florida; and is known to have been cultivated by the North American tribes as far as the St. Lawrence. By European colonists, was carried Westward across the Pacific to the Philippines, called there in Tagalo "calabasang bilog," and termed "c. sulcata" by Blanco; to the neighbouring islands (Rumph. v. pl. 145); to Anam and China, widely cultivated (Lour.); to Burmah, called there "shwæ-pha-yung" (Mason); to Hindustan, observed by Rheede viii. pl. 2 in Malabar, by Roxburgh, Wight, Graham, and Drury, cultivated throughout. Transported to Europe, is termed "pepo rotundus major" by Dodoens 666, "pepo maximus indicus compressus" by Lobel pl. 641; is described also by Matthioli pl., and Bauhin hist. ii. 219; was observed by Chaubard in Greece; by Forskal, and Delile, in Egypt, called there "kara estombouli" gourd of Constantinople; is known to be cultivated in Abyssinia under an Arabic name "doubba" (A. Rich., and A. Dec.); was observed by Grant in central Africa, from "5° S. to 2° N." on the Nile: and later perhaps than the visit of Forster, was carried to the islands of the Pacific; observed by myself, the Peruvian variety on Taheiti, and the North American on the Feejeean Islands and New Zealand.

Chenopodium ambrosioides of our Southern and Gulf States. An herb called in Mexican "epazolt" (Span. transl. Linn., and Blanco), and cultivated from early times: — a kind of "atriplex" four or five feet high was found by Hariot in 1584 cultivated on the Roanoke, and the only salt used by the natives procured from its stem, its seeds besides making good pottage, and leaves cooked by his own party for greens (De Bry i): C. ambrosioidés was observed by Nuttall on the Arkansas; but farther East has the aspect of an introduced weed, occurring in waste places and around dwellings in our Southern and Middle States as far as Philadelphia. By European colonists, was carried Westward across the Pacific to the Philippines, its Mexican name becoming "apasotis" in Tagalo, Bisaya, and Pampango, and the plant cooked and eaten by the natives and employed medicinally; to Japan, observed by Thunberg around Nagasaki, but no native name given; to Hindustan, where it has acquired native names (Pidd.). Transported to Europe "in 1619" from Mexican seed, is termed "botrys ambrosioides mexicana" by C. Bauhin pin. 138; was observed by Barrelier pl. 1185, and Brotero, seemingly wild in Portugal; by Ray hist. i. 96, Bonamy 26, Koch, and others, naturalized from Algeria to middle Europe (A. Dec.); was called at Verona in 1745 "thé allemand," because drank in infusion by the Germans (Seguier fl. i. 90); was observed by Chaubard around Mistra in the Peloponnesus; by Forskal, around Constantinople: by European colonists also was carried to the Azores and Canaries; to St. Helena by Burchell (A. Dec.); to Western Equatorial and Austral Africa (Benth. fl. nigr., and Moq.); and to the Mauritius Islands, where it has become naturalized (Boj.). "C. anthelminticum" or *American wormseed*, regarded by A. Gray as not distinct, is known to occur also in waste places from Florida to Philadelphia and Kentucky (Chapm., Pursh, and Short), and according to Elliot is indigenous.

"1161 A. D. = 1st year of the 'ta-ting' of Chi-tsoung of the Kin," ruler of Northern China.

"The same year (=557 Hej.," Pall. trav. i. 192), date of an *Armenian inscription* in the cemetery among the ruins of Bolgari on the Lower Volga, the ancient capital of Bulgaria.

"1162, May 26th" (Nicol.), election, in a synod at Westminster, of Thomas-a-Becket as archbishop of Canterbury.

"The same year" (Blair), Milan destroyed by the German emperor Fredericus Barbarossa. The churches only left standing.

"1163 A. D. = 'Joung-king,' 1st year of Hiao-tsoung, of the Soung" or Twenty-first dynasty — (Chinese chron. table).

"fields and waste places, Florida and Northward;" and known to occur in "waste places" as far as Pennsylvania and Ohio (A. Gray). By European colonists was carried Westward across the Pacific to the Philippines, where it has become abundant throughout, and is called in Tagalo "quilites" (an American word according to Blanco), in Bisaya "calites" or "tilites" or "orayi" or "harum" or "rayang bayang," in Pampango "ayantoto," in Ylocano "cuanton;" to the neighbouring islands (Rumph. v. pl. 83, and A. Dec.); to Burmah, called there "hen-ka-nway," a "common weed in some parts," eaten as "a potherb" by the natives (Mason v. 472); to Hindustan, devoid of a Sanscrit name (Roxb., and Pidd.), but called in Bengalee "kanta-mari," in Tamil "mulluk-kirai," in Malabar "mullan-chira," in Telinga "mundla-tota-kura" or "nalla-doggali," and known to occur from Bengal to Malabar (Drur.), observed by Graham as far as Bombay, "a common weed among rubbish during the rainy season," by Moon, on Ceylon. Transported to Europe, is described by Hermann hort. Lugd. 33 (Spreng.): by European colonists also, was carried to Western Equatorial Africa (Webb, and Benth. fl. nigr. 173 to 492); to the Mauritius Islands, according to Bojer only naturalized; and by French colonists, is called "brède de Malabar" (A. Dec.).

"May 19th" (Nicol.), a synod at Tours. "Against the Manichæans or Albigenses, and on discipline." Monks were forbidden to read writings on physical science (Humb. cosm. ii.).

"After six or seven years" (G. de la Vega iii. 18), the Inca Capac Yupanqui sending an army Northward, under his son Rocca, and "eighteen leagues from Cuzco" they reached the valley of Amancay.*

"1164, Jan. 25th" (Nicol.), a synod and "assembly of all the realm" at Clarendon. The archbishop of Canterbury with the other bishops "promised to observe the royal customs, but subsequently declined to subscribe to them." King Henry II. in consequence, delivered over the priests accused of theft, homicide, and other crimes, to the secular power.

"The same year (= 1220 samvat," Colebrooke as. res. vii. p. 175), date of an inscription by raja Vigraha on the column projecting above a stone building at Delhi, Lacshana Pala, a Rajaputra, being prime minister.

The Sanscrit poet Jayadevas, born according to his own account at Cenduli, about this time writing† (see Lassen proleg. p. v); he mentions as cotemporary poets Umapatidharas, Caranas, Govardhana, and Dhoyin: and was earlier — than Kalidasa according to the Hindus (W. Jones).

"In or about this year" (T. Wright early trav. Palest.), arrival in Bagdad of Benjamin de Tudela; the first traveller from Western Europe known to have penetrated beyond Palestine and Syria. He found in Bagdad extensive buildings and "medical warehouses" for the care of the sick poor, also a hospital for the insane; and obtained information respecting Tartary, Thibet, Hindustan, Ceylon, and the passage by sea to China. Returning Westward, he found independent Jews at Aden, possessing "cities and fortresses on the summits of the mountains" (the walls so conspicuous there at the present day), and making incursions into "Maatum also called Nubia." — Continuing up the Red Sea, he reached Assuan on the Nile, and after an absence of three or four years descended the river. Next proceeding to Constantinople, he describes the Greeks as luxurious and unwarlike, hiring "soldiers of all nations whom they call 'barbarians' for the purpose of carrying on their wars with the sultan of the Thogarmin, who are called Turks." He further states, that the Slavonians and Russians "sell their children to all nations."

"1165 A. D. (= the year 'yei-man' of the dairo Ni-sio," San-kokf transl. Klapr.), under investiture from China, the Second or Tsiou-san dynasty ruling the Loo Choo Islands, arrival there of Tametomo from Japan. He married the younger sister of the an-zi of Dai-ri (Ta-li) or king; — and after the birth of his son Soun-ten-o "in 1167," returned to Japan; where he was followed by his wife and child.

"1166 A. D." (Nicol.), a synod in London. An appeal was made to the pope by the bishops of England, "Against the legation and the sentences of the archbishop of Canterbury, then a refugee in France."

"April 11th" (Nicol.), a synod at Constantinople. "Concerning marriage."

"The same year" (ann. Jap., and art de verif.), Nidsioo or Ni-sio succeeded by his son Rokudsioo, now seventy-ninth dairo of Japan.

One hundred and sixty-fourth generation. Sept. 1st, 1167, onward mostly beyond youth: the Jewish writers, Joseph Kimchi, Maimonides, and Petachja: the Arab writer Ebn Alwam: the Greek writers, Eustathius of Thessalonica d. after 1200, Neophytus d. after 1190, Xiphilinus d. 1199, Joel d. after 1200: Theorianus, Hugo Etherianus, Arnoldus Carnotensis, Joachimus: the scholastic theologian Petrus Comestor: the Icelandic poet and historian Sæmund.

"The same year" (Alst.), "*Indulgences*" remitting sin, mentioned as "pias fraudes" by Petrus Cantor of France. (The beginning of the contest between the Bible and a visible church).

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* *Ismene amancaes* of Western Peru. The *amancaes lily*; from its abundance giving its name to the valley in question, — and fully described by G. de la Vega iv. 15: I. amancaes was observed by myself in a well-known ravine near Lima.

† *Guatteria Corinti* of Tropical Hindustan. A climbing shrub allied to the species called in the environs of Bombay "asoca" (Graham), and W. Jones as. res. iv. 275 was informed "that one species of the asoca is a creeper;" the voluble "asoca" of Jayadevas, — may be compared: G. Corinti was observed by Rheede v. pl. 14 in Malabar; by Nimmo, and Graham, in "the hilly parts of the Concans;" by Wight, in other parts of the peninsula.

Dalbergia scandens of Tropical Hindustan. A beautiful scandent shrub (Graham); and the bower of bloomy and elegant "vanjula" plants interweaving their branches, described by Jayadevas, — may be compared (the "vanjula" of Susrutas chik. 19 to Kalp. 7 being referred by Hessler to an allied species): D. scandens was observed by Rheede vi. pl. 22 in Malabar; by Graham, having "long drooping racemes of light rose-coloured flowers" and "well adapted for covering trellises," common "throughout the jungly tracts of the Concan," and according to Gibson "in the Mawul districts;" by Roxburgh cor. pl. 19, and Wight, as far as Coromandel.

"1168 A. D." (Munk, and Marcel), an army of crusaders, brought from Palestine into Egypt to repel a Syrian invasion, assuming the offensive captured Bilbeis (Bubastis) and advanced as far as Cairo; but were finally compelled to retire.

Cocculus cebatha of Tropical Arabia. A woody vine called in Yemen "kebath," in which we recognize the "kabath" of Ebn Alawan landwirths., — and Ebn Baitar: C. cebatha was observed by Forskal p. 171 among the mountains of Yemen, the ripe berries acrid but edible, and a spirituous liquor procured from them.

"1169 A. D." (Caradoc of Llancarvan, and Major 2d edit. Columb. p. xxi), death of Owen Gwynedd, prince of North Wales. Contention arising among his numerous sons, one of them named Madawe or Madoc sailed with a small fleet "westward, and leaving Iceland on the north, came at length to an unknown country where everything appeared new and uncommon and the manner of the natives different from all that he had ever seen:" the fertility and beauty of the country inviting settlement, he left behind most of his men; and returning to Wales, persuaded "a considerable number" of his countrymen to accompany him, and "with ten ships" bade "a final adieu to his native soil." — The event is alluded to by Meredyth ab Rhys, a Welsh bard who died "in 1477."

"In this year" (art de verif.), Roku-dsioo, succeeded by Takakura, third son of Go-sijrakawa, and now at the age of "nine" dairo of Japan.

"1170 A. D." (Nicol.), a synod at Constantinople. The propositions of the emperor Emanuel Comnena for the union of the two churches, were rejected.

"In this year" (= 1192 — 142 + "120th yr." of hist. Prithw., and Wilford as. res. ix. p. 171), adoption or accession of Prithwi-raja or Pithaura as king of Delhi, uniting the Tomara and Chauhana families. According to some authorities, he was a son of Vigraha-Deva (H. H. Wils. ind. dram. ii. p. 154).

The Sanscrit poet Kalidasa,* "eighth gem in the council of king Vicrama" (Navaratna, and

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* *Elæocarpus oblongus* of Tropical Hindustan. A very beautiful tree when in full bloom called in the environs of Bombay "khas" or "kassow." (Graham); and the "namerui" tree of Kalidasa kum. i. 56 to iii. 45, its flowers and leaves gathered and worn, — is referred here by Stenzler: E. oblongus was observed by Rheede iv. pl. 24 in Malabar; by Graham, at Mahableshwur and in the vale of the Yena, its petals fringed and foliage "frequently tinged with red;" by Wight pl. 46, in other parts of the peninsula.

Calysaccion longifolium of Western Hindustan. A large Clusioid tree called in Canara "taringee" or "woondee" (Bed.), in the environs of Bombay "suringee" or "gordeoondy" (Graham), or the female "poonag" (Bed., and Graham); and possibly the "punnaga" trees the bees abandoning in Kalidasa ragh. iv. 57: — C. longifolium was observed by Graham "on the Ghauts and throughout the Concans," its flowers "collected and exported to Bengal for dyeing silk;" by Wight pl. 1999, Cleghorn, and Drury, as far as Mysore, its flowers emitting a fragrance not unlike that of violets and used as a perfume, its fruit delicious to the taste. (See Rottlera tinctoria).

Aleurites laccifera of Southern Hindustan and Ceylon. Called in Sanscrit "laksha" (Ainsl.); and the "lacsha" of Kalidasa sacont., its juice staining her feet exquisitely red, — may be compared: A. laccifera was observed by Burmann pl. 91 on Ceylon; and it or its product is mentioned by Ainslie 23 (J. F. Wats.).

Ixora parviflora of Tropical Hindustan and Burmah. The *torch tree* is small and erect, called in the environs of Bombay "whorn" or "gooavee-luckree" or "raicoorah" (Graham); and the slender "karnikara" of Kalidasa vikram. iii. 2, spreading its brilliant blossoms around the skirts of the mountain, and elsewhere termed a flame of the woods — (W. Jones as. res. iv. 251), may be compared: I. parviflora was observed by Graham "common on the Ghauts" and "in the jungles about Nagpore, the dak runners make torches of it;" by Roxburgh, and Wight, in other parts of Hindustan; and by Mason, in Burmah.

Aganosma Roxburghii of Tropical Hindustan. A very ornamental climbing Apocynous shrub called in Sanscrit "malati". (Ell.); in which we recognize the fresh blossom of the "malati" of Kalidasa sacont. : — A. Roxburgii was observed by Rheede vii. 55 to ix. 14 in Malabar; by Graham, only in "gardens." in the environs of Bombay; by Roxburgh ii. 11, in Eastern Hindustan.

Convolvulus (Argyreia) speciosa of Tropical Hindustan. The *elephant creeper* is a twining plant called in Sanscrit "samutra-putrum" (Ainsl.), in Tamil "samutra-pallum" or "samudra-chedi" (J. F. Wats.) or "shamuddirap-pachchai" or "kadal-palai," in Telinga "samudra-pala" or "chandra-poda" or "kokkita," in Hindustanee "samundar" (Drur.), in the environs of Bombay "samudra shoka" or "googulee" (Graham); and the "vratati" of Kalidasa sacont., its twining stems entangling elephants, — may be compared: A. speciosa was observed by Rheede xi. pl. 61 in Malabar; by Graham, "common" in the environs of Bombay and "at the bottom of hills in the Deccan," the

Bentl. as. res. viii. p. 242), mentions king Prithue, and "Siva's bull steep to climb as mount Kailasa's side" (Dowlutabad).

Betula bhojputra of the mountains of Hindustan. A species of *birch* called in Sanscrit and Telinga "bhurjamu." (J. F. Wats.); in which we recognize the "bhurja" tree of Kalidasa kum. i. 7 to ragh. and vikram. ii., its bark used for epistles by maidens on the mountains:—B. bhojputra was observed by Elliot, and Balfour, on the Northern Circars.

"The same year" (Clavig. ii., and Humb. ii. 6), the Chéchémécas making their appearance on the Mexican table-land, speaking the Toltec language.*

"1171 A. D." (art de verif.), death of Adhed and end of the Fatimite dynasty: the claim of the Egyptian sultans to spiritual authority being abandoned, and that of the Abbassid khalifs acknowledged. Saladin now became the real ruler of Egypt; though to some extent acting under the orders of Nooreddin of Damascus.

"The same year" (Lubke and Lutrow), in England, a new cathedral commenced at York.—The southern wing was finished "in 1227;" the northern cross-arm and tower, "in 1260;" the nave, in 1321; and the building completed in the "beginning of the Fifteenth century."

"In or about this year" (rudim. chron. Lond.), the *woollen manufacture* established in England, at Worsted and Norwich.

"The same year" (Nicol.), a synod at Armagh. "All the English who were in bondage" in Ireland, were released.

Euphorbia hyberna of Western Europe. A large-leaved species of *spurge*, from early times "used by the peasants of Kerry" for capturing fish by poisoning the water—(Major edit. Bethenc. p. 131): E. hyberna is described by Dillenius elth. pl. 290; and is known to grow on the mountains of Southern Europe (Pers.).

"1172 A. D." (Blair), invited by Dermot one of the local kings, Henry II. entered and took possession of all Ireland: returning "about the beginning of February." Or (according to the London rudimentary chronology) "the church in Ireland first becomes subject to the Roman see."

"The same year" (rudim. chron. Lond.), building of Dublin castle.

"upper side of the leaves" according to Gibson used by the natives "as a discutient, the under or white side as a maturant;" by Burmann pl. 20, Wight, and Drury, in other parts of the peninsula.

Convolvulus (*Rivea*) *fragrans* of Tropical Hindustan. The *clove-scented creeper* is perennial and twining, called in the environs of Bombay "kulmilata" (Graham); and the "camalata" of Kalidasa sacont.,—may be compared: R. fragrans was observed by Vaupell, Nimmo, and Graham, from Guzerat to Bombay and the Concans, its flowers "expanding at sunset and perfuming the air with the scent of cloves," leaves "used as a potherb;" was observed by W. Jones as. res. iv. 257 as far as Bengal.

* *Guazuma ulmifolia* of the West Indies and neighbouring portion of South America. A Theobromoid tree with yellow flowers, its mucilaginous fruit eaten from early times: the "guaçuma"—is described by Oviedo hist. gen. viii. 7; is known to grow on Martinique (Lindl.); and was observed by A. Saint-Hilaire plant. us. pl. 14 in Brazil, its bark employed medicinally, and on account of its abundant mucilage to clarify sugar (Lindl.). Transported to Europe, is described by Plukenet alm. pl. 77: and by European colonists was carried to Hindustan, where it is called in Telinga "oodrick" (Drur.), and is now cultivated throughout, its light loose-grained wood used for furniture, and its leaves for feeding cattle (Roxb., Royle, Wight, and Drur.), was observed by Graham "planted" as far as Bombay.

Plumiera rubra of Mexico and the West Indies. An Apocynous tree with large fragrant flowers, called in Mexican "quauhlepatlis" (Hernand.), and known from early times:—observed by Hernandez in Mexico; by Catesby pl. 92, and Descourtilz, in the West Indies; and known to grow as far as Surinam (Ehret pl. 10, and Pers.), its milky juice according to Lindley "excessively corrosive."

Plumiera alba of Mexico and the West Indies. Arborescent, called in Mexican "chupirena" or "quauh-tlepatli" (Hernand.), and its delightfully fragrant flowers known from early times:—observed by Hernandez in Mexico; by Plumier pl. 231, Jacquin am. pl. 174, and Descourtilz, in the West Indies, but no Carib name given. By European colonists was carried Westward across the Pacific to the Philippines, where it has become well known though fruit is excessively rare, is called in Tagalo "carachucha" or "calachuchi" or "calasasi," and its bark used in Ylocos as cathartic and vermifuge (I. de Mercado, and Blanco); to the neighbouring islands (Rumph. iv. pl. 38); to Anam (Lour.); to Burmah, enumerated as "exotic" by Mason; to Hindustan, observed by Roxburgh, and Forbes or. mem., by Graham as far as Bombay, but "very rarely bears seeds perhaps from being always propagated by cuttings," by myself only around villages.

"May 21st" (Nicol.), a synod at Avranches. Henry II. "was absolved from the murder of Thomas-a-Becket, after swearing to abolish all the unlawful customs established during his reign."

"1173 A. D." (Nicol.), in a synod at Westminster, reading of the Bull for the canonization of Thomas-a-Becket. Richard prior of Dover was elected archbishop of Canterbury; and "twenty-seven canons were made on discipline."

"The same year" (art de verif.), death of Nooreddin; Saladin becoming the acknowledged sultan of both Egypt and Syria. Gold and silver were coined by Saladin, to redeem the *glass money* in circulation (Marcel 139 and 144). He replaced the brick wall around Cairo with stone; built the citadel, and cleared the deep well therein, — to the present day called from him "Joseph's" well (Wilk. theb. and eg. p. 305).

The removal of the outer stone coating of the Great pyramid, is attributed to Saladin (Marcel 141).

"1174 A. D." (rudim. chron. Lond.), building of the leaning tower at Pisa.

"1175 A. D." (= 571 A. H." of Abu-Abdallah ben Ahmed Muhrim, Badjer edit. Varthem. p. 59), the walls and towers on the mountains around Aden chiefly built by Othman ez-Zenjily, appointed governor by Turan Shah, a brother of Saladin.

"In this year" (palm-leaf ann. Jag., and W. W. Hunter, Stirling giving 1174), Madan Mahadeva succeeded by Anang Bhim Deo, now king of Orissa. — He built the great temple of Jaganath, and reigned "twenty-seven years."

"1176, Jan. 25th" (Nicol., see also Alst.), a synod at Northampton. Wherein an unsuccessful attempt was made by the archbishop of York "to compel the Scotch bishops to acknowledge his jurisdiction."

"The same year" (Blair), in England, the dispensing of justice by Circuits, first appointed.

"The same year" (rudim. chron. Lond.), London bridge commenced by Peter Coleman, a priest of Colechurch.

"In this year (= 572 A. H." of Ferisht., Elph.), Shahab-u-din, associate sultan of Ghor and Ghazni, commencing operations against Hindustan by the capture of Uch, at the junction of the rivers of the Panjab with the Indus.

"1177 A. D." (Nicol.), a synod at Tarsus. For the reunion of the Armenians and Greeks.

"1178 A. D. (= 575 A. H." of Ferisht., Elph.), unsuccessful expedition against Guzerat by Shahab-u-din; who however overran Sind to the seashore.

"In this year" (Clavig. ii., and Humb. ii. 6), the Nahualtecs making their appearance on the Mexican table-land: like the Chichimecs, speaking the Toltec language.

Dioscorea sativa of Tropical America. Cultivated by the Waraus of the delta of the Orinoko* —

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* *Dioscorea alata* of Tropical America? Cultivated by the Waraus (Schomb.), and called in Carib "couchou" — (Descourt.). Westward, from an early period cultivated by the Polynesians, and observed by myself on the Taheitian, Samoan, and Tongan groups, and on the Feejeean constituting the main support of the population: called in Taheitian and Tongan "ubi" (Forst., and A. Dec.), or according to Hale, "uhi" or "uh'" on Rotuma, "uhi" or "ui" or "ufi" by Polynesians generally, "uvi" by the Feejeeans, and according to Blanco, "ubi" by the Tagalo of the Philippines, and "quinampai" on Zebu: was also observed under cultivation in the Malayan Archipelago by Rumphius v. pl. 121; is enumerated by Mason v. p. 813 as wild in Burmah; in Hindustan, has no Sanscrit name (Roxb. iii., and Pidd.), but was seen there under cultivation by Rheede vii. pl. 38, and myself, and is given by Graham as "wild in both Concans." Farther West, the *purple yam* was observed by myself on Zanzibar, and was said to be also cultivated on the neighbouring main land by African tribes. (See Colocasia antiquorum).

Colocasia sagittifolia of Tropical America. Cultivated by the Waraus (Schomb.), and called in Carib "ouaheu" — (Descourt.): the "agi's" cultivated by the natives on Hayti, are described by F. Roman Pane 26 as "certain roots like turnips and some like radishes" (F. Columb.); according to Oviedo nat. hyst. 80 and gen. hist. vii. 3, the "ajes" are distinct from batatas and resemble the great turnips "nabos grandes" of Spain; and C. sagittifolia was observed in the West Indies by Plumier iv. pl. 35. Farther North, the "cocushaw" of the aboriginals on the Roanoke, growing in marshy places and after expressing a poisonous juice used for making bread (Hariot, in De Bry i.), may be compared; C. sagittifolia continues to be cultivated from Florida to Carolina, and is called *tanier* (Pursh, Muhl., Ell., Baldw., and Mc. Euen), the leaves very large. By European colonists, was carried to the Mauritius Islands, where it is called "tongo" (Descourt.; see also C. antiquorum).

Cedrela odorata of Eastern Equatorial America. Employed by the Waraus of the delta of the Orinoko for making canoes — (Schomb. edit. Ralegh): observed in the West Indies by P. Browne pl. 10; and within the borders of Peru, by Ruiz and Pavon (Pers.). By European colonists, was carried Westward across the Pacific to the Philippines, where "plenty of cedar" called "calanta" was found

(Schomb. edit. Ralegh): the word "igname" was heard by Vespucci on the coast of Paria, and was found by Cabral in 1500 applied in Brazil to a root from which bread was made (A. Dec.); very large white-rooted yams are imported from the West Indies, belonging to a species I have not seen growing. By European colonists, D. sativa was carried to the Malayan Archipelago, "injames" of the Portuguese after the Brazilians, called "byra" by the Javanese and Malayans, and "siatsini" by the Chinese, a root on which thirty persons may dine but the taste not near so good as potatoes, were seen in Java by Nieuhoff; the "cassab el darrir" figured by Alpinus as cultivated in Egypt, may also be compared. "D. Cliffortiana" regarded as a distinct species, was observed by Hænke wild in Peru, by Martius wild in Brazil, and is not with certainty known to be cultivated.

"1179, March 5th to 19th" (Nicol.), Eleventh general ecclesiastical Council. Convened at the Lateran in Rome; "two hundred and eighty" bishops being present. Among other acts, Petrus was sent as legate into France, to inquire into and suppress the "heresy of the Waldenses or Albigenses" (Alst.).

The local princes of Japan now nearly independent, defeated by Joritomo, to whom the military authority had been delegated by Takakura. Joritomo now assumed the title of "cubo" (corresponding to "maire du palais" under the early French kings, or "sultan" under the califs, art de verif.).

"1180 A. D." (Alst.), Emanuel succeeded by Alexius II. Comnena, fifty-fourth Byzantine emperor.

"June 24th to Oct. 18th" (Nicol.), a synod at Tarragona. The use of the Christian era was substituted for the "Era of Spain."

"1181 A. D." (ann. Jap., and art de verif.), Takakura succeeded by his eldest son Antoku, now eighty-first dairo of Japan.

"Sept. 1st" (Alst., and Nicol.), Alexander III. succeeded by cardinal Ubaldo Allocingoli, now Lucius III., fifteenth pope. Philip II. ruling France; and William, Scotland.

"In or about this year" (Blair), compilation of a Digest of the *Laws of England*, by Ranulph de Glanville.

"The same year (= 1103 Salivahan.," Colebrooke as. res. ix. p. 431), latest date in an inscription chiefly in the Old Canara language — found among the ruins of Curogode in Southern Hindustan.

"1182 A. D." (Alst.), Alexius II. succeeded by his son Andronicus, fifty-fifth Byzantine emperor.

"1184 A. D." (Blair), massacre of all the Latins in Constantinople. Arranged by the emperor Andronicus.

"In this year (= 1844th of Synmu," art de verif.), abdication of Antoku in favour of his fourth brother Toba II. or Go-Toba, now dairo of Japan.

"1185 A. D." (Alst.), Andronicus succeeded by Isaacus II. Angel Comnena, fifty-sixth Byzantine emperor.

"Nov. 25th" (Nicol.), Lucius III. succeeded by cardinal Hubert Crivelli, now Urbanus III., sixteenth pope. Urbanus III. "dated his pontificate from the day of his election."

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by De Morga, and C. odorata according to Blanco is employed for canoes, and is called in Tagalo and Pampango "calantas," and in Bisaya "lanigpa" or "lanigda;" and Eastward across the Atlantic to Senegal, where too it is employed for canoes (Desc.).

Euterpe sp? of Guayana. The "manica" or "manicole" palms, furnishing the laths of the dwellings of the Waraus — (Schomb.).

Manicaria saccharifera of Guayana. The "trouli" palm, furnishing the thatch of the dwellings of the Waraus — (Schomb.): the palm described also by Jacquin (Steud.). And from transported specimens, by Gaertner ii. pl. 176.

Carapa Guayanensis of Guayana. Oil of the "carapa" nut employed by the Warau women to anoint their hair — (Schomb. edit. Ralegh): the tree observed also in Guayana by Aublet ii. pl. 387.

Bignonia chica of Guayana. Affording with some other species the "chico" or "caraweru" pigment employed among the Waraus — (Schomb.): observed also in this portion of South America by Humboldt and Bonpland (Steud.).

Strychnos toxifera of Eastern Equatorial America. A climbing plant, the juice furnishing the basis of the celebrated "woorari" poison employed by the Waraus to envenom their arrows — (Schomburgk). The bark applied externally is regarded by Hancock med. gaz. xx. 281 as a good remedy for foul ulcers (Lindl.).

Arundinaria Schomburgkii of Eastern Equatorial America. The arrows blown through a "curata" or internode of this reed, — and Schomburgk in travelling along the Paracaima mountains witnessed the effect of the poison; so nearly instantaneous, that a deer at the top of its speed was scarcely able to "run forty yards." A. Schomburgkii is described as fifty to sixty feet high, the weight of its numerous branchlets causing the upper part to droop and form an arch (geogr. plant. lond. tract soc.).

"The same year" (Alst.), end of the chronicle of Gothofridus Viterbiensis.

"1186 A. D. (= 582 A. H." of Ferisht., Elph.), after years of hostilities, Shahab-u-din partly by stratagem captured Khusru Malik, and obtained possession of Lahore.

"Sept. 14th" (Blair), Great *conjunction of the sun, moon, and all the planets* in Libra.

"1187 A. D." (Klapr. note to San-kokf), Soun-ten-o having returned to the Loo Choo Islands, now at the age of "twenty-two" made king; the first of the Tame-tomo dynasty. He introduced the "i-ro-fa" of Japanese alphabet.

"In this year" (Marco Polo 65), revolt of the Tartars against their legitimate ruler Unecan or Ung-kan; and Jenghiz elected khan.

"The same year" (Munk, and Marcel), the crusaders driven from Jerusalem and Palestine into a few fortified posts along the coast: — which were held by them many years.

"Oct. 20th" (Nicol.), Urbanus III. succeeded by cardinal Albert di Morra or Gregorius VIII.; and "Dec. 19th," by cardinal Paul Scolaro or Clemens III., eighteenth pope. Clemens III. "added the year of his pontificate to the dates of the place and day in his common Bulls; which practice was adopted by nearly all his successors."

The same year ("45th year of Manuel Comnena," editor), Gregorius Degha being Armenian patriarch, end of the chronicle of Samuel of Ania.

"1188 A. D." (Blair), Third crusade. — King Richard of England and Philip II. of France, departing in the following year with the crusaders.

"1189 A. D. (= 5th year of the nengo boun-zi," Klapr. transl. San-kokf p. 221), Yosi-tsoune defeated by his brother Yori-tomo seeking refuge among the Ainos; where he married a chief's daughter, received the name of Oki-gourou, and built a castle in the Eastern part of Yeso. — Remains of this edifice were visible in the days of the narrator, and the memory of Yosi-tsoune continued to be venerated by the Ainos, his history being celebrated in songs in their theatrical representations or pantomimic dances.

"1190 A. D. = 'tchao-hi,' 1st year of Kouang-tsoung of the Soung, and 1st year of the 'ming-tchang' of Tchang-tsoung of the Kin" — (Chinese chron. table).

"The same year" (Alst.), founding of a third military monastic Order; the "Teutonic knights."

"The same year" (rudim. chron. Lond.), rise of *heraldry*.

"1191, March 30th" (Alst., and Nicol.), Clemens III. succeeded by cardinal Hyacinth Bubona, now Celestinus III., nineteenth pope: and the first one who granted "absolution ad cautelam." Henricus VI. ruling Germany and Italy.

"In this year (= 587 A. H." of Ferisht., Elph.), Shahab-u-din totally defeated on the great plain beyond Tanesar by Prithwi, Hindu king of Delhi and Ajmir. Leaving the wreck of his army at Lahore, he retired across the Indus.

"Towards the end of the Twelfth century" (Lubke and Lutrow), the new cathedral at Strasburg commenced. — The spire, "four hundred and ninety-one feet" high, was completed "in 1439."

"1193 A. D. (= 589 A. H." of Ferisht., Elph., Bentley giving "588 A. H." = 1192), Shahab-u-din with a new army entering Hindustan defeated Prithwi, put him to death on the battle-field, and obtained possession of Delhi and Ajmir. The biography of Prithwi or Pithaura is included in a history of Rajputana by Chand, a Hindee or Hindustanee poet who had resided at his court (G. de Tassy pref. and p. 138).

Kutb-u-din Eibak, left behind as the representative of Shahab-u-din, commenced near Delhi the Kutab Minar, a round tower — "two hundred and sixty-five feet high" (Lubke and Lutrow).

"In this year" (art de verif.), Saladin succeeded by Melek-Aziz Othman, second Ayoubite sultan of Egypt. A copper coin issued by Melek-Aziz Othman, is figured in Marcel p. 146.

"1194 A. D. (= 591 A. H." of Ferisht., Elph.), returning to Hindustan and Delhi, Shahab-u-din defeated the Hindu king Jeia Chandra farther down the Jamna, and obtained possession of Canouj and Benares. The greater part of the Rahtor clan abandoning Canouj founded a principality at Marwar, — now in alliance with the British government.

The roof of Peterborough cathedral, "of the date of about 1194" (hist. viol.), contains as far as known the earliest representation of the *violin*; the only musical "instrument that, like the human voice, possesses the power of perfect intonation." Bows, perhaps a British invention, had been previously applied to other instruments for two or three centuries. — "Fiddlers" are said to be mentioned by old English poets prior to Chaucer. But the Cremona manufacturers, whose violins have never been equalled, were of the "Sixteenth" century.

"1195 A. D. = 'tsing-youan,' 1st year of Ning-tsoung, of the Soung" or Twenty-first dynasty — (Chinese chron. table).

The same year (= "12th year of Toba II.," art de verif.), Joritomo after new victories visiting Toba II. at Meaco, was confirmed by him in the title of "cubo" or general in chief. — The title became hereditary.

"The same year" (Alst.), Isaacus II. succeeded by Alexis III. Angel, fifty-seventh Byzantine emperor.

"In this year (= 592 A. H." of Ferisht., Elph.), after capturing Biana near Agra, and laying siege to Gwalior, Shahab-u-din appears to have been called away by troubles in the West, and left Kutb-u-din to complete his conquests in Hindustan.

"1196 A. D." (Blair), Henri Dandolo doge of Venice.

"The same year" (Azt. hierog. annals, Clavig., and Humb. ii. 6), the Acolhuans and Aztecs making their appearance on the Mexican table-land: speaking, like their predecessors, the Toltec language.

The cochineal insect, Coccus cacti, discovered at an early period by the Mexicans, and reared extensively to procure its brilliant dye.* — When the Spaniards entered the country in 1519, *cochineal* first became known to Europeans (Pereir.); but to the present day Mexico continues the source of commercial supply.

"1197 A. D." (G. de Tassy i. p. 519), Gwalior in the district of Agra captured by the Muslims. — The city was retaken by the Hindus; but was finally subjugated in "1225" by Altamsch sultan of Delhi. A History of Gwalior is extant, written by the Hindee or Hindustanee poet Vargaraya.

"In or about this year" (G. de la Vega, = 1249 — "near 50 years reign," Blas Valera, and addit. art de verif.), Capac Yupanqui succeeded by his son Roca, now sixth Inca of Peru. — He enlarged the empire to "two hundred leagues from North to South, by one hundred from East to West;" and afterwards added fifty leagues to its length and breadth.

Myrospermum Peruiferum of Eastern Peru. An Amyroid tree called there "quinquino" (Lindl.), yielding the fragrant bitter aromatic *balsam of Peru*, known from early times † — (Hernand. mex. pl. 51, and Ruiz): growing in the Peruvian forest, in low warm sunny situations near the river Maranon (Lindl.).

Cinchona sp. of the Eastern slope of the Peruvian Andes. Forest-trees affording *Peruvian bark*, from early times employed to intoxicate fishes — (Saunders, and Lindl. fl. med. 211).

Phytelephas macrocarpa of the Eastern side of the Peruvian Andes. A palm, its long fronds employed from early times to cover dwellings, and the ivory-like kernel of its fruit for making implements: — observed by Ruiz and Pavon 301 in the forest in the warm region, its fruit very large and called by colonists "caleza de negro" (Pers.). The imported kernels under the name of *vegetable ivory* have become well known in the arts.

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* *Opuntia coccinellifera* of Mexico and the West Indies. A species of *prickly pear*, said to be that on which the cochineal insect feeds, — described by Lopez de Gomara (Spreng.): O. coccinellifera, red-flowered and nearly thornless, is known to grow on Jamaica (Pers.). Transported to Europe, is described by Knorr del. ii. pl. O, and Dillenius elth. pl. 297: and by European colonists was carried to Hindustan, observed "in gardens Bombay" by Graham; to Burmah, called there "ka-la-soung-let-wa" (Mason).

† *Baccharis genistelloides* and *B. venosa* of Peru. Allied species abounding in bitter extractive matter and from early times employed medicinally: — called in Brazil "carqueja dolce" and "c. amarga" (Lindl.), or the first according to Marcgraf and Piso pl. 78 "canambaga" (Pers.): "particularly serviceable in chronic diseases of horses, which are very fond of this herb" (Mart., and Lindl.).

Canna edulis of Peru. Called there "achiras" (Lindl.), its fleshy tubers containing a large quantity of starch resembling arrowroot, and from early times eaten as potatoes: — described by Ker (bot. reg. ix. 775).

Polypodium crassifolium of the Eastern side of the Peruvian Andes. A fern called "puntu-puntu" (Lindl.), and from early times its root in infusion and decoction used as a sudorific: — observed by Ruiz in the mountain-forest, in gravelly and rocky naked warm situations (Lindl.). From transported specimens, is termed "phyllitis maculata amplissimo folio" by Petiver fil. pl. 8.

Polypodium calaguala of the Peruvian Andes. A fern called "calaguala" or "ccallahuala" (Lindl.), its dried root extremely bitter and from early times used medicinally, — having great deobstruent, sudorific, antivenereal, and febrifuge virtues: observed by Ruiz in the elevated cold region, in clefts and on the side of rocks (Lamb. cinch. 120 pl. 2). Seldom to be had genuine in Europe (Lindl.).

Acrostichum huacsaro of Peru. A fern called by Spanish colonists "cordoncillo" or "calaguala m diana," in Peruvian "huacsaro" (Lindl.), its root from early times used medicinally, — in cold infusion and decoction yielding a red colour and slight astringent taste, but very inferior in action to true calaguala: observed by Ruiz in elevated cold situations along the Andes (Lamb. cinch. 128, and Lindl.).

"1198, Jan. 8th or 9th" (Alst., and Nicol.), Celestinus III. succeeded by cardinal Lothaire de' Conti di Segni, now Innocentius III., twentieth pope. The writings of Innocentius III. are voluminous.

"Towards the close of the twelfth century" (Way pref. pr. pm.), Uguitio or Hugo of Pisa holding the office of bishop of Ferrara. — He died "about 1212" (Ughelli). His dictionary is quoted by Galfridus pr. pm.

Thymus vulgaris of the Mediterranean and Tauro-Caspian countries. Called in Britain *thyme* or *garden-thyme*, in France "thym" (Nugent), in which we recognize the timum or tima of Uguitio — and the C. F. vocabulary, identified by Galfridus pr. pm. with the "tyme herbe:" T. vulgaris is described by Brunfels, Tragus, Fuchsius (Spreng.), Dodoens, and Tournefort inst. 196; is known to grow wild in Italy, Spain, and Southern France (Pers., and Lenz), and is besides cultivated throughout middle Europe (Woodv. med. bot. pl. 109). Eastward, was observed by Sibthorp in mountainous situations in Greece and on the Greek islands; is known to grow also in Siberia (Pers.). By European colonists, was carried prior to 1670 to Northeast America, where it continues under cultivation as a seasoning herb. According to Lindley, "is fragrant and stimulating, its essential oil is administered to remove flatulence."

"The same year" (art de verif.), Melek-Aziz Othman succeeded by Melek-el-Mansur, third Ayoubite sultan of Egypt. A copper coin issued by Melek-el-Mansur, is figured in Marcel p. 147.

"The same year" (Stirling res. Asiat. xv. 315 to 327, and Elphinstone iii. 7), the pagoda of Jagannat, on the Eastern shore of Hindustan, completed.

"At the end of the Twelfth century" (Pouchet), six different species of *seals*, Phoca, described by the Norwegian author of the "Miroir Royal" — (transl. Einersen p. 176).

"1199 A. D. (= 1859th of Synmu," art de verif.), abdication of Toba II. in favour of his eldest son Tsatsi or Tsutsi, surnamed Mikaddo, now at the age of three years dairo of Japan. In the first year of his reign, death of Joritomo; leaving his title of "twenty" years standing (Kaempf. ii. 5) to his own son Jori-sje. — After two years, Jori-sje was slain.

"In the beginning of the Thirteenth century" (Jap. centen. comm. 106), seeds of the *tea* plant brought by the priest Miyoye from China to Japan, and its cultivation introduced.

"1200 A. D." (art de verif.), Melek-el-Mansur succeeded by Melek-Adel Seif-Eddin, fourth Ayoubite sultan of Egypt. Silver and copper coins issued by Melek-Adel, are figured in Marcel p. 149.

"In this year (= 6th year khing-youan of Ning-tsoung," Remus. mel. iii. 88), a letter and tribute sent to China by the king of Cambodia on his accession. — He reigned "twenty" years.

"The same year" (Alst.), end of the chronicle of Dodechinus.

One hundred and sixty-fifth generation. Jan. 1st, 1201, onward mostly beyond youth: the Jewish writers, Samuel ben Samson, Charisi, R. Isaac the blind, Sheshet ha-Nassi, and Samson of Germany: the Arab writer Boha-eddin: the Greek writers, Nicetas Choniates d. 1216, and Balsamon d. 1204: Conradus Urspergensis, Honorius Augustudunensis; William of Newburgh; Campanus of Lombardy; Gervase of Canterbury; Ralph of Diceto; Saxo Grammaticus; Walter of Coventry; Accursius; Antonius of Padua: the astronomer Jean de Sacrobosco (Pouchet).

"The same year" (Nicol.), by a synod at Paris, Evrard of Nevers convicted of heresy and burned.

"1202 A. D. (= 599 A. H." of Ferisht., Elph.), death of Gheias u-din. Shahab-u-din or Mohammed Ghori now becoming sole sultan of Ghor and Ghazni.

"1203 A. D. (= 600 A. H." of Ferisht., Elph.), Shahab-u-din proceeding North against Kharizm, defeated by the Khitan Tartars.

"In this year" (Blair), Fourth crusade. Sailing from Venice, the expedition arrived on the "14th of June" at Chalcedon.

Ibn Roshd or Averrhoes at this time writing. — He died "in 1217."

Geranium molle of Europe and the adjoining portion of Asia. Called in Britain *culver foot* (Cockayne), and probably one of the four kinds of "pede columbino," little differing, known to Averrhoes — (J. Jacobi de Manliis): the "pes-columbae" of ms. Bodley 536, and "geran columbina" of Lyte are referred here by Cockayne: G. molle is termed "g. columbinum minus majori flore et foliis florum bifidis" by Tournefort inst. 268; is known to occur in waste and fallow ground from Denmark throughout middle Europe (fl. Dan pl. 679, Vaill. paris pl. 15, Pers., and A. Dec.); was observed by Forskal near Marseilles; by Sibthorp, and Chaubard, in the Peloponnesus and on the Greek islands. (See G. columbinum).

Geranium dissectum of Europe and the adjoining portion of Asia. Probably one of the four kinds of "pede columbino" known to Averrhoes — (J. J. de Manl.): G. dissectum is termed "g. columbinum maximum foliis dissectis" by Tournefort inst. 268; is known as a weed in waste and cultivated ground from Denmark throughout middle Europe (fl. Dan. pl. 936, Curt. lond. vi. pl. 45, Vaill. paris

pl. 15, Cavan. iv. pl. 78, and Pers.); was observed by Sibthorp, and Chaubard, in the Peloponnesus and other parts of Greece; by Delile, in the cultivated fields of Lower Egypt.

Geranium Pyrenaicum of Europe and the adjoining portion of Asia. Probably the fourth kind of "pede columbino" known to Averrhoes — (J. J. de Manl.); G. Pyrénaicum is termed "g. columbinum perenne pyrenaicum maximum" by Tournefort inst. 268; is known to grow wild in middle Europe (Lorey and Dur.), and naturalized as far as Normandy, Paris, Britain, and Ireland (Cav. iv. pl. 99, Curt. lond. iii. pl. 42, Wats., and A. Dec.); was observed by Sibthorp from mount Athos to the Peloponnesus.

"1204 A. D. = 4th year of the 'kia-tai' of Ning-tsoung, and 4th year of the 'tai-ho' of Tchang-tsoung" of the Kin (Chinese chron. table), beginning of the Sixty-fifth cycle.

"The same year" (. . . . F. Mason i. 6 and iii. 67); in Burmah, by Nara-padi-sæthu, king of Pugan, building of the great pagoda at Tavoy point.

"The same year" (Blair), after "about three hundred years" separation, Normandy conquered and re-united with France. — Three years afterwards, towns in Normandy were elected into corporations, Rouen, and Falaise being the first.

"The same year" (Blair), the *Inquisition* instituted. Against the Albigenses.

"July 20th" (Alst., and Blair), Constantinople captured by the crusaders, and "a great number of *libraries*" there destroyed by the soldiers (Ramusius, Gibbon, Michaud, and Pouchet). Henri Baldwin was now made king, under the spiritual dominion of the pope: the Venetians receiving as their share the island of Crete. Alexis III. was however succeeded at Adrianople by Theodorus Lascaris as the legitimate Byzantine emperor.

The "Chronicle of the conquest of Constantinople" by Geoffrey de Villehardouin, almost the earliest literary production by a layman (rudim. chron. Lond.).

"1205 A. D. (= 602 ann. H.," J. T. Blunt as. res. iv. p. 316), accession of Cuttub Shaw as sultan of Delhi. — He reigned five years; and his tomb is pointed out near the Cuttub Minar tower.

About this time (= "about six hundred years" before 1804, tradit., and Colebrooke as. res. viii. 467), the celebrated Sri Bhagavata composed by a grammarian.

"1206, March 14th (= 602 A. H., Shaban 2d" of Ferisht., Elph.), Shahab-u-din, during a second expedition against Kharium, assassinated on the Indus by a band of Gakkars, who had lost relatives in his wars. Kutb-u-din now became first sultan of Delhi, and received the insignia of royalty from Mahmud Ghori, the successor of Shahab-u-din.

"In this year" (Yule p. cxvii, and Pauth. 348), the Western Tartars acquiring prominence in History, Chinghiz elected khan and invited by Ning-tsoung to aid him against the Kin.

"1208 A. D." (rudim. chron. Lond.), England laid under an interdict by the pope.

"The same year" (Alst., and Pouchet), a mendicant Order of monks founded by Franciscus; and named from him "Franciscans." — The Dominicans were founded eight years later. For the next two or three centuries, nearly all the distinguished writers belong to the mendicant monastic Orders (Pouchet).

"1209 A. D. = 1st year of the 'ta-ngan' of Tchou-young-ki, of the Kin," ruler of Northern China — (Chinese chron. table).

"In this year" (Tchao yuan phing, and Klapr. mem. ii. 331), the "fourth" of Jenghiz-khan, voluntary submission of Barchu-Arte-Tieghin, chief of the Ouigours, a Turkish tribe on the Selenga.

"1210 A. D." (Blair), the persecution against the Albigenses very severe.

"October" (Alst., and Nicol., see also Blair), a synod at Paris. "Fourteen disciples of Aumari" or Almaric were condemned to be burned; together with the metaphysical writings of Aristotle, just imported from Constantinople and translated into Latin.

"The same year (= 607 ann. H.," Elph., and J. T. Blunt as. res. iv. 316), Kutb-u-din Eibak succeeded by his son Aram, — and within a twelvemonth by Altamsh, now sultan of Delhi.

"1211 A. D. (= 1871st of Syamu," art de verif.), abdication of Tsatsi-mikaddo in favour of his younger brother Siuntoku, now dairo of Japan. Sonnetomo, second son of Joritomo, being refused the title of his father and brother, commenced war, — built the first *ships of war* seen in Japan, and at length obtained confirmation of the title of cubo.

"The same year" (Lubke and Lutrow), building of the cathedral at Rheims.

"1212 A. D." (Alst.), end of the chronicle of Robertus de Monte.

"1213 A. D. = 1st year of the 'tchi-ning' of Tchou-young-ki of the Kin, who died in this year; and 1st year of the 'tchin-yeou' of his successor Hiouan-tsoung" — (Chinese chron. table).

"July" (Nicol.), a synod at St. Albans. King John, on swearing to observe the laws of Edward III. the Confessor and of Henry, was reconciled to the prelates and barons.*

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* *Aethusa cynapium* of middle and Northern Europe. Called in Britain *fool's parsley*, and apparently the same plant by old writers "ass-parsley" (Prior): the bridde s nest identified in

"Aug. 25th" (Nicol.), a synod in London. The pope having confirmed king John's absolution, the interdict was removed and the clergy were permitted to read "divine service in public."

"1214 to 1215 A. D." (Nicol.), a synod at Bordeaux. All persons holding Jews were enjoined "to compel them to remit usury to those who had taken the cross;" and a provision was adopted, "That widows and others should not be compelled to marry against their inclinations."

"1215 A. D." (Way ed. pr. pm. pref.), Alexander Neccham appointed abbot of Cirencester. His writings are voluminous, — and are quoted by Galfridus, pr. pm.

"June 10th" (Blair), *Magna Charta* signed by king John and the barons.

"Nov. 11th to 30th" (Alst., and Nicol.), Twelfth general ecclesiastical Council. Convened at the Lateran in Rome. Among other acts, *Auricular confession* was sanctioned (a measure connected with Indulgences and their prospective use). — Forty years later, Indulgences were for sale in England (Alst. p. 395).

"1216, July 18th" (Alst., and Nicol.), Innocentius III. succeeded by cardinal Cencio Savelli, now Honorius III., twenty-first pope. Fredericus II. who wrote on Falconry (Pouchet), ruling Germany and Italy; Alexander II. ruling Scotland; and in England "Oct. 19th," king John succeeded by Henry III.

"The same year" (Clavig. ii.), arrival of the Aztecs at Tzompanco, a city in the vale of Mexico.*

"1218 A. D." (Munk), Melek-Adel Seif-Eddin succeeded by Melek-Kamel, fifth Ayoubite sultan of Egypt. A gold coin issued at Cairo by Melek-Kamel — is figured by Marcel p. 151.

Astragalus glyciphyllus of Northern and middle Europe. Called in Britain *milk-vetch* or *liquorice-vetch* (Prior); in which we recognize the "bathrat" or "schalin" seen by Abul Abbas elnabati at Seville in Spain, and identified by a botanist there with the root of "glycirrhiza urbana" — (Ebn Bait.); also the medieval Latin "liquiricia" (Prior), and the "licoris" plant of Chaucer c. t. 13690: A. glyciphyllus is described by Morison ii. pl. 9; is termed "a. luteus perennis procumbens vulgaris sive sylvestris" by Tournefort inst. 416; and is known to occur in waste and cultivated ground principally in Northern Europe (Engl. bot. pl. 203, and Pers.). Eastward, was observed by Sibthorp on mount Athos.

Neurada procumbens of the Northern Sahara, from the Atlantic as far as Arabia. Called in Egypt "saadan," in which we recognize the "sadan" growing in the sand of the treatise Elrujlat (by A. A. Elnabati), — and Ebn Baitar: N. procumbens was observed by Forskal, Delile, and myself, in the Egyptian portion of the Desert; and is known to grow also in Barbary and Arabia (Linn., Lam. ill. pl. 393, and Pers.).

Nerium obesum of the Southern border of the Sahara as far as Arabia. The "zakkum" described in the treatise Elrujlat as a tree of extraordinary shape, like a root as large as a man rising more or less, the flowers jessamine-like, — and by Ebn Baitar as purple-flowered with Sesamum-like pods but longer and containing woolly seeds, may be compared: N. obesum was observed by Forskal p. 205 among the mountains of Yemen, and called "aden" or "öddæjn;" and by myself, on the hills at Aden.

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gloss. Laud. 553 with the daucus asininus, — having according to Gerarde p. 873 leaves like hemlock, may be compared: Ae. cynapium is termed "petroselini vitium" by Tragus 100 (Spreng.); is described also by Blackwell pl. 517; and is known to grow in mountainous situations (Pers.), and in cultivated ground from Austria to France and Britain (Crantz, and Engl. bot. pl. 1192). Eastward, is known to occur in the Tauro-Caspian countries (Bieb., Trevir., and Steud.). By European colonists, was carried to Northeast America, where it has been observed by myself sparingly around dwellings in New England. Its leaves according to Lindley "are poisonous, producing nausea, vomiting, headache, giddiness, drowsiness, spasmodic pain, numbness, etc."

* *Cassia alata* of Tropical America. A shrub eight to twelve feet high, with showy yellow flowers: — observed by Meriam in Surinam (Spreng.); by Swartz, and Descourtilz, in the West Indies, but no Carib name given; termed "c. herpetica" by Jacquin obs. ii. pl. 45. By European colonists was carried Westward across the Pacific to the Philippines, called in Tagalo "acapulco" or "gamot sa buni" remedy against herpes or "catanda" or "sonting," in Pampango "pacayungoon castila," in Bisaya "casitas" or "sunting" (Blanco), observed by myself naturalized in Interior Luzon; to the neighbouring islands (Rumph. vii. pl. 18); to Burmah, "exotic" although "often found apparently growing wild," called "mai-za-lee-gyee," and "much cultivated by the natives for its medicinal properties in diseases of the skin" (Mason v. 490); to Hindustan, called in Sanscrit "dadrooghna," in Bengalee "dad-murdun," in Telinga "mitta tamara," in Tamil "wandu rolle" (Lindl.) or "wandukolli" or "seemee aghatie," in Hindustanee "veleytie aghatie" (Drur.), observed by Ainslie, Roxburgh, Wight, and Drury, under cultivation as far as Travancore, the juice of its leaves mixed with lime-juice as a remedy for ringworm; by Graham, and myself, in gardens at Bombay.

Jatropha glandulosa of Tropical Arabia. Called in Yemen "öbab" or "bocka," in which we recognize the "baka" of Abul Abbas Elnabati, — and Ebn Baitar: J. glandulosa was observed by Forskal p. 163 in Yemen, in stinging emitting a watery and somewhat milky juice, acrid enough to corrode iron, the fresh stems applied to boils or felons to soften the tumour and soothe the pain. Farther East, a shrub suspected by Graham to be "J. glandulifera" has been found in the Bombay Presidency only "near Punderpore in the Deccan, where a fabulous legend is connected with its first springing up;" but "J. glandulifera" was observed by Roxburgh in other parts of Hindustan, and according to Lindley "the pale or whey-coloured thin juice which exudes from a fresh wound is employed by the Hindus as an escharotic to remove films from the eyes."

Jatropha glauca of Tropical Arabia. Possibly included with the preceding; — found by Forskal p. 162 sometimes substituted in Yemen though inferior in medicinal virtue, and called "öbab" or "medjersche." According to Ainslie, and Lindley, the "seeds yield stimulating oil recommended by the Hindus as an external application in cases of chronic rheumatism and paralytic affections." As transported to Europe, the plant is described by Plukenet alm. pl. 220, and Vahl.

Barleria bispinosa of Tropical Arabia. The Justicia tribe called in Yemen "uusar" (Forsk.), and the "haischar" of the Elrujlat of A. A. Elnabati growing at Medina, spiny, the flowers between white and blue, — may be compared with this species: B. bispinosa was observed by Forskal p. 6 along the base of the mountains of Yemen, and called "kulibe" or "schechad."

Grewia velutina of the mountains of Yemen. A shrub called in Yemen "nescham," in which we recognize the white "nascham" of the treatise Elrujlat, — and of Ebn Baitar (art. "gabariyat"): G. velutina was observed by Forskal p. 106 on the mountains around Hadie.

Ruellia guttata of the mountains of Yemen. A shrubby species called in Yemen "kasr" or "ghobeire," and the "gubaira" mistaken for a different plant according to the author of the Elrujlat — (Ebn. Bait. art. "gabariyat"), may be compared. R. guttata was observed on the mountains of Yemen by Forskal p. 114.

Not earlier than this year ("1218–30" Lubke and Lutrow, rudim. chron. Lond. giving "1228"), building of the Franciscan cathedral at Assisi; the earliest example in Italy of the *pointed arch*.

Eryngium alpinum of the mountains of middle Europe. The more simple-stemmed beautiful kind called "spinam Sancti Francisci," growing on mount Auerno of the Appenines, — and further described by Caesalpinus xiii. 28 as held sacred and having "cacuminibus cæruleis," seems to correspond: E. alpinum is described by Linnæus; and is known to grow on the mountains of Switzerland (Jacq. rar. pl. 94, and Pers.).

"1219 A. D." (Munk, and Marcel), Sixth crusade. The Expedition landing in Egypt, and capturing the city of Damietta. — After advancing in the course of two years as far as the head of the Delta, the crusaders were compelled to capitulate and leave the country.

"In this year" (Yule cath. i. p. cxviii), the Tartars under Jenghis Khan extending their conquests Westward: his armies penetrating to Russia, Georgia, and Armenia.

"In this year (=12th of the 'kia-ting' of Ning-tsoung," geogr. Chin. transl. Klapr. 36), submission of Tchhe, king of Corea, to the Mongols.

"1220 A. D." (rudim. chron. Lond.), in England, "rebuilding of the abbey church of Westminster;" and commencement of Salisbury cathedral.

"1221 A. D. (= 618 A. H." of Ferisht., Elph. vi. 1), the Sultan of Kharism having been defeated and his country overrun by the Mogul Tartars under Jenghis Khan, his son Jelal-u-din driven across the Indus into Hindustan seeking refuge with sultan Altamsh of Delhi.

"In this year" (Lubke and Lutrow), Mary and the child; a painting by Guido of Siena — extant to the present day.

"1222 A. D." (Alst.), at Adrianople, Theodorus Lascares succeeded by Joannes III. Ducas as the legitimate emperor. "At Constantinople in this year" (Nicol.), a synod, On the differences between the Greek and Latin bishops of Cyprus.

"The same year (= 619 Hej.," Pall. trav. i. 192), date of Arabic inscriptions in the cemetery of the ruined city of Bolgari, on the Lower Volga.

"The same year" (art de verif.), abdication of Siuntoku in favour of Foricawa II. or Go-Forikawa, grandson of Takakura, and now at the age of thirteen dairo of Japan.

"In the reign of Go-Horikawa" (Jap. centen. comm. 66), "Kato Shirozayemon went to China, and after having seen some of the Chinese *potteries*, returned and settled in the province of Owari," — but the pottery which he made was "a kind of *stoneware*."

"1223 A. D." (Blair), in France, the slaves all franchised, set at liberty by Louis VIII.

"1224 A. D. = 1st year of the 'tching-ta' of Ngai-tsoung, of the Kin," ruler of Northern China — (Chinese chron. table).

"The same year" (Remusat mel. iv. 169, and Pauth. 382), end of the historical encyclopedic work "Wen-hian-thoung-khao," — written many years later by the Chinese archæologist Ma-touan-lin (see 1317 A. D.).

"1225 A. D. = 'pao-tsing,' 1st year of Li-tsoung, of the Soung" or Twenty-first dynasty—(Chinese chron. table).

"May 15th" (Nicol.), a synod at Paris. Louis VIII. treating with the pope's legate, ceded his rights against the English, and prepared to march against the Albigenses or "heretics."

"The same year" (rudim. chron. Lond.), by the English parliament, a subsidy granted the king on condition of the confirmation of Magna Charta: the earliest instance of combining "a grant of supply with a redress of grievances," and thus establishing "a check on the king's prerogative."

"1226 A. D. (= 623 Hej.," Pall. trav. i. 192), date of "twenty-two" Arabic inscriptions in the cemetery of the ruined city of Bolgari, on the Lower Volga.

"1227, March 19th" (Alst., and Nicol.), Honorius III. succeeded by cardinal Ugolino de' Conti di Segni, now Gregorius IX., twenty-second pope. Louis IX. le Saint ruling France.

Veronica officinalis of Northern Climates. Called in Germany "erenbreiss" or "gruntheyl" (Trag.) or "grundheil" from "grind" leprous diseases, in Britain *groundheele*, in France "herbe aux ladres" from having cured a French king of leprosy (Prior) or "veronique" (Nugent) or "veronica" after the healed French king — (Braunsw.): the "vĕrōnikēs" is mentioned by Nicolaus Myrepsus antid. 327: V. officinalis is described by Tragus i. pl. 68, and Dodoens 40; is termed "v. mas supina et vulgatissima." by Tournefort inst. 143; and is known to grow from Lapland throughout middle Europe (fl. Suec. ii. 12, fl. Dan. pl. 248, and Pers.); was observed by Sibthorp in Northern Greece; is known to grow also in Siberia (Wats.). Westward, was observed by Hooker on Iceland; by Drummond, at 53° on the Rocky mountains; by A. Gray in central New York, "certainly indigenous in many places, especially in the Alleghanies;" by myself, to all appearance wild in the forest from the mountains of Western Massachusetts to the environs of Philadelphia.

"Nov. 18th" (Nicol.), a synod at Rome. The excommunication against the emperor Fredericus II. "for not proceeding to the Holy land," was repeated.

"The same year" (Lubke and Lutrow), in Spain, the cathedral at Toledo commenced;—"two hundred" years later the building was finished.

"The same year" (Desvergers), death of the Tartar chief Jenghis Khan. Whose wars and those of his immediate successors, though directed against Persians and Arabs, contributed to the extension of Muslim power Eastward, in Central Asia and towards the frontier of China. He was succeeded by his son Okkodai, now khan of the Tartars.

Sesbania Aegyptiaca of Equatorial Africa? Called in Burmah "yæ-thoo-gyee" (Mason), in the environs of Bombay "shewaree" (Graham), in Egypt "seiseban;" in which we recognize the "sisaban" of Madschul, — and Ebn Baitar: S. Aegyptiaca was observed in Egypt by Alpinus pl. 82, and Delile, and according to Forskal, is planted for hedges on account of its rapid growth, is useful also for firewood, but requires copious irrigation. Eastward, was observed in Hindustan by Rheede vi. pl. 27, Roxburgh, Wight; under cultivation there, by myself; and according to Graham is "a small tree of very quick growth," found by Gibson "cultivated and extensively used in the plain parts of the Deccan as a substitute for the bamboo." Farther East, was observed by Mason "exotic" in Burmah, cultivated by the natives and termed "water-chief," the leaves being applied "to promote suppuration."

"1228 A. D." (Elph. iv. 1), the Salonka dynasty succeeded by another dynasty of Hindu kings of Guzerat.

Indigofera pauciflora of Scinde and the neighbouring portion of Hindustan. Its twigs from early times used for teeth-scrubbers in Scinde and by the Hindus of India — (Badger edit. Varthem. p. 64).

"1229, Apr. 29th" (Nicol.), a synod at Westminster. The lay lords refused "to grant to the pope a tenth of all the revenues of England and Ireland, to be employed in the war against the emperor" Fredericus II.

"1230 A. D." (Blair), in the University of Paris, several persons killed in the disputes about Aristotle.

"In this year" (Hugh Davies, and A. Dec. geogr. bot. 627), by the Welsh prince Rhys Grug, land and privileges granted to the physician Rhywallon, to relieve him and his descendants from pecuniary cares in pursuing their medical investigations. — The family were established at Myddfai, have left manuscripts relating to the properties of indigenous herbs, and continued extant until about "1740."

The encyclopædic work "De rerum natura" by Thomas Cantipratensis, in this year professor at Louvain (Humb. cosm.).

"In or about this year" (Ramus., and Stanley edit. J. Barbaro p. 46), Seleucha in Cilicia taken from the Turks by Rubino and Leone, brothers of Armenia.

"1231 A. D." (Elph. iv. 1), Ujen captured by Altamsh, and the dynasty of Hindu kings of Malwa terminated.

Trichosanthes anguina of Tropical Eastern Asia. Mentioned perhaps in the Nabathean landwirthschaft of Sagrit (Safarit) — of Ebn Baitar art. "kuthn?" as well as by Abu Abdallah, for "schlangengurke" occurs in the translations by Sontheimer anmerk. ii. 12 and 26: T. anguina was observed by Graham "commonly cultivated about Bombay" and called "chiconda;" and by Rumphius v. pl. 148, Roxburgh, and Wight, in other parts of Hindustan. Farther East, is enumerated by Mason as "exotic" in Burmah, called "pai-len-mwæ," and in "very general demand for vegetable curries;" from its contorted long slender-striped fruit is called *snake-gourd* by the colonists. As transported to Europe, is described by Miller pl. 32.

"1232 A. D." (Nicol.), a synod at Nice. "On the jurisdiction of the patriarch."

"The same year" (Nicol.), a synod in London. The authors of the ill-treatment of "Roman clerks who had benefices in England," were excommunicated.

"In this year (= 5th of the tchao-ting," geogr. Chin. transl. Klapr.), a Mongol army under Ogotai entering Corea, and "seventy-two" inspectors established in the principal cities, notwithstanding the renewal of submission on the part of king Tchhĕ.

"1233 A. D." (art de verif.), Foricawa II. succeeded by his eldest son Sidsio, now at the age of five dairo of Japan.

"From Apr. 24th to May 10th" (Nicol.), a synod at Nympha in Bithynia. "On the procession of the Holy Ghost."

"The same year" (Blair), the *Inquisition* committed to the care of the Dominican Order of monks.

"The same year" (rudim. chron. Lond.), discovery of *coal* at Newcastle in England.

"1234 A. D. = 1st year of the 'touan-ping' of Li-tsoung" of the Soung, "end of the rule of the Kin" (Chinese chron. table). The Tartar khan Okkodai having consolidated with his empire all the provinces North of the Kiang (Yule i. p. cxviii).

One hundred and sixty-sixth generation. May 1st, 1234, onward mostly beyond youth: the Chinese astronomer Ye-lou-thsou-tsai: the Persian writer Nasir-eddin Tousi: the Jewish writers, Meir Abulafia, Abul Menni ben Abi Nassar ben Hafidh el-Atthar, David Kimchi, Jacob of France: the Arab writer Abraham Ibn Sahl: the Greek writers, Germanus of Constantinople d. 1254, Nicephorus Blemmides, d. after 1255, Arsenius of Corinth d. after 1264: Hugo de S. Caro, Jacobus a Vitriaco, Matthæus Paris; John of Halifax; Peter de Vignes; Grostest; Bruno de Lungoburgo: the scholastic theologians, Gulielmus Antisiodorensis, Gulielmus Parisiensis, and Alexander de Ales: the painter Margaritone d. 1275 (Bryan).

"In or about this year" (Hillel ben Samuel, and Steinschneid. ii. 11), a controversy among the Jews respecting Maimonides, and the "Jewish creed" submitted by them "to the judgment of Christians." The result was, that the Talmud and other Hebrew writings "to the number of about twelve thousand volumes" were publicly burned at Paris.

Verbal information received from Abd-allatif by Ebn Baitar (art. "jimjim").

Malva verticillata of China. Called in Egypt "khobbeyzeh," in which we recognize the "melukiyya" seen in Egypt by Abd-allatif, and identified by him with the "khobbeiza:" — a cultivated and esculent *mallow* resembling M. rotundifolia, was seen in Egypt by Forskal; M. verticillata was observed there by Delile, and its field-culture, mentioned by Clot-Bey, was witnessed by myself. As transported Westward, M. verticillata is described by Linnæus, Jacquin hort. pl. 40, and Cavanilles ii. pl. 25; and since 1843, has made its appearance in cultivated ground near Llanely in Wales (Engl. bot. pl. 2953, Bab., and A. Dec.).

Citrus limonum of Tropical Eastern Asia. The "limun de baume an inch long and of the shape of an elongate egg," seen in Egypt by Abd-allatif, — may be compared: *limes* were seen in Egypt by Belon; and the "leymoun maleh" of Delile, may also be compared. Farther North, the "limon pusillus" is described in 1638 by Ferrari pl 211; and C. limonum, recognized by the crenulate leaves, is figured as a greenhouse plant by Parkinson. Eastward from Egypt, C. limonum was observed by myself at Muscat; the "lime tree" is enumerated by Graham as "common in gardens" in the environs of Bombay; and the "small acid lime" is described by Mason v. p. 453 and 760 as "exotic" in Burmah, but "seen almost everywhere in abundance." By European colonists, C. limonum was carried to the islands of the Pacific, as ascertained by myself at the Hawaiian, Taheitian, and Tongan Groups; and a single tree of unknown origin was said to exist on the Samoan Group.

Sorghum saccharatum of Abyssinia? Called in Yemen and Egypt "dokhn," in which we recognize the "dokhn," described by Abd-allatif as cultivated only at the Southern extreme of Egypt: — S. saccharatum was observed by Forskal in a garden at Rosetta, the seeds given to birds; by Delile, in a garden at Cairo; and as transported Westward, is described by Linnæus, and Mieg pl. 4. Southward from Egypt, was found by Forskal p. 174 extensively cultivated in Yemen as an esculent grain. Eastward, was observed in Hindustan by Roxburgh; according to Graham, was found by Sykes cultivated in the Deccan and called "shaloo;" and farther East, is mentioned by Mason v. p. 476 as

occasionally met with in Burmah, and called "pyoung." By European colonists, was carried to North-east America, where it is now cultivated for making brooms, and is called *broom corn.*

"1235 A. D." (Lubke and Lutrow), in Germany, the Elizabeth church at Marburg commenced.—The building was finished "in 1283."

"1236, April (= 633 A. H: 20 Shaban" of Ferisht., Elph. vi. 1), Altamsh succeeded by his son Rukn-u-din, and after "seven months" by his daughter Rezia, now sultana of Delhi.

"June 10th" (Nicol.), a synod at Tours. "In favour of the Jews."

In this year (= "633 Hej." at Damascus, first meeting of Ebn Abi Osaibiah with Ebn Baitar. Who on his way through Cairo received the title of vizir from Malek Kamel, also an honorary degree from the Arab academy;—and who died in "1248" (Ebn Abi Osaib., Abulfed., Spreng., and Sonth.).

Reaumuria vermiculata of the Northern Sahara. Called in Egypt "a'dbeh" or "mulleyh," in which we recognize the "mollah" or "kaschkah" of the Arabs identified by Ebn Baitar with the "androthakos:"—R. vermiculata was observed by Forskal p. 101, and Delile, in the Egyptian portion of the Desert, the plant bruised and applied externally against psora, or taken internally in decoction; is known to grow also on the seashore of Syria; Sicily, and Barbary (Desf. i. p. 431, and Pers.). From transported specimens, is described by Morison iii. pl. 9.

Dorema ammoniacum of Persia. An Umbelliferous plant called there "ooshak" or "oshac" (Lindl.), in which we recognize the "oshak" of Ebn Baitar,—referred by Sontheimer to gum *ammoniac* (probably from the evidence collected by Don linn. trans. xvi. 601): D. ammoniacum is described by Don as growing in Irak in "very dry plains and gravelly soil exposed to an ardent sun," and he regards it as really furnishing "the ammoniacum of the shops" (Lindl.: see Ferula Tingitana).

Valeriana Pyrenaica of the Pyrenees. The "sathwal" mentioned by Ebn Baitar as the name of zerumbet among the people of the North and remaining Franks,—may be compared with the "sete-wale" of Chaucer c. t. 13690, and "setwal" of Lyte iii. 17, referred by Prior to V. Pyrenaica; formerly "sold by ignorant or fraudulent apothecaries" for zeduar sometimes spelt "zedualle:" V. Pyrenaica is described by Plukenet alm. pl. 232, and escaping from gardens has become naturalized in various parts of Britain (Hook., Wats., and Bab.): in its wild state, is known to be confined to the Pyrenees.

Cineraria maritima of the Mediterranean shores. Called in Egypt "achaouan abiat," and possibly included in the "ukhuvan" of Ebn Baitar—and other Arab writers: observed by Alpinus pl. 28 used medicinally in Egypt; and by myself growing as far inland as Cairo. Farther North, observed by Sibthorp, and Chaubard, on the Greek islands and the Peloponnesus: and Westward, described by Lobel pl. 227, termed "jacobæa maritima" by Tournefort inst. 486, and known to grow on the seashore of France (Pers.; see Anthemis nobilis).

Verbesina sativa of Abyssinia. A sunflower-like plant called in Hindustanee "kalatill," in Bengalee "ramtil," in Telinga "valesuloo" (Drur.); and the "kurthum hindi" yielding oil according to Ebn Baitar,—may be compared: V. sativa was observed by Graham "commonly cultivated" on the Deccan for "the oil it affords;" by Roxburgh, and Royle, under cultivation in Bengal; is known to be also cultivated in Mysore, and the oil "from the larger seeds" according to Drury "is the common lamp-oil of Upper India." Westward, was observed by Bruce trav. in Abyssinia, yielding an oil employed throughout the country for domestic purposes (Grev.): is termed "polymnia Abyssinica" by the younger Linnæus suppl. 383, "guizotia oleifera" by Decandolle prodr.

Arnica montana of Subarctic climates. At Lahore called in Arabic "khanek-ul-zeib" (Honigb. 375, and J. F. Wats.); in which we recognize the "chanik eldsib" of Ebn Baitar:—A. montana is described by Matthioli p. 51, Dalechamp p. 1169 (Spreng.), and Clusius hist. iv. pl. 18; is known to grow from Lapland throughout Northern Europe (fl. Lapl. p. 305, and fl. Dan. pl. 63), and on mountains farther South to the snow-limit on the Pyrenees and Swiss Alps (Brot., and Dec.). Eastward, is known to grow throughout Siberia, as far as the Yenisei river and Bering's Island (Gmel.). And farther East, was observed by E. James along the Rocky mountains; by Nuttall, on the Upper Missouri; and is known to grow on Melville Island in Arctic America, and in Greenland (Sab., and Hook.). According to Lindley, "a virulent plant" that on the Continent has obtained the name of *panacea lapsorum*, its activity "seems however to have been exaggerated."

Solanum Forskalii of Yemen. Called there "bokæme," in which we recognize the "bokkam" of Ebn Baitar:—observed by Forskal p. 47 along the base of the mountains of Yemen.

Solanum Arabicum of Yemen. Called there "bokæme" or "bonkom," and possibly the "bokkam" of Ebn Baitar:—described by Forskal p. 47 as "horride armata," and observed by him along the base of the mountains of Yemen.

Solanum incanum of Tropical Arabia. Called in Yemen "ærsæn" or "ersan," in which we recognize the "arsam" mentioned by Ebn Baitar as a wild melongena growing in Yemen:—S. incanum was observed there by Forskal p. 46, the smoke of the seeds employed against toothache, the

leaves applied to wounds, and boiled with those of Physalis somnifera in water for washing hypochondriacs, regarded as labouring under "dæmoniacismo."

Eulophia salep of Northern Hindustan. Called there "khusyat-ul-salib" or "khusyat-ul-kulb" (ulfaz udwieh 860, Royle 369, and Birdw. 86), in which we recognize the "chusa elkalb" of Ebn Baitar:—Royle's specimens of the Eulophia yielding *salep* at Cashmere, were found by Lindley insufficient for ascertaining the species (see Orchis papilionacea).

Agrostis alba of Europe and Northern Asia. A grass called *white bent* (A. Gray), in Greece "agriokalamia" (Sibth.), in Egypt "naæjm" (Forsk.), in which we recognize the "najm" of Ebn Baitar:—A. alba is termed "phalaris semiverticillata" by Forskal p. 17, and was observed by him, and Delile, frequent about Rosetta and Cairo; by Sibthorp, on Zacynthus and in marshy ground around the Bithynian Olympus; by Bieberstein, on the subalpine portion of Caucasus; and is known to grow in Siberia (Kunth). Westward, is known to grow throughout middle Europe as far as Sweden (engl. bot. pl. 1189, and Wats.); and was observed by Hooker on Iceland. Probably by European colonists was carried to Northeast America, where it occurs around dwellings and along roadsides and seemingly wild in the forest; was received by Kunth from Nutka in Northwest America. *A. stolonifera*, regarded as not distinct, was observed by Sibthorp, and Chaubard, frequent in grassy situations in Greece; by Bieberstein, in the Southern portion of Tauria; is known to grow throughout middle Europe (engl. bot. pl. 1532); is termed "the hindering knot-grass" by Shakspeare m. n. d. iii. 2 (Prior); and was observed by Hooker on Iceland.

"1237 A. D." (Talvi ii. 1, and Pauth. 1), invasion of Europe by the Tartars under Batou, nephew of Okkodai Khan: Moscow was captured and the Russians defeated and rendered tributary,—remaining in bondage more than "two" centuries.

"In this year" (palm-leaf ann. Jag., and W. W. Hunter, Stirling giving 1236), Rajrajeswar Deva suceeeded by Languliva Narsinh, now king of Orissa.—He built the great Sun-temple at Kanarak by the sea (the Black pagoda), and reigned "forty-five years."

"Nov. 19th to 22d" (Nicol.), a synod in London. One of the decrees proposed by the legate Otto was, "That all acts should from thenceforth be dated on the day, year, and at the place, when and where they were subscribed."

Manuscripts in this year (De Wailly pl. xv. 5), presenting the following form of the letter k.

"1238, May 17th" (Nicol.), a synod in London. Satisfaction having been tendered, the interdict suspending the exercises of the University at Oxford, laid by the legate Otto in consequence of an insult, was removed.

"The same year" (art de verif.), Melek-Kamel succeeded by Melek-Adel II., sixth Ayoubite sultan of Egypt.

The itch insect, *Acarus scabiei*, described by Avenzoar.—He died "in 1262" (Pouchet).

1239 A. D. (= "7th year of Sidsio," art de verif.), visit of the general in chief Joritzne to Sidsio at Meaco.

"In this year (= 637 A. H." of Ferisht., Elph.), Rezia succeeded by her brother Moizz-u-din Behram, now sixth sultan of Delhi.

Limonia acidissima of Tropical Eastern Asia and the Malayan archipelago. A pinnate-leaved Aurantiaceous shrub called in Malabar "tsjeru caat-naregam" (Drur.); and from early times; its leaves root and fruit employed medicinally: *—observed in Malabar by Rheede iv. pl. 14, its dried fruit form-

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* *Guatteria* (*Polyalthia*) *cerasoides* of Western Hindustan. An Anonaceous tree called in Telinga "dudugu" or "chilka dudugu" (Drur.); and from early times, its whitish close-grained timber used in carpentry and for boats and small spars:—observed by Roxburgh, Wight, and Beddome, from the Godavery "common in all the dry forests near the foot of all the mountains on the western side of the Madras Presidency" (Drur.); by Graham, on the "Tull Ghaut, Jowar Forests," in the region around Bombay.

Flacourtia sepiaria of Western Hindustan. A thorny shrub called in Tamil "sottacla," in Telinga "conrew" (Drur.), in the environs of Bombay "tamboot" or "atroon" (Graham); and from early times, its berries eaten, and leaves root and bark employed medicinally:—observed by Rheede v. pl. 39 in Malabar; by Graham, common "throughout the hilly parts of the Concan" as far as Bombay; by Ainslie, Roxburgh, Wight, and Drury, "common everywhere" in the peninsula.

Ionidium suffruticosum of Western Hindustan. A nearly stemless Violaceous plant called in Bengalee "noonbora," in Telinga "pooroosbaratanum," in Tamil "orala-tamaray" (Drur.); and from early times, its root and leaves employed medicinally:—observed by Rheede ix. pl. 60 in Malabar; by Nimmo, in "the Concans" (Graham), as far as Bombay; by Ainslie, Roxburgh, Wight, and Drury, in other parts of the peninsula as far as Travancore, flowering "nearly all the year."

Abutilon polyandrum of Western Hindustan. An erect annual, known from early times:—

ing according to Gibson an article of commerce with the Arabs; by Law, "common on sandstone hills at Padshapore, and at the falls of Gokauk" (Graham); by Roxburgh, and Wight, as far as Coromandel, Hurdwar, and Assam. Is described by Rumphius ii. pl. 43 (Pers.), and according to Drury, the

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observed in Hindustan by N. L. Burmann pl. 47; by Roxburgh, Wight, and Drury, "on the Neilgherries and about Nundigrood, yielding "a long silky fibre resembling hemp, also fit for making ropes;" by Graham, as far as "Kandalla" near Bombay.

Sida retusa of Tropical Eastern Asia and the Malayan archipelago. Shrubby, and from early times, its root employed medicinally by the Hindus: — observed by Rheede x. pl. 18 in Malabar; by Graham, as far as "Kandalla" near Bombay; by Wight, and Waring pharm. ind., in other parts of the peninsula as far as Tranquebar (Pers., and Drur.). Farther East, is described by Rumphius vi. pl. 19, and is known to occur on the Philippines and Amboyna (Pers.). Also on the Mauritius Islands (Pers.), probably carried there either by European or prior navigators.

Hibiscus furcatus of Western Hindustan. Annual; its strong white fibre known from early times: — observed by Law on "the Ghauts" (Graham), to and beyond Bombay; by Royle, in other parts of Hindustan. From transported specimens, is described by Willdenow (Steud.).

Atalantia monophylla of Western Hindustan. An Aurantiaceous shrub or small tree called in Tamil "cat-ilimicham," in Telinga "adivi-nimma" (Drur.), in the environs of Bombay "maker limboo" or "ranlimboo" (Graham); and known from early times: — observed by Rheede iv. pl. 12 in Malabar; by Graham, "common on the Ghauts" as far as Bombay, and at "Mahableshwur;" by Roxburgh, in the forests of Coromandel, its hard heavy close-grained wood suitable for cabinet-work (Drur.).

Cissus pedata of Tropical Eastern Asia and the Malayan archipelago. Called in Tagalo "ayo" (Blanco); and from early times, its root employed medicinally on the Philippines: — observed by Rheede vii. pl. 10 in Malabar; by Graham, to and beyond Bombay, in "the Concans, Mahableshwur etc., common;" by Roxburgh, Wallich, and Wight, in other parts of Hindustan; by Mason, in Burmah; and by Blanco, on the Philippines.

Xanthoxylon triphyllum of Tropical Eastern Asia and the Malayan archipelago. A small unarmed tree, its aromatic berry-like capsules from early times used as a substitute for pepper: — observed by Graham in "the ravines at Kandalla" near Bombay, "Parr Ghaut, and table land of Mahableshwur, not very common;" by Wight pl. 149 (Drur.), under cultivation in Hindustan. Farther East, was received by Roxburgh i. 416 from Pulo Penang; was observed by Rumphius ii. pl. 62 on Amboyna, a cosmetic for the complexion prepared by women from its bark; is known to grow also on the Philippines (Pers.); and the "Evodia hortensis" seen by Forster on the New Hebrides and Friendly Islands, is by some writers regarded as not distinct.

Ailanthus Malabarica of Western Hindustan. A very handsome pinnate-leaved tree called in Telinga "perumarum," in Malabar "peroomarum" (Drur.), in the environs of Bombay "wood" (Graham); its fragrant resin from early times employed medicinally: — observed by Rheede vi. pl. 15 in Malabar; by Graham, in "ravines at Nagotnah" and in other localities around Bombay; by Buchanan, in the Annamullay forests, its resin called "muttee-pal;" by Ainslie, Wight, and Drury, as far as Travancore.

Naregamia alata of Western Hindustan. A small ornamental Meliaceous shrub called in Malabar "nela-naregam" (Drur.); and from early times, its leaves root and juice employed medicinally: — observed by Rheede x. pl. 25 in Malabar; by Nimmo, in "the country east of" Bombay, "rare" (Graham); by Wight, and Drury, "wild in the Travancore forests," and flowering "freely when introduced in gardens."

Chloroxylon swietenia of Western Hindustan. The *satin-wood* tree is large and mahogany-like, called in Tamil "moodooda" or "vum-maay" or "kodawah-porsh," in Telinga "billo billuda" (Drur.), in the environs of Bombay "billoo" (Graham); and its close-grained box-like timber valued from early times, and known to bear immersion in water: — observed by Gibson on "the Alleh Belah hills," and by Law "about the falls of Gokauk" (Graham); by Roxburgh, and Wight, in the mountainous districts of the peninsula as far as the Circars; by Tennent, in size and durability "by far the first of the timber-trees of Ceylon" (Drur.).

Samadera Indica of Western Hindustan. A Simarubous tree called in Malabar "karinghota" (Drur.); and from early times, its bark used as febrifuge, and oil extracted from its seeds: — observed by Rheede vi. pl. 18 in Malabar; by Lush in the "Goa jungles," by Nimmo "throughout the South Concan" (Graham), nearly as far as Bombay; by Wallich, Wight, and Drury, at Balghotty and abounding in Travancore and Cochin, its bruised leaves applied in erysipelas, and seeds "strung together and tied round children's necks as a preventive" of affections of the chest.

Tragia chamaelea of Western Hindustan. Erect and linear-leaved, called in Malabar "codi

very acid pulp of its fruit "is used by the inhabitants of Java instead of soap." By Nimmo, the living plant was introduced into the environs of Bombay (Graham).

Calophyllum elatum of Western Hindustan. A large tree called in Malabar "poon" or "poon-

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avanacu" (Rheede); and from early times beaten up with leaves of Argyreia Malabarica to promote the maturation of abscesses: — observed by Rheede ii. pl. 34 in Malabar; by Nimmo, in "S. Concan" (Graham); by Burmann pl. 25, on Ceylon; mentioned also by Roxburgh, and Drury p. 52.

Zizyphus xylopyra of Western Hindustan. A small thorny tree called in Telinga "gotee" (Drur.), in the environs of Bombay "gootee" (Graham); and from early times, its fruit used by Moochies for making blacking, and the kernels eaten: — observed by Law at Duddi, and by Gibson, and Graham, "common on the Ghauts;" by Retz, Roxburgh, and Wight, as far as Cochin and Courtallum and in "Southern India generally," its wood "very hard and durable and not heavy," and its "young shoots and leaves" eaten by cattle (Drur.).

Casearia esculenta of Western Hindustan. A Samydaceous shrub, its leaves eaten from early times and its roots employed medicinally: — observed by Rheede v. pl. 50 in Malabar; by Nimmo, on "the hilly parts of S. Concan" (Graham) nearly as far as Bombay; by Roxburgh, on the Circar mountains, its "bitter purgative roots much used by the mountaineers" (Drur.).

Acacia (*Albizzia*) *amara* of Western Hindustan. An unarmed tree thirty feet high called in Tamil "woonja," in Telinga "nalla-eegoo" or "nalla-eenga" or "narlinjie" (Drur.); and from early times, its leaves used for washing the hair, and its handsome hard and durable timber for building and other purposes: — observed by Law "common on the banks of the Krishna, about Nalutwar" (Graham); by Roxburgh, Wight, and Beddome, as far as Mysore and the Madras Presidency, its wood "superior to sal and teak in transverse strength and cohesive power" (Drur.).

Mimosa (*Dichrostachys*) *cinerea* of Western Hindustan. A thorny shrub six to seven feet high called in Tamil "vadatara" or "waratara," in Telinga "vellitooroo yeltoor," in Hindustanee "vurtuli" (Drur.); and from early times, its bruised young shoots applied in ophthalmia: — observed by Graham "common on the sterile plains of the Decean," also by myself; by Ainslie, Roxburgh, and Wight, as far as Coromandel, its wood "very hard" (Drur.); and by Burmann pl. 2, on Ceylon.

Cassia auriculata of Western Hindustan. A shrub called in Tamil "averie," in Telinga "tanghedu," in Hindustanee "turwer" (Drur.), in the environs of Bombay "turwar" or "awul" (Graham); and from early times, its seeds and bark employed medicinally, its bark also in tanning, its root in tempering iron with steel, and its branches preferred for making "datuns" or tooth-scrubbers: — observed by Gibson, Burn., and Graham, growing "abundantly in the sterile tracts of the Deccan and Goozerat;" by Ainslie, Roxburgh, Wight, and Drury, common in other parts of the peninsula.

Mucuna gigantea of Western Hindustan. A large woody climber called in Malabar "kakavalli" (Drur.); and from early times, its bark employed in rheumatism: — observed by Rheede viii. pl. 36 in Malabar; by Nimmo, in "the Concans" (Graham), to and beyond Bombay; by Roxburgh, and Wight, as far as Coromandel (Drur.); is described also by Rumphius v. pl. 6.

Hardwickia binata of Western Hindustan. A tree with binate leaflets called in Tamil "acha karachi" or "kat-udugu," in Telinga "nar-yepi" (Drur.); and from early times, its timber highly valued, a strong fibre procured from its bark, and its leaves eaten by cattle: — observed by Gibson, and Auld, "common in the Lulling pass" in the Bombay district (Graham); by myself, in the region around the Adjunta caves; by Roxburgh, Wight, and Beddome, from Mysore and the Western slope of the Neilgherries to the Salem and Coimbatore districts, growing as far as the elevation of "thirty-five hundred feet" (Drur.).

Cynometra ramiflora of Western Hindustan. A Leguminous tree sixty feet high called in Malabar "iripa" (Drur.); and from early times, its leaves and root employed medicinally, and an oil procured from its seeds: — observed by Rheede iv. pl. 31, and Wight, in Malabar (Drur.); by Nimmo, in "S. Concan" (Graham), nearly as far as Bombay; described also by Rumphius i. pl. 63.

Sonneratia acida of the seashore from the mouths of the Indus throughout the Malayan archipelago. A flowering maritime tree called in Tagalo "pagatpat" or "palatpat" or "palapat" (Blanco), in Burmah "tabu" or "tamu" (Mason), in Bengalee "orchaka," in Malabar "blatti," and its radical excrescences in Ceylon "kirili-now" meaning kirili root (Drur.); from early times, its fruit eaten and its timber and radical excrescences used for various purposes: — observed by Rheede iii. pl. 40 in Malabar; by Graham, in a "salt marsh" near Bombay, and the supply of "tewar" wood according to Heddle "inexhaustible in the delta of the Indus;" by Tennent, on Ceylon; by Roxburgh, as far as the Sunderbunds or mouths of the Ganges; by Mason v. 534, in Burmah, "in the mangrove swamps and on the banks of almost every stream" as "far as tide-waters reach;" by myself, within reach of the tide on the Philippines, where according to Blanco its fruit is eaten, its radical excrescences used medicinally and as a substitute for cork, and its strong timber for house and boat building; by Son-

goo" (Drur.), and known from early times: — growing according to Beddome, and Drury, in the forests of the Western Ghauts and from Coorg and Mysore to Travancore, not in dry deciduous woods, but only in the damp jungles of the Western coast, and furnishing the genuine *poon spars* of commerce, so highly prized.

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nérat, on the seashore of the Moluccas and New Guinea (Pers.). The excrescences according to Drury are spindle-shaped, sometimes "two feet long and three and a half inches wide," and when sawn into little boards are unequalled for lining insect-boxes.

Lagerstroemia microcarpa of Western Hindustan. A large Lythraceous tree called in Tamil "ventek" or "veveyla" (Drur.); and from early times, its timber much used for building purposes: — observed by Wight pl. 109, and Beddome pl. 30, "abundant in all the western forests of the Madras Presidency," but "not on the eastern side" (Drur.). The "naneh," with flowers in terminal panicles and fruit of the size of a pea, observed by Graham in the "Kennery forests" near Bombay and "common on the Ghauts," seems identical.

Conocarpus latifolius of Western Hindustan. A large Terminalioid tree called in Tamil "veckelie" or "vallay-naga," in Telinga "yella-maddi" or "siri-maun" (Drur.), in the environs of Bombay "daura" or "dabria" (Graham); and from early times, its timber considered almost equal to teak for house and ship building, its leaves used for dyeing leather, and its ashes in demand in the diet of certain wild tribes of the Neilgherry forests: — observed by Gibson, and Graham, from the "Kennery forests" near Bombay to "the inland Deccan hills," common; by Powell, in the Punjaub; by Roxburgh, Wallich, and Wight, as far as the Circar mountains and Dheyra Dhoon (Drur.).

Notonia grandiflora of Western Hindustan. A shrubby yellow-flowered Composite plant, known from early times: — said by Gibson "to be a remedy in hydrophobia," and observed in "high rocky places in the Deccan;" by Wight, and Drury, on the Neilgherries and as far South as Travancore.

Hoya pendula of Western Hindustan. A woody Asclepioid twiner, from early times much used medicinally: — observed by Rheede ix. pl. 13 in Malabar; by Dickinson, on "hills about Nagotna," and by Nimmo in "S. Concan" (Graham); by Roxburgh, and Wight, from the Neilgherries to the Circar mountains (Drur.).

Holostemma Rheedii of Western Hindustan. A perennial twining Asclepioid called in Malabar "ada-kodien," in Telinga "palla-gurgi" (Drur.); and from early times, employed medicinally, and its flowers eaten: — observed by Rheede ix. pl. 7 in Malabar; by Nimmo, and Graham, "running up trees and in hedges" in the environs of Bombay, "common in the rains;" by Roxburgh, Wight, and Drury, from the Covalum jungles near Trevandrum to Mysore and the Circars, or "from the southernmost province to the base of the Himalaya"

Cryptostegia grandiflora of Western Hindustan. A woody Asclepioid twiner with showy rose-coloured flowers, called in Malabar "palay" (Drur.); and known from early times: — observed by Graham "in gardens Bombay;" by Roxburgh, Wight, and Drury, in Malabar and Coromandel, yielding a fibre that "may be spun into the finest yarn," also caoutchouc in sufficient quantity to be "prepared for rubbing out pencil-marks."

Exacum bicolor of Western Hindustan. A showy Gentianoid annual, one to two feet high, and from early times used as a febrifuge: — observed by Graham in the environs of Bombay, generally "by the margins of rivulets;" by Roxburgh, Wight, and Drury, from the Neilgherries and Malabar to Cuttack, the dried stems "sold at Mangalore and elsewhere in the Southern Peninsula under the name of *country kariyat*," and "may be advantageously substituted for" gentian.

Schrebera swietenioides of Western Hindustan. A large pinnate-leaved Bignonioid tree, called in Tamil "mogalinga marum," in Telinga "muccadi chettoo" (Drur.), in the environs of Bombay "mokha" or "mokadee" (Graham); and from early times, its hard close-grained wood, less liable to warp than most kinds, used for a variety of purposes and especially for weaver's beams: — observed by Heddle, and Giberne, "on the Hala hills west of the Indus, also on the Tullghaut near Bhawndy," by Nimmo at Jowaur (Graham); by Roxburgh cor. ii. pl. 101, on the Circar mountains (Drur.).

Bignonia (*Spathodea*) *Roxburghii* of Western Hindustan. A large pinnate-leaved tree called in the environs of Bombay "warrus" (Graham); and from early times, its timber used for a variety of purposes: — observed by Auld in Kandesh, by Lush, and Graham, from Bombay to the Ghauts, Mahableshwar, and the Southern Mahratta country; by Roxburgh, as far as Coromandel (Drur.).

Convolvulus (*Argyreia*) *Malabarica* of Western Hindustan. A woody twiner called in Tamil "paymoostey," in Malabar "kattu kalangu" (Drur.); and from early times, its root and leaves employed medicinally: — observed by Rheede xi. pl. 51 in Malabar; by Graham, near Bombay and "pretty common on the Ghauts;" by Ainslie, and Roxburgh, as far as Mysore (Drur.).

Solanum trilobatum of Western Hindustan. A prickly woody climber called in Tamil "toodavullay," in Telinga "moondla moosteh" or "oochinta kura" (Drur.); and from early times, its leaves

Buchanania angustifolia of Western Hindustan. A Terebinthoid tree called in Tamil "colah mavuh" (Drur.); and from early times on the Western coast, its bark much used for its adhesive properties and oil for lamps obtained from it: — observed by Graham in "the Adjunta jungles;" by Roxburgh, Wight, and Drury, as far as the Trichore forests where it "is common," the bark "frequently mixed with chunam."

Poinciana elata of Tropical Arabia and as far as Guzerat. A small unarmed tree with showy yellow flowers, called in Yemen "ranf" or "mschillech" (Forsk.), in Tamil "pade rarayan," in Canara "neerangi," in Telinga "sooncaishla" (Drur.); and known from early times: — observed by Lush "in Goozerat," by Gibson "in the square of the great temple at Fultun," by Auld in "gardens Kandesh" (Graham); by Best, its leaves much used at Cuddapah for manuring indigo-fields; by Wight, and Drury, planted for its shade on roadsides, and for protecting "the footings of rivers and channel banks," from Malabar to Coromandel. Westward, was observed by Forskal p. 86 among the mountains of Yemen; by myself, in mountain-ravines at Aden.

Portulaca quadrifida of Tropical Arabia and Hindustan. Annual, procumbent from a central root, and called in Yemen "mortah" or "koraat errai" (Forsk.), in Tamil "passelie keeray," in Malabar "neelacheera," in Telinga "sun pail kura," on the Deccan "cholee" (Drur.); and from early times, eaten and employed medicinally: — observed by Rheede x. pl. 31 in Malabar; by Graham, "a common weed during the rains" in the environs of Bombay; by Roxburgh, and Wight, in other parts of the peninsula (Drur.). Westward, by Forskal p. 92 in Yemen, eaten crude and the bruised leaves applied in headache. *P. meridiana*, with flowers opening for two hours only, is regarded by Wight as probably not distinct.

Cassyta filiformis of Tropical Asia, the Malayan archipelago, and islands of the Pacific. A green-stemmed dodder-like epiphytic plant called in Yemen "djdha" or "hadeg mödeq" (Forsk.), in Tagalo "malabohoc" (Blanco), in Tamil "cottan," in Bengalee "akash-bulli," in Telinga "pauṇeh-tiga"

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eaten, and together with the berries flowers root and tender shoots employed medicinally: — observed by Gibson "in Guzerat and a few parts of the Deccan" (Graham); by N. L. Burmann pl. 22, Ainslie, Roxburgh, and Wight, as far as Cape Comorin (Drur.).

Justicia (*Rungia*) *repens* of Western Hindustan. A diffuse plant called in Tamil "kadaga saleh" (Drur.); and from early times its leaves in appearance and taste resembling those of thyme employed medicinally: — observed by Graham in the environs of Bombay, "appearing in the rains;" by Ainslie, Roxburgh, Wallich, and Wight, in other parts of the peninsula; and received by Burmann pl. 3 from Ceylon.

Ficus nitida of Western Hindustan. A tree; its root and leaves from early times boiled in oil and applied to wounds and bruises: — observed by Rheede iii. pl. 55 in Malabar; by Graham, in "the Concans," to and beyond Bombay; is described also by Rumphius iii. pl. 90.

Dioscorea triphylla of Western Hindustan. Called in the environs of Bombay "mar-chaina" (Graham); and from early times, its intoxicating intensely-bitter root put into toddy to increase its potency: — observed by Rheede vii. pl. 33 in Malabar; by Nimmo, "common in both Concans" (Graham), to and beyond Bombay; and is termed "ubium sylvestre" by Rumphius v. pl. 128.

Phœnix farinifera of Western Hindustan. A diminutive slender-stemmed palm, only two to three feet high, called in Tamil "eethie," in Malabar "eentha," in Telinga "chiruta-ita" (Drur.); and from early times, its fruit eaten together with the farinaceous substance from its stem, and the leaflets and petioles of its fronds made into mats and baskets: — observed by Roxburgh cor. i. pl. 74, and Drury, in Travancore and in "sandy situations and plains in the Deccan;" is termed "p. pusilla" by Loureiro (Steud.).

Pontederia vaginalis of Tropical Eastern Asia. Called in Tagalo "calaboa" (Blanco), in Burmah "lay-pa-douk" (Mason), in Malabar "carimgola" (Rheede); and known from early times: — observed by Rheede xi. pl. 44 in Malabar; by Nimmo, and Graham, to and beyond Bombay, "rice-fields and margins of tanks, Concans;" by Roxburgh, in other parts of Hindustan; by Mason, in Burmah; by Blanco, on the Philippines, employed medicinally by the natives; and is described by Rumphius vi. pl. 75.

Tradescantia cristata of Tropical Eastern Asia and the Malayan archipelago. Called in Tagalo "alicbangon," and from early times used medicinally on the Philippines — (Blanco): observed by Graham in the environs of Bombay, "the most common of" its tribe, "during the rains;" received by Linnæus, and Jacquin hort. pl. 137, from Ceylon; and observed by Blanco on the Philippines.

Aneilema tuberosum of Western Hindustan. A stemless Cyanotoid perennial, its tubers from early times employed medicinally: — termed "commelyna scapiflora" by Roxburgh; observed also by Buchanan, Wallich, Royle, Dalzell, and Powell, from the Punjaub to the "Southern Concan" (Drur.) beyond Bombay.

(Drur.); and from early times, employed medicinally and put by Brahmins as a seasoning into buttermilk: — observed by Rheede vii. pl. 44 in Malabar; by Graham, on hedges and "trees throughout the Concans;" by Roxburgh, and Drury, as far as Cochin and Bengal; by Loureiro, in Anam; by Blanco, on the Philippines, hardly known to the natives; described by Rumphius v. pl. 184; and was observed by myself from the Feejeean throughout the Southern Polynesian groups to the remotest coral-island. Westward from Hindustan, by Forskal p. 84 in Yemen, its berries eaten by boys, and applied bruised to the wound called "oruk."

"1240 A. D." (Alst., and Nicol.), a synod at Senlis. "A twentieth of the ecclesiastical revenues" was granted to the pope.

"The same year" (art de verif.), Melek-Adel II. succeeded by Melek-Saleh, seventh Ayoubite sultan of Egypt. The name of Melek-Saleh occurs at Cairo in an inscription over the door of his tomb — (Wilk. theb. and eg. 297 and 551).

"Twenty generations ago" (Speke trav. ix. 9), a large party of pastoral Wahuma under Rohinda sought protection of king Nono of Karagŭé, inhabited by the Wanyambo people. Nono was treacherously put to death, and Rohinda became the head of a new dynasty. — He "was succeeded by Ntaré, then Rohinda II., then Ntaré II., which order only changed with the eleventh reign, when Rŭsatira ascended the throne, and was succeeded by Mehinga, then Kaliméra, then Ntaré VII., then Rohinda VI., then Dagara, and now Rŭmanika" in 1861.

Hexalobus Senegalensis of Tropical Africa. An Anonaceous tree called by the Wanyamuesi "imkŏoa" (Grant); and from early times, its drupes used to color the "gums and teeth:" — observed from "5° S. to 2° North." Westward, described by A. Decandolle, as received from Senegal.

Boscia sp. of Eastern Equatorial Africa. A moderately-sized Capparideous tree called in Madi "m'zazza" (Grant), and probably as early as this date.

Flacourtia sp. of Eastern Equatorial Africa. A slender hazel-leaved tree with a few thorns, called in the Kinyoro language "m'seengeerra" (Grant), and as early perhaps as this date: — observed in Madi, on the Nile.

Lophira alata of Equatorial Africa. A Dipterocarpous tree called "meeenzerrah" (Grant); and from early times, a leaf used as a charm: — observed only at 3° 15′ N. near the Nile, but "the handsomest tree seen on the route," the leaves "two feet" long. Westward, is described by C. F. Gaertner fr. iii. pl. 188 as received from Western Equatorial Africa.

Harrisonia sp. of Eastern Equatorial Africa. A thorny Simaruboid tree called "m'ceenango" (Grant), and as early probably as this date: — observed at Madi, the branches catching "one's clothes in the woods."

Gymnosporia coriacea of Equatorial Africa. A small Celastroid tree called "m'thoozeea" (Grant); and from early times, its roots used medicinally by women, also as a purgative: — observed from "5° S. to 3° N.," very frequent. Westward, described by Guillemin and Perrotett, as observed in the countries on the Atlantic.

Rhus sp. of Eastern Equatorial Africa. A shrub called "m'sangool'a" (Grant); a superstitious belief continuing from early times, that plants for spinage can be found if its seeds are thrown about: — observed in Madi, its wood made into tooth-scrubbers.

Odina fructicosa of Eastern Equatorial Africa. A tall elegant tree called "m'sangar'a" (Grant); and from early times, its wood made into posts: — "Madi heights, 3° North." Described by Hochstetter.

Tephrosia Vogelii of Equatorial Africa. Bushy and seven feet high (Grant), hedging dwellings; and from early times, a mash of its leaves used in destroying fish: — observed from "1° to 2° North." Described by J. D. Hooker.

Æschynomene Schimperi? of Eastern Equatorial Africa. A bushy tree twenty feet high called "kong'golo" (Grant); its wood light, and from early times used for shields, — as at present by the Waganda: used "as trimmers and door-bolts" by the Wanyoro, and "as load-levers" by the Wanyamuezi.

Vigna luteola of Tropical Africa. A coarse bean called "koondé" (Grant); and from early times, cultivated by the natives: — observed in Karagŭé, and from "5° S. to 2° North." Westward, is described by Linnæus, and Jacquin hort. pl. 90, as received from Tropical America.

Lonchocarpus laxiflorus? of Tropical Africa. A small tree called "mowaleh" (Grant), and as early perhaps as this date: — observed in "Madi, 3° N."

Piliostigma Thonningii? of Equatorial Eastern Africa. A brushwood tree called in the Kinyoro language "m'keendambogo," in Suahili "keeteembee" (Grant); and from early times, short lashings stripped from its bark: — "found everywhere," the leaves "used to cover sores."

Cassia sp. of Eastern Equatorial Africa. A bush six feet high called "mcækæs'æ" (Grant); and from early times, used as fencing: — observed at "3° N.," common.

Cassia sp. of Eastern Equatorial Africa. A shrub six feet high (Grant); and from early times,

its branches from their disagreeable odour used to drive away musquitoes: — observed at "1° 42′ S., alt. 5000 feet.

Swartzia marginata of Eastern Equatorial Africa. An ordinary-sized tree called "m'nyembe" (Grant), and from early times. — Described by Bentham.

Nov. gen. near Copaifera of Eastern Equatorial Africa. A tree called "m'chenga" (Grant), and from early times, its bark made into fibred kilts, band-boxes, and round stores for grain: — "covers the Wanyamuezi forests." Farther South, the name "chenga" was found by Livingstone applied to a similar tree.

Acacia sp. near A. seyal, of Eastern Equatorial Africa. Called "m'seekeezzee" (Grant); and from early times, its inner bark used for lashings for temporary huts: — observed from "2° S. to 3° N."

Acacia sp. of Eastern Equatorial Africa. A small thornless tree called "m'footamvool'ah" (Grant); and from early times, its roots boiled for steaming the eyes in ophthalmia, — as at the present day by the Wanyamuezi: observed in Madi.

Acacia sp. of Eastern Equatorial Africa. A large tree called "m'gongwah" (Grant); and its wood, said to sink in water, used from early times for hatchet-handles and building purposes: — observed in "5° S., plentiful."

Albizzia sp. of Eastern Equatorial Africa. A thornless tree called "m'sangal'a" (Grant); and from early times, used in building: — growing on the "stream bank, 3° N."

Bryonia laciniosa of Eastern Equatorial Africa. A climber; its beautiful scarlet and white berries known from early times, — and beads like them according to Grant "would be vastly admired by the natives:" observed in "2° N.," in Unyoro. Probably through Arab or Banyan traders carried to Hindustan, observed by Rheede viii. pl. 19 in Malabar, by Graham "common in hedges" in the environs of Bombay, by Roxburgh, and Wight, in other parts of Hindustan, and received by Linnæus from Ceylon.

Steganotænia sp. of Eastern Equatorial Africa. An Umbelliferous forest-tree called "meonga Pembe" (Grant); and from early times, a branch superstitiously believed to enable the bearer to steal without discovery: — observed in "Madi, etc."

Crossopteryx febrifuga of Eastern Equatorial Africa. A Cinchonaceous bushy-growing tree called "m'tæloambai" (Grant); and from early times, its roasted seeds used to fumigate bark-cloth, or to form a scented pomade, — as at the present day by the Wanyamuezi: observed from "5° S. to 3° North." Described by Afr.

Hymenodyction sp. of Eastern Equatorial Africa. A Cinchonaceous shrub eight feet high called "m'fo" (Grant), and as early perhaps as this date: — observed at "Madi-burn bank."

Gardenia lutea of Eastern Equatorial Africa. Called "kolola" (Grant); and from early times, its contorted branches used for fencing, and boiled roots medicinally against hæmaturia, — as by the Wanyamuezi of the present day: observed from "5° S. to 3° North." Described by Fries.

Psychotria sp. of Eastern Equatorial Africa. A shrub called "m'sweet'æ" (Grant), and as early perhaps as this date: — observed at "Faloro, 3¼° N."

Vernonia stoechadifolia of Eastern Equatorial Africa. From early times mixed and burned with *Hygrophila spinosa* and salt extracted from the ashes, — as at the present day on the Upper Nile; observed by Grant growing in the forests and open woods "2° to 3° North." Described by Sch. bip.

Pluchea sp. of Eastern Equatorial Africa. A bush five feet high (Grant); and from early times, salt extracted from its ashes: — growing around a saline at "Kanyenyé, 6° 24′ S."

Embelia sp. of Eastern Equatorial Africa. A small tree called "m'sækær'a" (Grant), and as early perhaps as this date: — observed in "3° 15′ N."

Landolphia florida? of Eastern Equatorial Africa. An Apocynous climber, covering lofty trees (Grant); and from early times, playing-balls made of its rubber, — as by the Wahiyow of the present day.

Gomphocarpus sp. of Eastern Equatorial Africa. Four feet high (Grant); and from early times, worn as a charm, and eaten medicinally, — as by the natives at the present day: observed in "2° N."

Brachystelma? sp. of Eastern Equatorial Africa. Nine inches high (Grant); and from early times, its bulbous tasteless root eaten: — observed in "1° 42′ S."

Strychnos sp. of Eastern Equatorial Africa. A scrubby-looking tree called "m'phoondoo" (Grant), and as early perhaps as this date: — observed from "6° 21′ S." to "woods, 3° N."

Argyreia sp. of Eastern Equatorial Africa. Three feet high with immense flowers, and called "mohambo" (Grant); and from early times, skulls of wild animals placed by it, or with a branch in hand the hunter certain of sport: — observed in "2½° N."

Torenia pumila of Eastern Equatorial Africa. Its roots from early times eaten with salt and used as a gargle, — as by the natives at the present day: observed by Grant in "5° 45′ alt. 4300 ft., and 1° 42′ S. alt. 5500 ft.," abundant in swamps. Described by Bentham.

Cycnium sp. n. of Eastern Equatorial Africa. Creeping on bare open sandy heights, and called "m'sweera m'dogo" (Grant); and from early times, its fibrous roots used to cure the bite of a particular snake, — as by the Wanyamuezi of the present day: observed in "3° 15′ N."

Sopubia ramosa of Eastern Equatorial Africa. An erect woody plant in grassy plateaux (Grant); and from early times, salt water for cooking purposes obtained from its ashes, — as by the Wahiyow of the present day: observed in "2° N.," uncommon.

Stereospermum sp. of Eastern Equatorial Africa. A Bignoniaceous tree called in the Kinyoro language "mololo" (Grant), and as early perhaps as this date: — observed in "3° 15′ N.," frequent by water, its wood useless.

Hygrophila spinosa of Eastern Equatorial Africa. An Acanthaceous plant from early times cultivated for the salt procured from its ashes: — observed wild also by Grant from "4° 18′ S. to 3° 15′ North." Described by T. And. (See Vernonia stoechadifolia.)

Clerodendrum sp. n. of Eastern Equatorial Africa. A shrub two feet high used for drinking-tubes called "meereej'a" by the Wanyambo (Grant), and as early perhaps as this date: — observed in "1° 43′ S., alt. 5000 feet."

Vitex sp. of Eastern Equatorial Africa. Bush-sized and called "m'thalassee" (Grant), and as early perhaps as this date: — observed in "Madi, 3° 15′ N."

Coleus barbatus of Abyssinia and Yemen. From early times smoke of its burning leaves regarded an immediate cure for fever: — the plant observed by Grant "in Euphorbia hedges, 4° 18′ to 1° 42′ South." Eastward, was observed by Forskal p. 109 on the higher mountains of Yemen and called "medan." Probably by Arab or Banian traders carried to Hindustan, observed by Gibson in the rice-fields of Guzerat; by Graham in the environs of Bombay, sold in market, and "commonly cultivated in native gardens for the roots which are pickled;" by Roxburgh, and Wallich, in other parts of Hindustan, as far even as Nepaul.

Hyptis spicigera of Tropical Africa. Called "neeno" (Grant); and from early times, cultivated as a grain, and to extract oil, — as by the natives of Gani at the present day: observed by Grant in "3° North;" known to occur also in Ethiopia, Madagascar, and Senegambia (Benth., and A. Dec.); on the Cape Verd Islands (Webb.). Farther West, in Brazil and other parts of Tropical America; received also by Bentham from Manila (possibly by European colonists carried across the Pacific). Described by Lamarck.

Boerhaavia sp. of Eastern Equatorial Africa. A foot high (Grant); and from early times, its roots eaten in famines, — as by the Wahiyow of the present day: observed "in cleared ground, 2° N."

Acalypha sp. of Eastern Equatorial Africa. Called "m'cætæ" (Grant); and from early times, its wands of great length made into strong trays and baskets, — as by the people of Unyoro at the present day: observed "by rivulets 1° 42′ S., to 2° N."

Croton sp. of Eastern Equatorial Africa. A tree having immense leaves, called "m'pœfoo" (Grant), and as early perhaps as this date: — observed "in shady moist ground, 3° 15′ N."

Hymenocardia Heudelotii of Equatorial Africa. An Euphorbiaceous tree called "m'palanyonga" (Grant), and as early perhaps as this date: — observed in "3° 15′ North." Described by Planch.

Euphorbia hypericifolia of Tropical Africa? Its juice already perhaps rubbed upon snares to attract Guinea fowl? — as observed by Grant in "2° N." (on the Nile). Westward, was received by Bentham p. 500 from Nigritia (A. Dec.). Probably through European traders carried to the West Indies, observed by Sloane i. pl. 126 in cultivated ground on Jamaica; and thence perhaps has extended into Northeast America where it is now seemingly wild, observed by Baldwin in 31° in Florida, by Pursh in cultivated ground as far as Canada, by Elliot in Upper Carolina and Georgia, by Short in Kentucky, by Nuttall on the Arkansas, by E. James on the Missouri, and by myself along the Atlantic as far as 42° 30′.

Celtis integrifolia of Tropical Africa. A large tree called "m'læweh" (Grant); and from early times, its seeds made into necklaces, — as by the natives of Fipa at the present day: observed in "3° 30′ North." Westward, described by Lamarck as received from —.

Angræcum? sp. of Eastern Equatorial Africa. Epiphytic on a Kigelia (Grant); and from early times considered a remedy for ophthalmia: — observed in "3° 15′ N."

Ansellia sp. of Eastern Equatorial Africa. In thick clusters upon lofty-stemmed trees, and called by Uhiyow men "mitoolo" (Grant); its jointed roots from early times used medicinally: — observed at "M'bwiga, 7° 30′ S."

Amomum sp. of Eastern Equatorial Africa. Four feet high with scarlet underground fruit; the pulp around the seeds sucked from early times: — observed by Grant in Uganda, "2½° N.," frequent.

Dracaena sp. of Eastern Equatorial Africa. Ten feet high and called "mpopo m'weeto" wild beetul (Grant); and rom early times, used as fences: — observed in "2° N."

Smilax Kraussiana of Eastern Equatorial Africa. Called "m'kolol'a" (Grant); and from early times, its roots used medicinally, — as by the Wanyamuezi of the present day: observed, Sept. (1½° to) "3° 15′ North." Described by Meisner.

Dioscorea sp. of Eastern Equatorial Africa. A *yam* called "veeazee-koo" (Grant), and as early perhaps as this date: — "grown here and there on mounds," from "5° S. to 2° N.".

Auchomanes Hookeri? of Eastern Equatorial Africa. An Araceous plant three feet high with curving-down thorns, and called "yal'wah" (Grant); its large bulb from early times boiled and eaten, — as by the Wanyamuezi of the present day: observed in "3° 15′ North."

Gymnandropogon sp. of Eastern Equatorial Africa. Its millet from early times eaten in famines, — as according to Grant at the present day: observed in "5° 5′ S., alt. 3600 ft."

Anthistiria imberbis of Tropical Africa. Two to two and a half feet high, and known from early times: — the grass that clothes and waves like corn on the treeless hills of Karagŭé, "alt. 5000 to 5500 feet:" cattle according to Grant "are never grazed upon it." Described by Retz obs. iii. p. 11, and Thunberg (Pers., and Steud.).

Anthistiria ciliata of Tropical Africa. Two and a half feet high; and from early times, its grain eaten in famines: — growing according to Grant "under trees in rich low ground with great luxuriance, 5° 5′ S., alt. 3600 feet." Eastward, possibly by Arab or Banian traders carried to Hindustan, where it was observed by Graham growing "most abundantly throughout the Concans, and is commonly converted into hay for feeding horses;" by Retz, and Roxburgh i. 247, in other parts of Hindustan. Clearly through European traders, was carried to the West Indies (Pers.).

Setaria aurea of Eastern Equatorial Africa. Liable to small round fungi, their dust from early times eaten by the natives: — observed by Grant in "2° North." Described by Hochst.

Chloris Meccana of Abyssinia. Three to four feet high, and known from early times: — observed by Grant in "plantain-groves" under the Equator. Described by Hochst.

Kyllingia macrocephala? of Eastern Equatorial Africa. Eighteen inches high and called "keelolo" (Grant); and from early times, its pounded roots rubbed on the skin as a perfume, — as by the Wanyamuezi women of the present day: observed "by rocky burn, 3° 15′ N."

Fuirena umbellata? of Tropical Africa. Three feet long, called "keekal'a" (Grant); and from early times, salt extracted by the natives from its ashes: — observed by Grant "on sandy edges of burn, Madi;" known to grow in other parts of Tropical Africa as well as on Madagascar (Ad. Juss.), and in Tropical Asia (R. Brown). Westward, occurring also in Tropical America (Vahl ecl. amer. 2, Pers., R. Brown, Kunth, and A. Dec.), possibly brought by imported negroes. Described by Linnæus the younger.

"1241, April 12th" (Yule cath. i. p. cxx), a Tartar army having entered Poland and destroyed Cracow found Breslaw abandoned and in ashes, and near Lignitz defeated with great slaughter the forces of Poland, Silesia, and Moravia. Batu with the main army ravaging Hungary, capturing and destroying Pesth: but the Tartars were suddenly recalled by the death of Okkodai, who was succeeded by Kuyuk.

"Oct. 6th" (Greenhill in Sm. b. d.), *eclipse* of the sun. Witnessed at Nicaea, at the court of the excluded Byzantine emperor Joannes III., by Nicolaus Myrepsus.

Agrostemma githago of middle Asia. Called in Britain *cockle* or *corn cockle*, in Anglo-Saxon "coccel" (Prior), in Germany "kornrade," in Italy "gettone" or "gettajone" (Lenz), in Lithuania "kukalei," in Poland "kakol," in Russia "kukæl" (A. Dec.), in Greece "gōggōli" or "kōkkōli" (Sibth.); in which we recognize the κοκάλιδα του σίτου of Nicolaus Myrepsus iv. 2: — A. githago was observed by Sibthorp, and Chaubard, in the cultivated fields of Greece and the Greek islands; is known to grow in Armenia and around Caucasus, and in Siberia as far as Irkutzk (Koch, Bieb., and Turcz.). Westward, is mentioned by Gerarde, and Ray, as known from time immemorial in Britain; is termed "nigella" in the Ortus sanitatis pl. 310, and "lychnis segetum major" by Tournefort inst. 335; was observed by Desfontaines i. p. 363, and Munby, in Barbary; and is known to grow in Sicily, Sardinia, Southern Spain, Portugal, Italy, and throughout middle Europe as far as Denmark and Courland (flor. Dan. pl. 576, Moris, and A. Dec.). By European colonists, was carried to North-east America, where it has become a weed in grain-fields.

Neslia paniculata of Europe and the adjoining portion of Asia. Called in Greece "kōukōulia" (Fraas), and possibly the "kōkalitha tōu sitou" in question: — N. paniculata was observed by Sibthorp, and Fraas, in cultivated and fallow ground from Attica to Constantinople. Westward, is termed "rapistrum arvense folio auriculato acuto" by Tournefort inst. 211, "myagrum paniculatum" by Linnæus; and is known to occur in fallow ground in Piedmont and throughout middle Europe as far as Denmark (All., fl. Dan. pl. 204, and Pers.).

Artemisia camphorata of middle Europe. The καφουρας βοτανης of Nicolaus Myrepsus, — is referred here by Sprengel, and Hase: A. camphorata has not been observed by modern travellers in Greece; but is described by Lobel pl. 769, and is known to grow on rocks in middle Europe (Wulff in Jacq. coll. iv. p. 295, Vill. delph. iii. p. 242, Dec. fl. fr., and Pers.).

Leonurus cardiaca of Eastern Asia. Called in Japan "sitsisu soo" or usually "susu kaki" (Thunb.), in Britain *motherwort* (Prior): the καρδιοβοτανον of Nicolaus Myrepsus iii. 60 — is referred

here by Fuchsius: L. cardiaca was observed by Sibthorp, and Chaubard, from the Peloponnesus to Constantinople; is known to occur also about Caucasus and in Siberia (A. Dec.); and was observed by Kaempfer, and Thunberg, in Japan. Westward, is described by Brunfels, and Gerarde; is termed "cardiaca" by Tournefort inst. 186; and is known to occur in waste places in Hungary and throughout middle Europe as far as Denmark (fl. Dan. pl. 727, Lam. fl. fr., and Pers.). By European colonists, was carried to Northeast America, where it continues frequent in waste places in our Northern and middle States; to Brazil, where it was observed by A. St. Hilaire in the outskirts of Rio Janeiro. Its "reputed tonic powers" and use in the "disease of the stomach called heart-burn, are now little regarded," though according to Burnett "a stimulant which has been extolled by the Russians as a preservative against canine madness" (Lindl.). Its English name and alleged power in female complaints mentioned by Linacre, and Parkinson, may have arisen from its outward resemblance to Artemisia vulgaris.

Betonica Orientalis of middle Asia. The δροσιοβοτανον of Nicolaus Myrepsus i. 1 — is referred here by Sprengel: B. Orientalis is known to grow "in Oriente" (Pers.); and from transported specimens, is described by Linnæus, and Thuillier (Lam. ill. pl. 507, and Steud.).

Corrigiola littoralis of Europe and the adjoining portion of Asia. Diminutive, prostrate from a central root, and called in Britain *strap-wort*, in medieval Latin "corrigiola" (Prior): mentioned by Nicolaus Myrepsus, — according to transl. med. art. princ. 520 a: C. littoralis was observed by Sibthorp, and Chaubard, from the Peloponnesus to Constantinople. Westward, is described by Morison v. pl. 29; and is known to grow in sandy situations in Barbary and throughout middle Europe as far as Denmark (fl. Dan. pl 334, and Pers.).

Phalaris Canariensis of the Canary Islands. Called in Britain *Canary grass* (Prior), in Greece "kōukōulĕ" or "kōukōulŏhŏrtŏn" (Sibth.) or "aněmōhōrtō" (Forsk.), in which we recognize the ανεμοχορτον of Nicolaus Myrepsus: — P. Canariensis was observed by Forskal, and Sibthorp, in Greece and at Constantinople, frequent in cultivated ground; by Forskal, Hasselquist, and Delile around Alexandria and Cairo. Westward, is enumerated by Stapel as frequent on Malta, and was observed there by Forskal; is termed "gramen spicatum semine miliaceo albo" by Tournefort inst. 518; is known to occur in cultivated ground on the Canary Islands (Pers.); and since the domestication of Canary birds has been cultivated in Western Europe for feeding them with its seeds, in Britain tending to become naturalized (Wats., and A. Dec.). By European colonists, was carried to Northeast America, where it continues under cultivation and is occasionally met with growing spontaneously.

"Towards the end of October" (Alst., and Nicol.), Gregorius IX. succeeded by cardinal Geoffrey de Castiglione, now Celestinus IV., twenty-third pope. Dying on the "17th or 18th of November" before being consecrated, the office continued vacant — more than eighteen months.

"Nov. 29th" (Nicol.), a synod at Oxford. It was resolved, to send a deputation, praying the emperor Fredericus II. to leave the election of the pope to the cardinals.

"The same year" (Stirling res. Asiat. xv. 315 to 327, and Elphinstone iii. 8), the Black pagoda, near that of Jagannat on the Eastern shore of Hindustan, completed.*

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* *Cocculus villosus* of Eastern Hindustan and Burmah. A woody twiner called in Hindustanee "dier" or "faridbuti," in Telinga "doosra-tiga," in Bengalee "huyer" (Drur.); and from early times, its leaves and root employed medicinally: — observed by Ainslie, Roxburgh, and Wight, in the peninsula and as far as Bengal (Drur.); by Mason, in Burmah.

Sida rhomboidea of Assam? Called in Bengalee "swet-baryala," in Hindustanee "sufed-bariyala" (Drur.), and known perhaps from early times: — observed by Roxburgh, and Wight, "cultivated" from Assam to Negapatam and Coromandel, its long silky fibres of great strength (Drur.); according to Hannay hort. soc. beng. 1862, growing "luxuriantly in Assam."

Buchanania lancifolia of Chittagong. A Terebinthoid tree, its tender unripe fruit from early times eaten in curries: — observed by Roxburgh (Drur.).

Canarium Bengalense of Silhet and the adjacent mountainous countries. A Terebinthoid tree, its copal-like but brittle resin known from early times, — sold at a cheap rate in the Calcutta bazaar, and not valued by the natives (Madras exhib. rep., and Drur.).

Icica Indica of Assam and Chittagong. An Amyroid tree seventy feet high called in Bengalee "nayor" (Drur.); and from early times, its hard close-grained wood used for furniture: — observed by Wallich and termed "bursera serrata," its timber "tough as oak, and much heavier" (Drur.).

Bauhinia diphylla of Eastern Hindustan. Called in Burmah "pa-lan" (Mason), at Cuddapah and Guntoor "authee nar" or "yepy" or "apa" (Drur.); and its fibres known from early times: — observed by Buchanan, and Roxburgh, "common about Cuddapah and Guntoor" (Drur.); by Mason, in Burmah.

Cassia (*Cathartocarpus*) *Roxburghii* of Eastern Hindustan. A beautiful tree resembling the

"1243 A. D." (ann. Jap., and art de verif.), Sidsio succeeded by Saga II. or Go-Saga, younger son of Tsatsi-mikaddo and now eighty-seventh dairo of Japan.

"In the Thirteenth century" (Jap. c. c. 90), the third colossal statue of Budha, "the well-known Daibutsu, of Kamakura," was built "with an alloy containing a small percentage of gold."

"June 24th or 25th" (Alst., and Nicol.), cardinal Sinabaldo di Fiesco or Innocentius IV. elected twenty-fourth pope. He introduced into his Bulls the celebrated clause, "Non obstantibus."

"1244 A. D." (Nicol.), a synod at Tarragona. "Against such as robbed, ill-treated, or defamed priests."

"The same year" (Munk), the sultan of Damascus having made a treaty again admitting the crusaders into Jerusalem, Melek-Saleh extended an invitation to the Kharesmians, already then in Syria. In accordance therewith, the Kharesmians advanced upon and captured Jerusalem. — At the end of three years, they were expelled by the combined forces of the Syrians and Egyptians.

The number of Memluks increased beyond precedent by Melek-Saleh; who purchased some thousands of young "Turks," to whom he gave a military education, and thus obtained a formidable body of soldiers exclusively devoted to his interests.

"In this year (= 642 A. H." of Ferishta, Elphinst.), irruption of Mogul Tartars through Tibet*

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weeping ash, its hard handsomely-marked timber known from early times: — observed by Roxburgh on the Gingie hills, rare in the wild state (Drur.).

Dalbergia sissoides of Eastern Hindustan. Its timber valued from early times: — observed by Roxburgh (Drur.).

Olea robusta of Silhet. Its hard and durable timber known from early times: — observed by Roxburgh (Drur.).

Echaltium piscidium of Silhet. A perennial climbing Apocynoid called there "echalat" (Drur.); and from early times, the fibres of its bark used as a substitute for hemp: — observed in Silhet by Roxburgh (Wight pl. 472, Royle, and Drur.).

Wrightia mollissima of Cachar. Its timber known from early times, — being according to Brownlow in a. h. s. 1864 "the nearest approach to boxwood there is in that part of the country" (Drur.).

Premna esculenta of Chittagong. Its leaves from early times used there medicinally: — observed by Roxburgh (Drur.).

Artocarpus chaplasha of the forests East of Bengal as far as Chittagong. An immense tree; and from early times, river-canoes made of its trunk, its timber used besides for other purposes, especially for anything under water: — enumerated by Drury.

Calamus erectus of Silhet. Its seeds from early times used there by the poorer classes as a substitute for betel-nut: — observed by Roxburgh (Drur.).

* *Aconitum heterophyllum* of the Himalayas. Shrubby, its imported root called in Hindustanee "atis," on the Deccan "atvika" or "vajjè-turki," in Telinga "ativasa," in Tamil "ativadayam" (Drur.), and from early times sold in bazaars as aphrodisiac tonic and febrifuge: — observed by Wallich, and Royle, on the Himalayan mountains, at the elevation of "nine to ten thousand feet" (Drur.).

Aconitum palmatum and *A. luridum*, two other species growing on the Himalayan mountains, "and yielding similar properties" (Drur.).

Thalictrum foliolosum of the Khasia mountains. Called there "pila jari" yellow-root, exported from the Kumaon mountains under the name of "momeeree" (Drur.), and from early times employed medicinally: — observed by Buchanan (Steud.), and Royle ill. 51 (Drur.).

Grewia elastica, of Hindustan. A Tiliaceous tree, its timber from early times highly esteemed for its strength and elasticity, for making bows and the shafts of vehicles: — observed by Royle, its berries having a pleasant acid taste and used for making sherbet (Drur.).

Pavia Indica of the Himalayan mountains. The *Himalayan horse-chestnut* is a lofty tree called "kunour" or "pangla" (Drur.); and from early times, its seeds eaten, and its soft strong timber used for building and cabinet purposes: — observed by Colebrooke, Wallich, Royle, and Jacquemont, at the elevation "of from eight thousand to ten thousand feet in Kumaon Gurwhal" Sirmore and near the sources of the Ganges to Kunawur (Balfour, and Drur.).

Xanthoxylon hastile of the Himalayas. Prickly, and from early times its aromatic fruit used as a condiment, its seeds and bark as an aromatic tonic, and its small branches for tooth-scrubbers: — described by Wallich, and observed by Powell in the Punjaub, its larger branches used for triturating the hemp-plant, and its capsules and seeds "said to intoxicate fish" (Drur.).

Exacum tetragonum, of Subtropical Hindustan. A Gentianoid annual one to two feet high, powerfully bitter and called "ooda chiretta" purple chiretta (Royle); from early times, employed as a tonic and febrifuge: — observed by Roxburgh, Wallich rar. pl. 276, and Royle, "common in the

into Bengal, the only one by this route "during the period of authentic history." It was repelled by the local authorities.

Asparagus ascendens of Rohilcund. Affording according to Modeen Sheriff the genuine "sufed mush," called on the Deccan "shakakul-hindi," and from early times used medicinally as a substitute for and better than salep:—known to grow in Rohilcund (Waring pharm. ind. suppl.), enumerated by Drury. (See A. sarmentosus.)

"1245, June 28th to July 17th" (Alst., and Nicol.), Thirteenth general ecclesiastical Council. Assembled at Lyons. The emperor Fredericus II. was excommunicated, and his subjects absolved from their allegiance. The "red cap" for cardinals, was at the same time instituted.

"The same year" (Clavig. ii. and Humb. iii. 8), arrival of the Aztecs at Chapoltepec on the Western shore of lake Tezcuco.

Arachis hypogea of Eastern Equatorial America. The *peanut* called in Peru "anchic" (Monard.), in Brazil "mandubi" (Marcgr.), in Mexico "cacauate" (Blanco), in the West Indies "mani" (J. Acost.), and cultivated from early times—(Humb. iv. 9): the "mani" was seen in the West Indies or neighbouring portion of Tropical America by Oviedo gen. hist. vii. 5, and J. Acosta; A. hypogea, by Lerius 215, and Marcgraf 37, in Brazil. By European colonists was carried Westward across the Pacific to the Philippines, called in Tagalo "mani" (Blanco), and seen in 1693 by Kamel (Spreng.); to the neighbouring islands and Japan (Rumph. v. 426); to China and Anam (A. Dec.); to Burmah, called there "myæ-bai" (Mason); to Hindustan, having neither Sanscrit nor Bengalee names (Roxb., and Pidd.) but called in Tamil "vayer" or "nelay-cadalay," in Telinga "nela sanagalu," in Hindustanee "moong-phullee," sometimes by colonists *Manilla-nut* (Drur.), in the environs of Bombay "velaiti-moong" or "boi-moong" (Graham), is now cultivated from Calcutta throughout the peninsula (Drur.), was observed by myself abundantly cultivated on the Deccan; to Eastern Equatorial Africa (Lour. fl. coch.), observed by myself on Zanzibar, and according to some Unamuezi from N'yasa lake cultivated in their own country, observed by Grant "cultivated to a small extent from 7° S. to 2° N." on the Nile; to Egypt, called there "foul sennar" Sennar bean (Clot-Bey). By European colonists also, was carried before 1620 to Western Equatorial Africa (Purchas, Sloane i. 184, and Guillemin fl. seneg.); and more recently to Northeast America, where in our Southern States it is now abundantly cultivated.

"1246 A. D." (Roux in rec. soc. geogr. i., and mem. Chin. v. p 2), an embassy to the Tartars first sent by pope Innocentius IV.: Plan Carpin and Benedict of Poland crossing the Volga "April 8th" and continuing Northward of the Caspian reached the court near Karakarom. "July 22d," and received an audience from the newly proclaimed khan Kayu or Cuiuc, a grandson of Jenghiz. The journey proved the Caspian to be an inland sea, as already stated by Herodotus:—a conclusion confirmed a few years later by Rubruquis.

"In this year (= 639 A. H." of Ferisht., Elph.), Ala-u-din Masaud succeeded by Nasir-u-din Mahmud, grandson of Altamsh and now eighth sultan of Delhi.*—He reigned "twenty" years,

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Himalaya and the mountains and plains of Bengal and Central India" (Drur.); by Giberne, as far South as "Salsette" (Graham), near Bombay.

Rhazya stricta of Scinde. An excellent bitter tonic, from early times employed medicinally, mixed with Withania berries:—observed in Scinde by Stocks (Drur.). From transported specimens, described by Decandolle.

Hyoscyamus insanus of Beluchistan. Called there "kohi bung" mountain hemp (Drur.), and its powerfully poisonous properties known from early times;—common, "smoked in small quantities, and also employed for criminal purposes" (Waring pharm. ind., Stocks, and Drur.).

Scopolia lurida of Nepaul. Known from early times,—its bruised leaves emitting "a peculiar tobacco-like odour, a tincture prepared from them" found to dilate the pupil (Braithwaite, and Drur.).

Withania coagulans of Beluchistan, Scinde, and the mountains of Affghanistan. A densely tomentose shrub called in Scinde "puneer" (Drur.); and from early times, its fresh ripe fruit used as an emetic, dried and employed for other medicinal purposes, and universally throughout Beluchistan for coagulating milk:—observed by Stocks bomb. soc. 1849 (Wight pl. 1616, and Drur.).

Salvia plebeia of Subtropical Hindustan. A purple-flowered *sage;* its seeds from early times used as mustard by the Hindus, employed also medicinally:—described by R. Brown prodr. 501; observed by Roxburgh from Bengal to Silhet and Oude, by Dalzell 209 as far as Kandalla near Bombay (Drur.).

Salvia lanata of Northern Hindustan. From early times, its stems peeled and eaten, and its leaves root and seeds employed medicinally:—described by Roxburgh, and observed by Stewart punj. at Lahore.

* *Polanisia icosandra* of Hindustan and Burmah. A Cleomaceous plant two or three feet high called in Tamil "nayavaylie" or "nahi kuddaghoo," in Malabar "kat-kuddaghoo," in Hindustanee

patronised Persian Literature, and the "Tabakati Nasiri," a general history of Persia and India, was written at his court.

Acalypha fruticosa of Tropical Arabia and Hindustan. A birch-leaved shrub called in Tamil "hoorhoorya" (Drur.); and from early times, eaten as salad, and its mustard-like leaves and seeds used also medicinally: — described by Rumphius v. pl. 96; observed by Burmann pl. 99 on Ceylon; by Graham, "common in waste places during the rains" as far as Bombay; by Ainslie, and Wight, as far as Bengal; by Mason in Burmah, enumerated as indigenous. "*P. viscosa*" seen by Rheede ix. pl. 23 in Malabar, known to grow also on Ceylon (Pers.), is regarded by some writers as not distinct.

Polanisia chelidonii of Hindustan. A pretty annual with rose-coloured flowers (Graham); its pungent seeds in like manner used for mustard from early times: — received by the younger Linnæus from "Transchaur" (Pers.); enumerated by Graham among the plants of the vicinity of Bombay; and observed by Royle, and Wight, in other parts of Hindustan (Drur.).

Drosera peltata of Hindustan and Burmah. A yellow-flowered *sundew*, known from early times: — observed by Royle, and Wight, on the "Neilgherries, Bababoodens," avoided by cattle, the leaves curdling milk, and "mixed with salt" said to blister the skin (Drur.); by Mason, as far as Burmah.

Polygala telephioides of Hindustan. From early times used medicinally in catarrhal affections: — known to grow in Hindustan (Waring pharm. ind., and Drur.). From transported specimens, described by Willdenow (Pers., and Steud.).

Mollugo spergula of Hindustan and Burmah. A species of *carpet-weed* called in Burmah "gyen-ga" (Mason), in Bengalee "ghimi shak," in Telinga "chatarashi," in Tamil "toora" (Drur.); and from early times, its bitter leaves employed medicinally: — observed by Rheede x. pl. 24 in Malabar; by Graham, a "common" weed "in gardens" at Bombay; by Ainslie, Roxburgh, and Wight, as far as Bengal; by Mason, in Burmah, enumerated as indigenous.

Melanthesa rhamnoides of Tropical Hindustan. A Phyllanthoid shrub called in Tamil "pavala-poola," in Hindustanee "surasaruni" (Drur.); and from early times, its leaves and bark employed medicinally: — observed by Rheede v. pl. 44 in Malabar; by Nimmo, in "the Concans" (Graham), to and beyond Bombay; by Ainslie, Roxburgh, and Wight, as far as the Coromandel coast, its bright red fruit making a lively appearance, and in Behar the dried leaves smoked when the tonsils are swollen (Drur.).

Tragia cannabina of Tropical Hindustan. An annual Euphorbiaceous twiner, covered with stinging hairs, and called in Tamil "sirroo-canchorie," on the Deccan "kanch koorie," in Telinga "trinadoolagondie" (Drur.); its root from early times employed medicinally: — described by N. L. Burmann pl. 63, and known to grow in Malabar (Pers.); observed by Ainslie, Roxburgh, and Drury, from Travancore to Coromandel and Bengal, its root in decoction prescribed "as an alterative," and "in infusion in ardent fevers." Transported to Europe, is described by Plukenet alm. pl. 120.

Casearia anavinga of Tropical Hindustan. A Samydaceous shrub or tree called in Malabar "anavinga" (Drur.), very bitter in all its parts, and from early times employed medicinally: — observed by Rheede iv. pl. 49 in Malabar; by Graham, "a very common shrub" in the environs of Bombay (Graham); by Roxburgh, on the banks of the Hoogly and as far as Goalpara, a large tree, its leaves "used in medicated baths, and the pulp of the fruit" diuretic (Lindl., and Drur.).

Acacia (Albizzia) stipulata of Tropical Hindustan and Burmah. An unarmed tree forty to fifty feet high called in Telinga "konda-chiragu," in Bengalee "amlooki" (Drur.); and from early times, its close-grained strong timber valued for furniture and other purposes: — observed by Graham "common on the Ghauts, about Kandalla, etc.," as far as Bombay; by Roxburgh, Wight, and Drury, from Travancore to Courtallum and the mountains North of Bengal; by Mason, in Burmah.

Cæsalpinia sepiaria of Southern Hindustan and Burmah. The *Mysore thorn* is a woody twiner armed with strong recurved prickles and called in Burmah "hsoo-kyan-bo" (Mason), in Hindustanee "Hyder ka jhar" (Drur.), in the environs of Bombay "chillur" (Graham); known from early times: — indigenous according to Drury in Mysore; planted by Hyder Ali around his strongholds as an additional means of defence, and forming an almost impenetrable hedge is generally used "in the Baghayat lands of the Deccan," and has become well known throughout the country (Gibs., and Drur.); observed also by Roxburgh, and Wight. Farther East, by Mason in Burmah, enumerated as indigenous.

Jussieua villosa of Hindustan and Burmah. A perennial-rooted herb called in Malabar "carambu," in Bengalee "lal-bunlunga" (Drur); and from early times employed medicinally: — observed by Rheede ii. pl. 50 in Malabar; by Graham, "in moist places at Kandalla, and throughout the Concans," to and beyond Bombay; by Ainslie, Roxburgh, and Wight, as far as Bengal; by Mason, in Burmah.

Lagerstroemia parviflora of Tropical Hindustan. A large Lythraceous tree called in Telinga

"sinnie," in Telinga "tsinnie," on the Deccan "chinnie" (Drur.); in Yemen "bortam" or "schohat" or "anschat" or "dæfran" (Forsk.); and from early times, employed medicinally: — observed by Forskal p. 161 among the mountains of Yemen, its leaves macerated in water to wash infants afflicted

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"chinangee" (Drur.); and from early times, its excellent wood used for ploughs, axe-handles, building and boats: — observed by Roxburgh cor. i. pl. 66, Wight pl. 69, and Beddome pl. 31, from the Neilgherries to the Circars, Courtallum and Bengal (Drur.).

Cucumis momordica of Tropical Hindustan. Cultivated from early times: — observed by Graham in the environs of Bombay, "cultivated, much like the common cucumber but smoother and larger," by Ainslie, and Roxburgh, in other parts of Hindustan, "a good substitute for the common cucumber" (Drur.).

Trianthema decandra of Tropical Hindustan. A prostrate purslane-like annual called in Tamil "vallay-sharunnay," in Telinga "tella ghalijeroo," in Bengalee "gada buni," on the Deccan "bhees khupra" (Drur.); and from early times, its root employed medicinally: — was observed by Graham in the environs of Bombay, "a common weed, particularly abundant in moist places;" by N. L. Burmann pl. 31, Ainslie, Roxburgh, and Wight, as far as Bengal.

Trianthema obcordata of Tropical Hindustan. Perennial and prostrate, called in Tamil "sharunnay," in Telinga "ghelijehroo," in Bengalee "sabuni," on the Deccan "nasurjanghi" (Drur.); and from early times, its leaves and tender tops eaten in times of scarcity, and its root employed medicinally: — observed by Stewart in the Punjaub; by Ainslie, Roxburgh, and Wight, as far as Coromandel and Bengal.

Nauclea parvifolia of Tropical Hindustan. A Cinchonoid tree thirty to forty feet high called in Tamil "neer-cadamba," in Telinga "bota-cadamie" (Drur.), in the environs of Bombay "kuddum" (Graham); and from early times, its timber used for flooring and other purposes: — observed by Gibson, and Graham, "common in the Mawul districts," and "about villages throughout the Concans;" by Roxburgh, and Wight, from Malabar to Coromandel and Bengal.

Gardenia gummifera of Tropical Hindustan and Ceylon. An unarmed Cinchonoid tree, known from early times: — observed by Law in the Bombay district, "very common about Duddi on the Gutpurba" (Graham); by Roxburgh, and Wight, in other parts of Hindustan, and is known to grow on Ceylon, exuding from the buds and wounds in the bark a yellow resin similar to gum elemi (Pers., and Drur.). From transported specimens, is described by the younger Linnæus.

Pavetta Indica of Tropical Hindustan. A Cinchonoid shrub, three or four feet high and deciduous-leaved, called in Bengalee "kookoora-choora," in Hindustanee "cancra," in Tamil "pavuttay," in Telinga "paputta" or "nooni-papoota" (Drur.), in the environs of Bombay "paput" (Graham); and from early times, its fruit made into pickles, its leaves used for manuring fields, and its root employed medicinally: — observed by Rheede v. pl. 10 in Malabar; by Graham, from hills near Bombay "along the Ghauts," and "one of the commonest shrubs at Mahableshwur;" by Ainslie, Roxburgh, and Wight, as far as Coromandel, Bengal, Silhet, and Chittagong (Drur.).

Spermacoce hispida of Tropical Hindustan and Ceylon. A Cinchonoid annual called in Tamil "nuttee choorie," in Telinga "madana" (Drur.); and from early times, its root employed medicinally: — observed by Rheede ix. pl. 76 in Malabar; by Graham, "common in the rains" in the environs of Bombay; by Ainslie, Roxburgh, Wight, and Drury, as far as Travancore and Bengal; and is known to grow on Ceylon (Pers.).

Vernonia cinerea of Tropical Hindustan. From early times, used in decoction to promote perspiration in fevers: — observed by Rheede x. pl. 64 in Malabar; by Graham, in the environs of Bombay "a common weed during the rains;" by Ainslie, Roxburgh, and Wight, in other parts of Hindustan; by Burmann pl. 96 on Ceylon; and is described by Rumphius vi. pl. 14. Transported to Europe, is described by Plukenet pl. 177.

Dæmia extensa of Tropical Hindustan. A frutescent Asclepioid twiner, called in Bengalee "chagul-bantee," in Tamil "vaylie-partie" or "ootamunnie," in Telinga "jutuga," in Hindustanee "sagowania," on the Deccan "oobrun" (Drur.); and from early times, employed medicinally: — observed by Law, and Graham, in hedges and on bushes from Bombay to Ahmednuggur, "and almost everywhere," next to "the commonest" of its tribe; by Ainslie, Roxburgh, and Wight, as far as Bengal and the Himalaya, yielding a fibre "recommended as a fair substitute for flax" (Drur.).

Erythræa Roxburghii of Hindustan. An herb, powerfully bitter, and from early times held in great repute as a tonic: — observed by Roxburgh, and Wight, in the peninsula and Bengal, "common in cultivated fields after the rains."

Bignonia (Stereospermum) chelonoides of Tropical Hindustan. A large pinnate-leaved Bignonioid tree called in Tamil "pompadyra marum," in Telinga "tagada" or "kalfghootroo," in Malabar "padrie-marum" (Drur.), in the environs of Bombay "padree" or "purrul" (Graham); and from

with "tyfl" pustules. Eastward, was observed by Ainslie, Retz, and Roxburgh, in Mysore and the peninsula, its leaves in infusion prescribed by Hindu physicians "as a stomachic in dyspeptic affections and cholera" (Drur.).

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early times, its beautiful flowers offered in temples, and its hard durable timber much used: — observed by Rheede viii. pl. 24 in Malabar; by Graham, near Bombay, and "on the Ghauts pretty common;" by Ainslie, Roxburgh, Wight, and Beddome, as far as Coromandel and Silhet.

Bignonia suberosa of Southern Hindustan and Burmah. An ornamental tree, its firm close-grained wood known from early times, and its cracked spongy bark used as an inferior substitute for cork: — growing from Tanjore to Madras and Courtallum (Roxb., and Drur.); but at Bombay, observed by Graham only "in gardens" and planted for ornament. Eastward, was observed by Mason in Burmah, enumerated as indigenous. From transported specimens, is termed "millingtonia hortensis" by the younger Linnæus.

Bignonia xylocarpa of Tropical Hindustan. A large tree with bipinnate deciduous leaves, called in Tamil "vadencarni" (Drur.), in the environs of Bombay "khursing" or "khursingee" (Graham), at Daung in Kandesh "bairsingee" (Auld); its wood from early times used for cabinet purposes, and its tender pods eaten: — observed by Auld, Graham, and others, in the "Concans," on the Ghauts and in other parts of the district around Bombay; by Roxburgh, and Beddome, common "in almost all the Madras forests" and from Mysore to Bengal (Drur.).

Evolvulus alsinoides of Tropical Hindustan and Burmah. A creeping prostrate herb called "vishnugarandi" (Burm.), in Tamil "vistnoo-krandie," in Telinga "vistnoo-krandum," in Malabar "vistna-clandi" (Drur.); and from early times, reputed a sovereign remedy in dysentery: — observed by Rheede xi. pl. 64 in Malabar; by Graham, near Bombay, and "very common on the plains of the Deccan during the rains;" by Burmann pl. 6, on Ceylon; by Ainslie, and Roxburgh, as far as Bengal; and by Mason, in Burmah.

Leucas aspera of Tropical Hindustan. A white-flowered Labiate annual, the juice of its leaves from early times applied medicinally in cutaneous affections: — observed by Graham in the environs of Bombay, its flowers "appear in the rains;" is termed "phlomis esculenta" by Roxburgh, was also observed in other parts of Hindustan by Waring pharm. ind. (Drur.).

Anisochilus carnosum of Tropical Hindustan and Burmah. A small Lavandula-like perennial called in Tamil "karpuravalli," in Telinga "roga-chettu" or "omamu," in Malabar "chomara" or "kattu-kurrka" or "patu-kurrka," in Hindustanee "panjiri" (Drur.), in the environs of Bombay "vova" (Graham); and from early times, its leaves and stems much employed medicinally: — observed by Rheede x. pl. 90 in Malabar; by Ainslie, Roxburgh, and Drury, in Mysore, and in "clefts of rocks among mountains in N. Circars;" by Mason, in Burmah.

Anisomeles ovata of Tropical Hindustan and Burmah. A Labiate annual three or four feet high called in Malabar "tsjadaen" (Rheede); and from early times, an oil distilled from it used medicinally: — observed by Rheede x. pl. 88 in Malabar; by Graham, as far as Bombay; by Roxburgh, and Wight, in other parts of Hindustan; by Burmann pl. 71, on Ceylon (Drur.); and by Mason, in Burmah.

Clerodendrum serratum of Tropical Hindustan and Burmah. A flowering ornamental shrub called in Tamil "chiru-dekku," in Malabar "tsjeru-teka" (Drur.), in the environs of Bombay "barungee" (Graham); and from early times, its flowers and leaves eaten, and its root and seeds employed medicinally: — observed by Rheede iv. pl. 29 in Malabar; by Nimmo, and Graham, from "Kandalla" near Bombay "throughout the Mahal districts above the Ghauts;" by Ainslie, Roxburgh, and Wight, at Courtallum and its root under the name of "gunta-bharinjie" largely exported from the Northern Circars for medicinal purposes; and according to Drury is "cultivated in Travancore." Farther East, by Mason in Burmah, enumerated as indigenous.

Gisekia pharnaceoides of Tropical Hindustan and Burmah. A Phytolaccoid herb; from early times, employed as a powerful anthelmintic in cases of tapeworm: — observed by Nimmo in the "Concans" (Graham), to and beyond Bombay; by Roxburgh cor. pl. 183, Wight, Drury, and Lowther, "common in pasture-grounds all over the country;" by Mason, in Burmah. From transported specimens, described by Linnæus.

Tetranthera monopetala of Tropical Hindustan. A middling-sized Lauraceous tree, flowering from the branches below the leaves, called in Bengalee "buro-kookoorchitta," in Telinga "narra mamady" (Drur.), in the environs of Bombay "peesah" or "kalla jhar" (Graham); and from early times, its leaves given to silk-worms, its bark used medicinally, and oil for candles and ointment procured from its berries: — observed by Powell in the Punjaub; by Graham, "on Kandalla Ghaut and the hills about Parr" in the Bombay district, the leaves having the "smell of cinnamon when bruised;" by Ainslie, Roxburgh cor. ii. pl. 148, and Wallich, as far as Bengal and Oude.

Amaranthus campestris of Tropical Hindustan. From early times employed medicinally as demul-

Acacia concinna of Tropical Hindustan. A large woody climber full of recurved prickles and called in Bengalee "kochai," in Tamil "shika," in Telinga "shikaya," in Malabar "chinik" (Drur.), at Bombay "chicakai" (Graham); and from early times, its succulent pods used by the Hindus for marking their foreheads, also for washing the head, and its acid leaves substituted for tamarinds in cookery: — observed by Nimmo, and Graham, the pods "sold in the bazaar" at Bombay; by Burmann pl. 1, growing on Ceylon; by Roxburgh, and Wight, from Mysore to Bengal and Assam (Drur.).

Typha elephantina of Hindustan. Called in Scinde "pauna"-grass (Heddle), in Bengalee "hogla" (Drur.); and from early times, its stems cut for matting, tied also in bundles from their buoyancy used to swim with: — observed by Heddle in Scinde, its long tortuous roots carefully guarded, being of great importance in binding the soil along the Indus; by Powell, in the Punjaub; by Nimmo, on "margins of tanks and in the beds of rivers throughout the Concans" (Graham), to and beyond Bombay; by Roxburgh, as far as Bengal, and from elephants being fond of it termed *elephant grass* (Drur.).

"Oct. 19th" (Nicol.), a synod at Lerida. James king of Arragon, under excommunication "for having caused the tongue of the bishop of Gironne to be cut out, was reconciled to the church."

"Dec. 1st" (Nicol.), a synod in London. On the demand of the pope, of "a third of the revenues of the clergy of England."

"1247 A. D." (Nicol.), a synod at Tarragona. Muslims desiring baptism were required to "abide for some days with the rectors of the church, to prove their conversion."

"The same year" (ann. Jap., and art de verif.), Saga II. succeeded by his second son Fikakusa II. or Go-Fikakusa, now eighty-eighth dairo of Japan.

"1248 A. D." (Nicol., see also Alst.), a synod at Breslau. A fifth of the revenues of the Polish clergy granted for three years to the pope, to aid him against the emperor Fredericus II.

"The same year" (Lubke and Lutrow), on the Rhine, the cathedral at Cologne commenced, under the superintendence of Gerhardus. — To the present day; the work of completion is going on.

"1248 or 1249 A. D." (Nicol., see also Alst.), a synod at Shening. Against the marriage of the clergy, a practice continuing in Sweden "after the example of the Greeks."

"1249 A. D." (Blair), Seventh crusade. Led into Egypt by Louis IX. le Saint; and on "June 5th," Damietta again captured.

"In or about this year" (Garc. de la Vega), Roca succeeded by his son Yahuarhuacac, now seventh Inca of Peru.

Scoparia dulcis of Peru and the neighbouring portion of Tropical America. A Rhinanthoid annual called in Brazil "basourinha" or "vacourinha" (Lindl.), and from early times employed medicinally as a cooling laxative (Mart.), in Spanish America in infusion to cure agues — (Humb.): observed by myself, introduced in the environs of Rio Janeiro, but to all appearance indigenous in Lower Peru; by J. D. Hooker, on the Galapagos Islands; by Descourtilz, in the West Indies, but no Carib name given. By European colonists, was carried Westward to the Taheitian Islands (Beechey voy.); to Australia, before the visit of R. Brown; to the Philippines, naturalized and

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cent, — observed by Ainslie "given in decoction" in strangury (Drur.). Transported to Europe, is described by Willdenow (Pers.).

Antidesma bunias of Tropical Hindustan. A small or middle-sized tree called in Tamil "nolai-tali," in Malabar "nuli-tali" (Drur.), in the environs of Bombay "amtee" (Graham); and from early times, regarded as a remedy in snake-bites, and ropes made of its bark: — observed by Rheede iv. pl. 56 in Malabar; by Graham, as far as Bombay, "on the Kandalla Ghaut, rare;" by Roxburgh, Wight, and Drury, from Travancore to Coromandel and Nepaul, its trunk in Assam sometimes "twelve or fourteen inches in diameter," its wood by immersion in "water becoming heavy and black as iron;" is termed "bunias sativus" by Rumphius iii. pl. 132.

Ficus heterophylla of Tropical Hindustan. A harsh-leaved shrub called in Bengalee "goori-shiori," in Telinga "buroni," in Malabar "valli-teragam" (Drur.); and from early times, its root employed medicinally: — observed by Rheede iii. pl. 62 in Malabar; by Graham, from Bombay to the Ghauts; by Roxburgh, Wight, and Drury, "common in moist places in the Peninsula and Bengal."

Ficus cunia of Tropical Hindustan and Burmah. A tree called in Malabar "perina teregam" (Drur.); and from early times, its bark and fruit used medicinally, and its rough leaves for polishing furniture: — observed by Rheede iii. pl. 61 in Malabar; by Graham, in "the Concans" to and beyond Bombay; by Roxburgh, and Wight, as far as Coromandel and Oude; is described also by Rumphius iii. pl. 95; and was observed by Mason in Burmah.

Eleusine stricta of Hindustan. Cultivated to a great extent, and perhaps from early times: — differing according to Drury "in having the spikes straight, being of a larger size, and more productive, the seeds are also heavier, which cause the spike to bend down horizontally."

sometimes used as a substitute for tea, and called in Tagalo "chachachachan" (Blanco); to Burmah (Mason); to Hindustan, having no Sanscrit name (Pidd.), and confined to the Southern portion (A. Dec.); to Arabia, observed by Forskal p. 31 at Ghomfude on the Red Sea, and called "dfar" (from Dhofar); to Eastern Equatorial Africa, observed by Grant "common in waste ground 5° 1′ S., alt. 4000 ft." Also by European colonists was carried across the Atlantic to Western Equatorial Africa (R. Brown cong. 58); to the Mauritius Islands, observed by Bojer naturalized.

"1250 A. D." (Humb. cosm.), Vincentius Bellovacencis or Vincent of Beauvais writing his "Speculum naturale," an encyclopedic work. He had charge of the earliest *public library* in France, founded by Louis IX. — (Pouchet), and died "in 1256" (Spreng.).

The *herring*, Clupea, mentioned by Vincentius of Beauvais, and as salted for provision. — Salting of "alech" or herring, is also mentioned by Albertus Magnus.

"Apr 5th" (Blair, and Marcel), after advancing to the head of the Delta, the crusaders again defeated, obliged to capitulate, and leave Egypt.

The death of Melek-Saleh (fixed to this year by an Arabic inscription on his tomb near Cairo, Wilk. theb. and eg.) kept secret several months, was now declared; his son Turan Schah becoming the eighth Ayoubite sultan of Egypt.

At the end of two months (Clot-Bey, and Marcel), the Memluks or military slaves, perceiving, that they held their master's power in their own hands, put him to death and made one of their own number sultan. The Institution was at the same time rendered permanent by continual purchases of recruits from abroad. Ibek thus became the head of the Bahrite Memluk dynasty. A copper coin issued by him, is figured in Marcel p. 158.

"In or about this year" (Raffles ix. and x.), prince Haji Purwa returning from Hindustan, where he had been converted to Mohammedanism. With an Arab companion he attempted to convert his brother Munding Sari and others of the royal family of Java; but proving unsuccessful and fearing a tumult, he fled and "is believed to have found an asylum in Cheribon then an uninhabited wilderness." The earliest mention of Mohammedanism in Javan history, the troubles leading to the removal of the capital farther Westward where it retained the name Pajajaran.

"In this year" (Crawfurd vii. 11), colonists from Gilolo in the Moluccas settling in the island of Ternate.

"In this year" (Klapr. note to San-kokf), abdication of Ghi-fon in favour of Yei-so, of the ancient royal family and now king of the Loo Choo Islands; the "fourth" of the Tame-tomo dynasty.

"In or about this year" (Humb. atl. pict.), in the reign of Nopaltzin king of the Chichimecs, the culture of *cotton* and *maize* and the art of making bread, long neglected and in danger of being lost, revived by a Toltec named Xiuhtlato.

Nicotiana tabacum of Mexico. The most generally known species of *tobacco* called in Brazilian "petume," in Carib. "youly," in Mexican "quauhyetl" (Desc.), and cultivated as early doubtless as this date:*—following the coast of Honduras South, Columbus in 1502 observed natives on the

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* *Nicotiana quadrivalvis* of Oregon. A species of *tobacco* — cultivated according to Nuttall by the natives along the Missouri, but on the Columbia probably indigenous: communicated to and described by Pursh.

Rhus copallinum of North America. A species of *sumach*, its leaves from early times "used as tobacco by the" tribes on "the Missouri and Mississippi" — (Pursh): "lentisci" were seen by Le Moyne in 1564 in Florida: R. copallina, by Chapman from "Florida to Mississippi;" by Baldwin at 31°; by Michaux, in Carolina and Virginia; by Pursh, in New Jersey; by myself, from 38° to 43° along the Atlantic; by Pitcher, on the Arkansas; by Lewis and Clark ii. 136, on the Rocky mountains and as far as the Pacific.

Liquidambar styraciflua of Northeast America. The *sweet-gum* is a forest-tree exuding a fragrant resinous fluid, mingled with tobacco in smoking at the court of the Mexican emperors — (Humb. iv. 10): "a gume which bleedeth from a kind of maple," "not much unlike a balsome both in sent and vertue," was observed by Newport on James river; L. styraciflua grows wild within or near the border of Mexico, is at least described by Hernandez 56 (Spreng.); was observed by Cabeza de Vaca in Texas; by Darby, on the Sabine; by Nuttall, on the Arkansas; by Chapman, "Florida to Mississippi, and northward;" by Baldwin, at Matanza in Florida; by Catesby ii. pl. 65, and Elliot, in Carolina; by myself, as far as 41°, near New York city; by Eaton, more than a degree farther North along the Hudson and Connecticut. According to F. A. Michaux, a very small quantity of storax can be procured from the trunk by incision.

Prosopis sp. of the Rio del Norte. The *mezquite* tree called "mezquiquez;" and from early times, its flour rendered sweet and wholesome by mixing earth eaten by the natives: — the tree, with

shore making hostile demonstrations, "chewing herbs" and "spurting it towards" him (F. Columb. 88 to 108); "tabaco" and "fuente de betum" are described by Oviedo gen. hist. v. 2 to vi. 12; and "petum" by Hieronymus Benzoni, who returned from the West Indies in 1556. Before the close of the year, the living N. tabacum became known to Nicotius in Lisbon (Pers., and Spreng.); is described somewhat later by Monardes, Lobel, and Gamerarius; was observed by Forskal, Delile, and Clot-Bey, under cultivation in Egypt; by Forskal, in Yemen; was introduced "in 1605" into Hindustan (Royle him. 282), is cultivated abundantly in Guzerat and on the Deccan (Graham, and Drur.); was observed by Mason in Burmah, called there "hsæ;" by Blanco in various parts of the Philippines; and according to Thunberg, was introduced by the Portuguese into Japan. Directly or indirectly through European colonists its cultivation has extended throughout the warmer parts of the Globe, was witnessed by myself in Brazil, Peru, Australia, on a limited scale among the natives on the Hawaiian, Taheitian, Samoan, and Tongan Islands, the manufactured article being in request even among the Feejeeans. The custom that most prominently distinguishes modern society, was taught by American tribes.

Nicotiana rustica of Northern Mexico. A species of *tobacco* called on the Saco "pooke" (Jossel.), on James river "apooke" (Strach.), on the Roanoke "uppowoc" (Har.), and from early times cultivated in Mexico (Humb. iv. 9) and in Northeast America: — clearly the species observed by Jacques Cartier under cultivation by the natives along the St. Lawrence; by Josselyn rar. 54 (near the mouth of the Saco), "a small kind with short round leaves;" by Strachey on James river, bearing a little yellow flower like henbane; by Hariot. 16, springing up spontaneously along the Roanoke and cultivated besides by the natives (figured by John With, De Bry i. pl.): N. rustica has been observed by myself, a weed in fallow ground in New England; by A. Gray, in "old fields, from New York westward and southward, a relic of cultivation by the Indians." Transported to Europe, is described by Matthioli, Lobel, Cæsalpinus viii. 44, and Gerarde 356; has become naturalized in middle Europe, occurring in waste places from Paris to the South of France and Venice; was observed by Delile, and Clot-Bey, under cultivation in Egypt; and the "Syrian and Turkish tobaccos" according to Lindley "are prepared from this species, which is much" milder than N. tabacum.

Argemone Mexicana of Mexico. A prickly yellow-flowered Papaveraceous weed, widely diffused among the American tribes as early perhaps as this date: — said to grow wild in unwooded mountainous situations in Mexico (Pers., and Dec.), observed in Northwestern Mexico by companions of Beechey (A. Dec.): in Northeast America, occurring in "waste places, not common" in our Middle States (A. Gray), and "exotic" in South Carolina (Ell.): probably an introduced weed only in Surinam (Merian pl. 24), Brazil, Buenos Ayres, Chili, and Peru (C. Gay, Hook, and myself). Spanish colonists calling it "figo del inferno" (Grah., and Lindl.). Farther West, was carried by European colonists across the Pacific to the Hawaiian Islands, observed there by myself; to the Philippines, called in Ylocano "casubhang aso" from resemblance to *Carthamus dentatus* (Blanco); to Java (Blume); to the environs of Bombay, observed by Graham "common everywhere and in flower all the year," by myself under cultivation on the Deccan, lamp-oil according to Gibson being extracted by the natives from its seeds; to Zanzibar, observed there by myself. Eastward from America, was carried to Europe as early as 1593, when seeds were received from England by Camerarius (C. Bauhin prodr.); is described by Ferrandus Imperatus 873 (Spreng.); was also carried across the Atlantic to St. Helena, Senegal, Guinea, Austral Africa (Le Prieur, Thonning, Burch., and Sonn.), and to the Mauritius Islands (Boj.).

"1253 A. D." (voyag. Belg.), journeying Eastward across the Volga, Rubruquis on "Dec. 27th" reached Karacaroum, near the frontier of China, and the seat of government of Mangou, khan of the Tartars. Rubruquis found here an embassy from Hindustan, another from a Turkish sultan; and among the population of the city, Nestorian Christians, Sarrasins or Muslims, Cathayan or Chinese

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fruit hanging like the carob, first seen by Cabeza de Vaca journeying Westward on approaching the Rio del Norte.

Opuntia sp. of Texas. Its fruit eaten by the natives from early times: — West of the Mississippi, Cabeza de Vaca found the natives removing to another part of the country to eat prickly pears, of the size of a hen's egg, vermilion and black in colour and of agreeable flavour, and for three months have nothing else: the species commencing according to Darby at Natchitoches on the Red river, may be compared; as well as that seen by E. James at the base of the Rocky mountains, and said to grow as far as Monterey.

Gamassia Nuttallii of the Upper Mississippi. Its onion-like bulb from early times eaten by the native tribes — (A. Gray): observed by Nuttall near the confluence of Huron river and Lake Erie, also near St. Louis and on the Lower Ohio; by Short, near Lexington in Kentucky; by E. James, and Pitcher, on the Arkansas; and according to A. Gray grows in Wisconsin.

artisans, and even Europeans, most of them captives. He also procured here information respecting China (mem. Chin. v. p. 4).

Polygonum (*Helxine*) *Tataricum* of Central Asia. Called by the Tartars "dikusch," or by Tartars and Russians "kyrlik" (Moritz.): the ALIUD GRANUM sold according to Rubruquis at Karacaroum, though rarely,*— may be compared: P. Tataricum was observed by Gmelin wild near the Yenisei; is known to occur throughout Siberia, and nearly naturalized in Russia (Ledeb.); and according to Don fl. nep. p. 74 has been cultivated from time immemorial in Nepaul and on the confines of China. Westward, has been carried to Britain, where it continues under cultivation and sometimes springing up spontaneously, but not as yet naturalized (A. Dec.). By European colonists was carried to Northeast America, observed by myself under cultivation in Northern New Hampshire.

As early probably as this date (Kaswini lex. geogr.), the island of "Ramana in the China Sea" described by Muhammed ben Zakarya Alrazi as containing people four span high and covered with red down, living on trees, and their language like the notes of birds unintelligible (the Borneo *orang*).

The great island of "Zanig" in the same vicinity described by Zakarya ben Muhammed ben Khakan as containing white yellow and red parrots; and a bird called "alhavari" talker, smaller than a pigeon, white beneath with a black neck, red feet and yellow bill, and speaking more distinctly than a parrot (the *maina*).

"In or about this year" (Blair), under the direction of Alphonso IX. king of Castile and Leon, the Alphonsian *astronomical tables* composed by R. Ishak Aben Sid.

1254 A. D. (= "1179 an. jav.," Raffles x.), Prabu Munding Sari succeeded by Munding Wangi, now king of Java at New Pajajaran.

"Dec. 12th" (Alst., and Nicol.), Innocentius IV. succeeded by cardinal Reinaldo de' Conti di Segni, now Alexander IV., twenty-fifth pope. Alexander III. ruling Scotland.

"1255, Jan. 13th" (Nicol.), a synod in London. "Against the exactions of the Courts of Rome and of England." — Two years afterwards, another synod was convened on the same subject.

"The same year" (Alst.), at Adrianople, Joannes III. succeeded by Joannes IV. Theodorus, as the legitimate Byzantine emperor.

The "grotto-temple" at Mahamalaipur, on the Coromandel coast of Hindustan, said to have been constructed in the "Thirteenth century" (Lubke and Lutrow).†

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* *Polygonum* (*Helxine*) *emarginatum* of Central Asia. An allied species cultivated with the preceding and from time immemorial in Nepaul and on the confines of China (Don, and A. Dec.), and possibly the plant in question: — P. emarginatum does not appear to have been met with farther West; but is attributed to China (Pers.); and from transported specimens is described by Roth cat. i. p. 48.

† *Michelia Nilagirica* of the mountains of Southern Hindustan. A Magnolioid tree, its handsome mottled timber from early times used in house-building: — observed by Wight (Drur.).

Flacourtia crenata of the mountains of Southern Hindustan. Its white very hard and dense timber valued from early times: — according to Beddome pl. 78, and Drury, "common on the Neilgherries and Shevaroys." The "F. montana" called "attuck ka jhar," a thorny "middle-sized tree" observed by Graham "on the Ghauts rare," its "fruit size of a crab apple eaten by the natives," may be compared.

Vateria Indica of Ceylon. Distinguished by its larger fruit and leaves (Drur.); and known from early times.

Dipterocarpus Indicus of South Canara. Known probably to the natives from early times, — but only "in 1865" discovered by Europeans (Drur.).

Garcinia pedunculata of Southern Hindustan. A large Calophylloid tree called in Hindustanee "tikul" or "tikoor" (Drur.); and its very large agreeably acid fruit known from early times: — growing according to Roxburgh, and Wight, at Rungpore, the fleshy part of the fruit used by the natives in curries and for acidulating water, dried slices retaining their quality for years (Drur.).

Pterospermum rubiginosum of Southern Hindustan. A large Sterculioid tree called in Tamil "kara-toveray" (Drur.); and from early times, its excellent timber used for building and other purposes: — observed by Wight, and Beddome, "common in Tinnevelly, Wynaad, the Annamullays and western forests" (Drur.).

Kleinhovia hospita of Tropical Eastern Asia, the Malayan archipelago, and as far as the Samoan Islands. A Sterculioid tree called in Tagalo "tan-ag," in Bisaya "tanag" or "hamitanag," in Pampango "panampat," in Ylocano "bitnong" (Blanco); and from early times, its leaves cooked and eaten, employed also medicinally: — growing according to Persoon, and Blanco, on the Philippines; observed by Rumphius iii. pl. 113 on Java and Amboyna (Pers.); by myself, from the Feejeean to

Canarium strictum of Southern Hindustan. A large Terebinthoid tree called in Tamil "congilium-marum," in Malabar "thelly" (Drur.); its resin, distinguished as *black dammer*, known from early times: — observed by Roxburgh, Wight, and Drury, from the mountain "forests about Courtal-

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the Samoan Islands. Westward, by Roxburgh, and Wight, in Hindustan; by Nimmo, in "S. Concan" (Graham), nearly as far as Bombay.

Gordonia obtusa of the mountains of Southern Hindustan. A beautiful Camellioid tree called "nagetta" (Drur.); its beech-like timber much used from early times: — observed by Wallich, Wight, and Beddome, "common on the Neilgherries, Wynaad, and Western Ghauts of Madras from twenty-five hundred to seventy-five hundred feet" in elevation (Drur.).

Cleyera gymnanthera of the mountains of Southern Hindustan. A large Camellioid tree, its timber from early times valued by the natives as strong and durable: — observed by Wight "common about Ootacamund" on the Neilgherries (Drur.).

Hugonia mystax of Ceylon and Southern Hindustan. A yellow-flowered shrub ten to fifteen feet high called in Tamil "agoore," in Malabar "modera canni" (Drur.); and from early times, its root employed in snake-bites and for other medicinal purposes: — observed by Rheede ii. pl. 19 in Malabar; by Drury, "commonly met with in Travancore;" by Wight, as far as Coromandel; and is known to grow on Ceylon (Pers.).

Euonymus crenulatus of the mountains of Southern Hindustan. A small tree, its close-grained box-like wood known from early times: — observed by Wallich, Wight, and Beddome, on the Neilgherries, Pulneys, and Western Ghauts, its wood may be used "for wood-engraving" (Drur.).

Sarcostigma Kleinii of Southern Hindustan. A Hernandioid woody climber; its oil, called "adul" or "odul" (Drur.), from early times much used on the Western coast for rheumatism: — observed by Wight pl. 1854 in Travancore (madr. exh. rep., and Drur.).

Euphorbia cattimandoo of Southern Hindustan. A shrub or small tree called in Telinga "cattimandu" (Drur.); and from early times, its juice used as a vesicant, and when boiled as a cement: — observed by W. Elliot at Vizagapatam, the boiled juice "sold in the bazaar" (Wight pl. 1993).

Cleistanthus patulus of Southern Hindustan. A large Euphorbiaceous tree called in Telinga "jiguru" (Drur.); and its hard durable timber known from early times: — observed by Roxburgh cor. pl. 179, and Wight, at Courtallum and on the Circar mountains (Drur.).

Macaranga Indica of Southern Hindustan. A peltate-leaved Euphorbiaceous tree called in Tamil "vuttathamaray," in Malabar "putta-thamara". (Drur.); and known from early times: — observed by Wight, and Drury, on the Neilgherries and in Travancore, its gum little known but affording superior impressions of leaves coins and medallions.

Macaranga tomentosa, growing also in Travancore, exudes a similar gum (Drur.).

Zizyphus glabrata of Southern Hindustan. An unarmed tree twenty feet high called in Tamil "carookoova," in Telinga "kakoopala" (Drur.); and from early times, its leaves used medicinally: — growing in Mysore, and observed by Ainslie, Roxburgh, and Wight pl. 282, a decoction of its leaves given in cachexia (Drur.).

Gluta Travancorica of Southern Hindustan. A large Terebinthoid tree called in Tamil "shenkurani" (Drur.), its fine-grained timber known from early times: — observed by Beddome on the Tinnevelly mountains and in Travancore, its wood taking a good polish and "well adapted for furniture" (Drur.).

Acacia sundra of Southern Hindustan. A tree twenty to thirty feet high called in Tamil "karungali," in Telinga "sundra" (Drur.); and from early times, its very hard and durable timber preferred by the natives for house-posts: — observed by Roxburgh cor. iii. pl. 225, Wight, and Beddome, from the Bombay Presidency and Mysore to Travancore and the Northern Circars, abundant, a tree much resembling A. catechu, and yielding a similar resin.

Acrocarpus fraxinifolius of Southern Hindustan. A large Leguminous tree, deciduous-leaved, and called in Tamil "mallay-kone," by the Burghers on the Neilgherries "kilingi" (Drur.); its flesh-coloured light timber from early times used for building and furniture: — observed by Wight, Beddome, and Drury, on the Travancore mountains and Western Ghauts and in South Canara, a tree of rapid growth, largely used for shingles in Coorg and hence called *shingle tree*.

Cæsalpinia digyna of Southern Hindustan. From early times, an oil for lamps expressed from its seeds: — observed in Southern Hindustan by Rottler, and Wight (Steud, Graham, and Drur.).

Terminalia coriacea of the Coromandel mountains. A large tree called in Tamil "kara-maradoo," in Canara "mutti" (Drur.); and from early times, much used for the solid wheels of buffalo-carts, its wood being heavy hard and strong: — observed on the Coromandel mountains by Roxburgh, and Wight (Drur.).

Lobelia nicotianifolia of the mountains of Southern Hindustan and Ceylon. A stout annual

lum in the Tinnevelly district" to Malabar, the Trichore forests, and Pulney hills, the resin sold along the Canara coast.

Lumnitzera racemosa of the seashore from Madagascar to Hindustan and Burmah. A Termi-

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called in Mahratta "boke-nul" or "deonul" (Drur.), and probably from its uses as a reed in incantations "dawul" (Gibson); from early times, its leaves used medicinally, and its dried hollow stalks as koluri horns: — observed by Graham from Kandalla near Bombay to the Parr hills and Mahableshwur; by Roxburgh, Wight, and Drury, on the Neilgherries and as far as Canara and the mountains of Ceylon.

Conocarpus acuminatus of the Circar mountains. A large Terminalioid tree called in Telinga "pachi-man" (Drur.); and from early times, its wood if kept dry almost equalling teak used for house-building: — observed on the Circar mountains by Roxburgh, Wallich, and Wight.

Gyrocarpus Asiaticus of Southern Hindustan. A large Terminalioid tree called in Telinga "tanukoo" (Drur.); and from early times, its light timber preferred above all others for catamarans, used also for cowrie-boxes and toys: — observed by Law "on the banks of the Krishna near Nalutwar" (Graham), in the Bombay district; by Roxburgh cor. i. pl. 1, and Wallich rar. ii. 68, on the mountains of Coromandel.

Myrtus (*Rhodomyrtus*) *tomentosa* of Tropical Eastern Asia and the Malayan archipelago. A shrub or small tree, its fruit eaten from early times: — according to Wight, and Drury, "common on every part of the Neilgherries," also on Ceylon and Malacca, its ripe fruit "very palatable," much like the gooseberry; was observed by myself as far as Singapore; by Loureiro, in Anam (Steud.); is known to grow in China, where also its fruit is eaten and preserved. Transported to Europe and North America, has become frequent in greenhouses.

Zanonia Indica of Ceylon and Southern Hindustan. A Cucurbitaceous vine climbing over tall trees and called in Malabar "penar-valli" (Drur.); its leaves from early times employed medicinally; — observed by Rheede viii. pl. 47 in Malabar; by Wight, and Drury, at "Alwaye near Cochin," and called *bandolier fruit;* and is known to grow on Ceylon (Pers.).

Bryonia callosa of Southern Hindustan. A woody Cucurbitaceous climber called in Tamil "toomutti," in Telinga "boddama" (Drur.); and from early times, its seeds used as a vermifuge, employed also in diseases of horses, and yielding an oil for the lamps of the poorer classes: — observed by Rottler in Coromandel (Ainsl., and Drur.).

Bryonia epigaea of Southern Hindustan. A woody Cucurbitaceous climber called in Tamil "kolung kovay," in Telinga "akasa-gherooda," in Hindustanee "rakus" (Drur.); and from early times, its root regarded as a remedy in snake-bites, used also for other medicinal purposes: — observed by Rottler, Roxburgh, and Wight, in Coromandel, its root living in the air without water, and well known in Mysore and on the Deccan (Ainsl., and Drur.).

Blumea balsamifera of Tropical Eastern Asia and the Malayan archipelago. Suffruticose and yellow-flowered, called in Tagalo and Pampango "sambon," in Ylocano "sobosob," in Bisaya "lalac-dan" or "lacad bulan" or "guitinguitin" or "gabuen" or "ayoban" or "alibun" (Blanco); and from early times employed medicinally: — observed by Nimmo in "the Concans," the bruised plant smelling of camphor (Graham); growing also on Ceylon and in Assam, its taste pungent (Drur.); "is in very general use among the Javanese and Chinese as an expectorant" (Horsf.); is termed "baccharis salvia" by Loureiro, as observed in Anam, used there as stomachic, antispasmodic, and emmenagogue; was observed by Blanco on the Philippines, much used medicinally by the natives, and regarded at Manila as a substitute for "salvia;" by Rumphius vi. pl. 24, on the Moluccas (Drur.).

Rhododendron arboreum of the mountains of the Punjaub and Southern Hindustan. A tree; from early times, a good subacid jelly made from its flowers: — observed by Stewart on the mountains of the Punjaub; by Wight, Hoffmeister, and Drury, on the "Neilgherries and other lofty mountain-ranges," its young leaves according to Madden poisonous to cattle.

Gaultheria Leschenaultii of the mountains of Southern Hindustan. A glabrous shrub, flowering all the year, its berries blue, and known from early times: — observed by Wight, Drury, and Broughton, abounding on the Neilgherries, an oil procured from it identical with that from the Canadian G. procumbens. From transported specimens, described by Decandolle prodr. vii. 593 to 606.

Isonandra acuminata of the mountains of Southern Hindustan. A Sapotoid tree eighty to ninety feet high, rising to a great height before branching, called in Tamil "pali" or "pauley," in Malabar "pashonti" or "pauchootee" (Drur.); and known from early times: — observed by Lascelles in 1850 in the Wynaad forests, by Cullen, and Cleghorn, from the Travancore forests to Coorg and the Annamallay mountains and on the Eastern and Western Ghauts to the elevation of "three thousand feet," its exudation bearing some resemblance to the gutta percha of commerce (Drur.); by Dalzell fl. bom. as far as the Bombay district.

Diospyros calycina of Southern Hindustan. Called there "vellay toveray" (Drur.); and its

nalioid shrub or tree called in Malabar "kada kandel" (Drur.); and its very strong durable wood known from early times: — observed by Rheede vi. pl. 37 in Malabar; by Nimmo, on the "margins of salt water creeks S. Concan" (Graham), nearly as far as Bombay; by Drury, among the man-

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valuable light-coloured timber much used from early times: — observed by Beddome pl. 68 "in the Tinnevelly district and southern provinces of Madura, being very abundant up to three thousand feet of elevation" (Drur.).

Exacum pedunculatum of Southern Hindustan. A Gentianoid annual, known from early times as a bitter tonic: — observed by Wight, and Drury, "common in the Western districts of Mysore." Transported to Europe, is described by Plukenet mant. pl. 343 (Pers.).

Ophelia elegans of the mountains of Southern Hindustan. A shrubby branching Gentianoid called "salaras" or "salajit" (Drur.); and from early times, in great request as a bitter and febrifuge: — observed by W. Elliot, and Wight, on the Pulney hills and Northern Circars, the dried stems sold in the bazaars, and exported in bundles (Drur.).

Ophelia multiflora of the Neilgherries. White-flowered; its dried root from early times used at Bombay as a substitute for gentian and chiretta, — and apparently its stems and leaves also (Waring pharm. ind.): observed by Dalzell fl. bomb. 156 growing at Mahableshwar (Drur.).

Ipomaea gemella of Southern Hindustan? From early times, its mucilaginous leaves employed medicinally: — observed by Koenig, and Ainslie, in waste places in Tranquebar, known to occur also on Java (Pers., Steud., and Drur.).

Ehretia buxifolia of Southern Hindustan. A Cordia-like shrub or small tree called in Tamil "cooruvingie," in Telinga "bapana boory," in Hindustanee "poluh" (Drur.); and from early times, its root employed medicinally, and by Mohammedan physicians considered an antidote to vegetable poisons: — observed by Ainslie, and Roxburgh, in Coromandel, by Drury "common on barren lands and in forests."

Gmelina Asiatica of Southern Hindustan. A thorny yellow-flowered shrub called in Tamil "neelacoomil," in Telinga "nelagoomadi" (Drur.); and from early times, its mucilaginous demulcent root employed medicinally: — described by Rumphius i. pl. 40 and ii. pl. 39; observed by Roxburgh, and Drury, from Travancore to Coromandel; but by Graham, "common in Bombay gardens," and "forms an elegant and excellent hedge," its flowers "large." Transported to Europe, is described by Plukenet alm. pl. 14.

Premna latifolia of Coromandel. A Verbenaceous tree called in Telinga "pedda-nella-kura" (Drur.); and from early times, its leaves eaten in curries, and its firm white wood used for many economical purposes: — observed by Roxburgh, and Wight pl. 869.

Premna tomentosa of Southern Hindustan. A shrub or small tree, its hard close-grained ornamental wood known from early times: — observed by Wight, and Drury, common from Travancore to the Circar mountains. From transported specimens, described by Willdenow, and Lamarck.

Justicia (*Adhatoda*) *Tranquebarensis* of Southern Hindustan. Fruticulose, and called in Tamil "tavashu-moorungie" or "poonakoo-poondoo," in Telinga "pindi-konda" (Drur.); from early times, its leaves employed medicinally: — received by the younger Linnæus from Tranquebar; and observed by Ainslie, and Wight, along the Eastern coasts of the peninsula (Drur.).

Justicia (*Rostellaria*) *procumbens* of Southern Hindustan and Burmah. A spreading shrub, jointed and often rooting at the joints, called in Tamil "nereipoottie," in Telinga "nakapootta chittoo" (Drur.); and from early times, the juice of its leaves applied in ophthalmia: — observed by Ainslie, Roxburgh, and Wight, "very common on pasture-ground on the Coromandel coast" (Drur.); is known to grow also on Ceylon (Pers.); and was observed by Mason in Burmah. Transported to Europe, is described by Plukenet alm. pl. 56.

Antidesma diandrum of the Circar mountains. Its timber from early times used for many purposes: — observed by Roxburgh (Steud., and Drur.).

Antidesma pubescens of Southern Hindustan. A small tree called on the Circars "pollarie" (Drur.); and from early times, its fruit eaten: — observed by Nimmo in "S. Concan" (Graham), nearly as far as Bombay; by Roxburgh cor. ii. pl. 167, on the Northern Circars (Drur.).

Arum montanum of the Northern Circar mountains. Stemless and called in Telinga "kondarakis" (Drur.); its root from early times employed by the mountaineers to poison tigers: — observed by Roxburgh, and Wight pl. 796 (Drur.).

Arum lyratum of the Circar mountains. Its root from early times cooked and eaten, — regarded very nutritious when prepared "in a particular manner;" observed by Roxburgh (Drur.).

Areca Dicksonii of Southern Hindustan. A palm, its nut from early times eaten by the poorer classes as a substitute for betel-nut: — growing according to Drury wild in great abundance on the mountains of Malabar and Travancore.

groves "in the backwater in Cochin;" by Rottler, Roxburgh, and Wight, as far as the Sunderbunds or mouths of the Ganges, and used for fuel in Calcutta; by Mason, in Burmah. Westward, is termed "bruguiera madagascariensis" by Decandolle.

Cyperus bulbosus of the shores of Tropical Arabia and Hindustan. Called in Tamil "sheelandie," on the Coromandel coast "sheelandie arisee," in Telinga "pura-gaddi" and its root "puri dumpa" (Drur.); and from early times, flour from this root eaten: — observed by Roxburgh, and Wight, "in sandy situations near the sea on the Coromandel coast" (Drur.); is known to grow also on Ceylon, and Westward in Southern Arabia (Retz, and Pers.).

"The same year" (Abyss. chron., and M. Russell 151), in Abyssinia, through the interposition of the monk Tecla Haimanout founder of the monastery of Devra Libanos, the line of Solomon restored: the reigning monarch abdicating in favour of Icon Amlac, on condition that one-third of the kingdom should be ceded for the maintenance of the church; and in place of an Abyssinian abuna, that the head of the church should always be named by the patriarch of Egypt.

"1256 A. D." (Danish Chronicle, and Relat. du Groenl. 190), Greenland revolting and refusing to pay tribute to king Magnus of Norway, the Danish king Eric, who had married his daughter, sent a fleet and enforced obedience: but would take no further advantage, — and the treaty of peace was signed in Norway "in 1261" by three leading Greenlanders, whose names are given by Angrimus Jonas.

"1257 A. D." (art de verif.), Ibek succeeded by Nooreddin Ali, second Memluk sultan of Egypt.

"In this year" (Klapr. mem. ii. 365), the remnant of the Ouigour in the country of Cha tcheou subjugated by the Mongols.

"The same year" (Crawf. ind. arch.), Chico, the first king or kolano of Ternate, reigning.

"1258, June 6th" (Nicol.), a synod at Merton. To defend the liberties of the church of England "against the grant of a tenth, made by the pope to king Henry III."

"The same year" (Desvergers, and Marcel), Bagdad captured by the Tartars under Hulagu, a general of Mangu Khan, and the hereditary spiritual khalifate abolished. — At the end of three years (Marcel), some members of the Abbassid family sought refuge in Egypt; where one of them being proclaimed khalif, the highest religious office among Muslims was continued.

"The same year" (rudim. chron. Lond.), proclamation of king Henry III. to the people of Huntingdonshire, the earliest specimen of the *English language* bearing a precise date.

A tradition among the Senekas, that the *fortifications* "in their territory were raised by their ancestors in their wars with the western Indians, three, four, or five hundred years ago. But their uncertainty about the time," and "the total want of tradition respecting them" among other American tribes, are circumstances tending to invalidate the testimony.

Cucurbita polymorpha of Tropical or Subtropical North America. The *squash*, called by the New England tribes "askutasquash" (R. Will.), and cultivated from early times: * — observed under

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* *Mollugo verticillata* of North America. A prostrate spreading weed, sometimes called *carpet-weed* (A. Gray), known from early times to the natives: — observed by myself from about Lat. 44° frequent in waste and cultivated ground throughout our Middle States, but possibly indigenous in the sands of the seashore; by Chapman in our Southern States, in "cultivated ground common." Westward, was received by Hooker from the banks of the Columbia and the Northwest Coast; was observed by Brackenridge, coming South with our land-party, on the Upper Sacramento near Shasty mountain. Transported to Europe, is termed "planta mihi incognita Rauwolfii" by Jungermann (Schmied. Geon. i. fig. cl), is described also by Plukenet mant. ix. pl. 332.

Prunus Chicasa of Arkansas and Texas. The *Chicasaw plum*, a small tree, said by the natives to have been brought from the country West of the Mississippi — (Ell.); was observed by Nuttall, and E. James, clearly indigenous along the Arkansas. De Soto on his way to Apalache found plums growing in the fields without planting and better than those of Spain, and after reaching the Mississippi met with "red" plums: Strachey on James river found among the natives fruit much like a "damoizin" but of the taste and colour of cherries: P. Chicasa was observed by Baldwin from Lat. 30° in Florida, by J. Read at St. Augustine, by Chapman in "old fields forming thickets;" by Walter, Michaux, Elliot, and Schweinitz, in the Carolinas; by Short, in Kentucky; by myself, along the Atlantic planted as far as Lat. 39°, and its cultivation increasing.

Caulophyllum thalictroides of the Alleghanies and tributaries of the Ohio and St. Lawrence. Called by the native tribes "co-hosh," and from early times "esteemed as a medicinal plant among them" — (Pursh): observed by myself on the White mountains and Berkshire hills; by Darlington, and Conrad, not far from Philadelphia; by Elliot, on the Alleghanies of Carolina; by Short, in Kentucky; by Nuttall, in the States West of the Alleghanies; and was received by Hooker from various parts of Canada.

Actaea Americana of Northeast America. Called red and white "co-hosh," and from early times

cultivation by the natives by W. Wood, R. Williams, and Josselyn; is known to have been cultivated throughout our Middle and Southern States; and by the natives in the West Indies, as appears from Dalechamp pl. 616, and was seen by Chanvalon on Martinique (Poiret dict. nat. xi. 234). Trans-

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"considered by the natives as a valuable medicine" — (Pursh): the red-fruited variety growing according to Hooker from Hudson's Bay to 60° on the Rocky mountains, according to A. Gray from "New England to Penn. and Wisconsin;" observed by Lapylaie at 51° on Newfoundland; by myself, as far South as 42° along the Atlantic; and by Mc Ewen, at Sacketts Harbor on Lake Ontario. The white-fruited variety, by myself along the Atlantic as far North as 43°; by Conrad at 40°; by Elliot, on the Alleghanies of South Carolina (Chapm.); and according to A. Gray is "more common southward, extending to Virginia and Kentucky;" was received by Hooker from Lake Huron. Transported to Europe, is described by Cornuti pl. 77.

Dentaria diphylla of the Alleghanies and affluents of the Ohio and St. Lawrence. Its pungent roots from early times "used by the natives instead of mustard" — (Pursh); observed by Michaux from the Alleghanies of Carolina to Tennessee; by Pursh, "in shady beech-woods, on high mountains, Pennsylvania to Carolina;" by Drummond, on the Alleghanies and at St. Louis, was received by Hooker from Lake Huron; and according to A. Gray, grows from "Maine to Kentucky."

Psoralea esculenta of the Upper Missouri. The *bread-root* of the native tribes, from early times eaten either crude or cooked, and stored besides "for winter use" — (Ph. and Nutt.): observed by Lewis and Clark "on the banks of the Missouri;" by Bradbury and Nuttall, "a few miles from St. Louis" on high hills near the Merimek, also "on the elevated plains of the Missouri," and called by Canadian boatmen "pomme de prairie."

Galium tinctorium of Northeast America. From early times used by the native tribes to "dye their feathers, porcupine quills, and other ornaments, of a beautiful red" — (Ph. and Nutt.): the plant does not seem well known to botanists, but is regarded as distinct from G. trifidum by Linnæus, Decandolle, and Pursh; was observed by Torrey as far North as 41° on the Hudson; by Schweinitz, at 36° in Upper Carolina; and by Short, in Kentucky.

Bidens bipinnata of North America. A weed called *Spanish needles* (A. Gray), known to the native tribes from early times: — observed by Torrey as far North as Lat. 41°; by myself, multiplying in clearings and cultivated ground in our Middle States; by Schweinitz, and Elliot, in Carolina; by Chapman, in "cultivated grounds common;" by Baldwin, as far as 29° in Florida; by Short, at Lexington in Kentucky; by Nuttall, and Pitcher, on the Arkansas. By European colonists, was carried Westward across the Pacific to the Philippines, observed by Blanco in two localities, but remaining unknown to the natives; is perhaps the "agrimonia moluccana" of Rumphius vi. pl. 15, and "b. Wallichii" seen by Mason in Burmah, by Roxburgh in Hindustan, and by Graham "a very common annual" in the outskirts of Bombay: was also carried across the Atlantic to Guinea (fl. Nigr.). Transported to Europe, is described by Zanoni 32 in 1675; somewhat later by Morison vi. pl. 7; by Gouan, as growing in the open air; and has since become a troublesome weed in the Tyrol (A. Dec.).

Solanum nigrum of North America and the West Indies. A low herb with black nauseous inedible berries, known as a weed from early times: — was in New England before 1670, as appears from Josselyn; observed by myself along the Atlantic in waste and cultivated ground from Lat. 43° to 33°; by Chapman, from "Florida to Mississippi;" by Nuttall, along the Arkansas and the Missouri to its source; was received by Hooker from the Saskatchewan and Hudson's Bay; and observed by myself on the banks of the Upper Sacramento prior to visits of settlers. In the West Indies, was received by Torrey from Key West; and the "yerua mora'ó solatrum" supposed by Oviedo to be identical with that of Spain, may be compared. By European colonists, S. nigrum was carried to Bermuda (Baldw.); to Britain, observed by Josselyn, and the *garden nightshade* or *petty morel* (Prior) having according to Lindley the berries "black;" also to Sweden (fl. Dan. pl. 460, and Fries 16. See S. miniatum).

Aristolochia serpentaria of Northeast America. The *Virginia snake-root*, from early times "so very highly" esteemed by the native tribes, — and subsequently by the colonists (Ph.): observed by Catesby i. pl. 29 in Virginia; by Chapman, from "Florida to Mississippi;" by Elliot, in South Carolina; by Croom, near Newbern; by Darlington, frequent at 40° on the Brandywine; by Torrey, as far as 41° on the Hudson; by Short, in Kentucky; by Nuttall, in Arkansas; and according to A. Gray, grows from "Connecticut to Indiana." Transported to Europe, is described by Gerarde 848, and Plukenet phyt. pl. 223 f. 2 and alm. p. 53; and continues in medicinal use "as a stimulant, tonic, diaphoretic, and in certain cases as an antispasmodic and anodyne" (Lindl.).

Panicum capillare of the Hawaiian Islands? A coarse annual grass, from early times known as a weed in Northeast America: — observed by Michaux 48; by myself, frequent in waste and

ported to Europe, is termed "cucumis turcicus" by Fuchsius in 1542 (Dalech.); from 1561 was cultivated by J. Bauhin hist. ii. 224 (A. Dec.); is described also by Dodoens, and Lobel, soon becoming an agricultural product throughout middle and Southern Europe; was observed by Chaubard abundantly cultivated in the Peloponnesus; by Delile, and Clot-Bey, in Egypt, called there "kara mogrebi" Western gourd. By European colonists, was carried to Austral Africa, and thence to Hindustan, where *vegetable marrow* was found by Graham "in gardens Bombay, not very common;" and "C. verrucosa," regarded as a variety, to Japan (Thunb.).

Helianthus annuus of Northwest America. The *sunflower* called in Mexico "chimalatl" and known there from early times (Humb. iv. 9); also from early times cultivated in our Atlantic States, — as appears from the figures accompanying Hariot's account of the Roanoke (De Bry i. 14 and pl. 20); the custom of planting the sunflower among maize adopted by colonists as far as Northern New England. In Europe, H. annuus was first made known through a description sent by Cortusi to Matthioli and published in 1568; is described somewhat later by Dodoens, Monardes, and Gerarde, now becoming well known in gardens; was observed by Forskal at Constantinople; by him, Delile, and Clot-Bey, in the gardens of Egypt; and by Roxburgh, and Graham, in the gardens of Hindustan.

Helianthus tuberosus of North America. The "girasole" or *jerusalem artichoke*, called in French "topinambour" (Nugent), in Spanish "pataca" (Herrera agr.), known in New England from early times: — Gookin coll. 3 found the natives mixing "jerusalem artichokes" in their pottage: its cultivation, adopted by the colonists, has been observed by myself as far as the border of Canada, the plant sometimes escaping and springing up spontaneously: H. tuberosus was observed by Chapman "commonly cultivated" also in our Southern States; but was not met with by Humboldt ii. 473 in Mexico, nor in any of the Spanish colonies, nor by Martius in Brazil (A. Dec.). Transported to Europe, was seen by Columna ecphr. ii. 11 in 1616 in the Farnèse garden; is termed "battatas canadensis" by Parkinson, becoming now an object of agriculture, sometimes escaping but hardly naturalized (A. Dec.); was observed by Clot-Bey, recently introduced into Egypt; by Gerarde, about Sabathoo on the Himalayas and called "kuchaloo" or "pinaloo" (Edin. journ. sc. ix. 235), by Lush, "cultivated in Deccan gardens" and thriving "remarkably well" (Graham).

Catalpa bignonioides of our Gulf States. The *catalpa* or *catawba* tree, known from early times, and supposed to have been brought Northward by the Creeks and Cherokees — (. . . .): observed by Nuttall clearly indigenous in Alabama; by Chapman, on "river-banks, Georgia, Florida, and westward." Farther North, by Catesby i. pl. 29, Walter, and Elliot, in Carolina; by myself, planted for ornament as far as 43° along the Atlantic. Transported to Europe, was observed by A. Decandolle flowering in the open air at Geneva in Switzerland; is known to be planted in Italy (Lindl.); and according to Clot-Bey has recently been introduced into Egypt.

Carya olivæformis of the Lower Mississippi and Texas. The *pecan hickory* known from early times, and oil to season their "sagamitty" with, made from its nuts "pacannes" by the native tribes of Louisiana — (Bossu trav. 349): the walnuts West of the Mississippi were found by De Soto 23 to 24 soft shelled, like unto acorns, and stored by the natives (soc. Hackl.): C. olivæformis was known to Walter (Pers.); was observed by Chapman on "river-bottoms, Mississippi, northward and westward;" by Darby, from Natchitoches to the Rio Colorado of Texas; by Nuttall in Arkansas; by F. A. Michaux, from the St. Francis river in Arkansas to Illinois, and along the Mississippi to about Lat. 42°; by Long's expedition, as far as 41°; by myself, on the Lower Ohio; and by Short, in Kentucky. Transported to Europe, is described by Aiton, and Gaertner; and *pecan nuts* have become a well-known article of commerce.

Amaranthus retroflexus of Mexico and the unwooded central portion of North America. A coarse weed known to the natives from early times: — received by Moquin from Mexico; observed by Nuttall along the Arkansas: by Chapman, in "cultivated grounds, Florida, and northward;" by Short, in Kentucky; by myself, frequent in waste and cultivated ground from Philadelphia to about 44° in New England. From New England, according to Ray, was carried to Europe; is termed "a. maximus Novæ Angliæ totus viridis" by Zannichelli in 1735, "a. spicatus" by Lamarck in 1778, has since become a weed throughout middle Europe from France to Silesia, the pest of the gardens according to Bieberstein in Southern Russia as far as the Ukraine (A. Dec.); was observed by Sestini at Constantinople, by Chaubard in the Peloponnesus. "A. hybridus" as well as "A. chlorostachys" are regarded by A. Gray as perhaps not distinct.

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cultivated ground in New England and our Middle States; by Chapman, in "sandy fields, Florida, and northward;" by Nuttall, on the Arkansas; is known to occur on Jamaica (Pers.); and was received by Kunth from Montevideo. Transported to Europe, is described by Linnæus, and Retz obs. iii. 9; and was observed by Balbi springing up spontaneously near Nice (Dec.). This or a species much resembling it was observed by myself indigenous on the Hawaiian Islands.

Amaranthus albus of the unwooded central portion of North America. A weed known to the natives from early times, — and probably the species seen by Nuttall on the Arkansas: was observed by Chapman in "cultivated grounds, Florida, and northward;" was received from Pennsylvania by Linnæus, and observed near West Chester by Darlington; by A. Gray in Central New York, in "waste grounds, near towns, and road-sides, common." Transported to Europe, the "blitum maritimum minus calyculis aculeatis" found by Micheli naturalized in the sands near Viaregio in Tuscany, is referred here by Tilli in 1723, also by Willdenow pl. 1: A. albus was observed by Desfontaines "in 1797" in Barbary, and has since become a weed in Sicily, Sardinia, Spain, Portugal, and France, as far even as Paris (Loisel., Guss., Boiss., and A. Dec.).

Phytolacca decandra of central North America. The *poke*, called by the natives of Virginia "pocan" (Lindl.), and known from early times: — observed by E. James on the Upper Arkansas, by Nuttall lower down on the Arkansas, and by N. A. Ware in Opelousas; but along the Atlantic, observed by myself a weed in waste and cultivated ground from about Lat. 44° throughout our Middle States; by Chapman, "margins of fields and uncultivated ground, Florida, and northward," by Croom as far as 30° 30′. Transported to Europe, was seen in France about 1650 by Barrelier pl. 150, was at first cultivated for colouring Bordeaux wine with its berries, called "raisin d'Amerique," is mentioned as a cultivated plant by Ray "in 1693," but subsequently became naturalized (A. Dec.); is termed "ph. americana majori fructu" by Tournefort inst. 299; is called in Italy "uva Turca o di Spagna" (Poll.); is known to occur in Barbary (Pers.); was observed by Forskal, Sibthorp, and Chaubard, naturalized from Constantinople to the Peloponnesus and called "agriōstaphitha;" by Forskal, and Delile, in Egypt, in gardens and springing up spontaneously and called "sabaghah" dye-stuff.

Poa annua of the Andes of South America? A low annual grass, known as a weed from early times: — this or an allied species observed by myself near the snow on the Peruvian and Chilian Andes: P. annua was received by Kunth from South America and the Falkland Islands; was observed by Nuttall on the Arkansas; by Short, in Kentucky; by Chapman, in "yards and gardens, Florida, and northward introduced;" by myself, a weed around dwellings and in waste ground in our Middle States and New England; by Hooker, in Iceland. In Europe, is described by T. Johnston (Ger. emend. 3) in 1633, subsequently by Ray syn. 408; is termed "gramen pratense paniculatum minus album" by Tournefort inst. 521; is known to occur along roadsides and in irrigated ground from Lapland to the Mediterranean (Pers., and Wats.); was observed by Sibthorp on the Bithynian Olympus, and along the shore of Asia Minor, also in the Peloponnesus; by Hasselquist, at Damietta in Egypt; is known to grow in waste ground along the Taurian mountains (Bieb.), and in Siberia (Kunth). Clearly by European colonists, was carried to the Interior towns of Southern Brazil (A. Saint-Hil.); and to either Auckland or Campbell's Island, in the absence of inhabitants found on the grave of a French sailor (A. Dec.).

Echinochloa crus-galli of North America. A coarse grass known as a weed from early times: — observed by Nuttall on the Arkansas; by myself, to all appearance indigenous on mud-flats along the Delaware, and within reach of brackish water along the New England shores, but multiplying as a weed in cultivated ground; by Chapman, in "wet places, Florida, and northward." Transported to Europe, is described by Matthioli, and Camerarius, had become frequent in the days of the Bauhins, occurring in waste places around London in the days of Parkinson, and Ray (Wats., Bab., and Bromf.); is termed "p. vulgare spica multiplici longis aristis circumvallata" by Tournefort inst. 515; is known to occur around Paris, and as far as Holland (A. Dec.); was observed by Forskal, Sibthorp, and Chaubard, in cultivated ground from the Bithynian Olympus to Smyrna and the Peloponnesus, and called "kĕhri" or "kĕkri;" by Forskal, and Delile, in rice-fields near Rosetta in Egypt. Clearly by European colonists, was carried to Austral Africa (E. Mey.), and Australia (Kunth). *E. crus-corvi* regarded as distinct, was observed by Thunberg near Nagasaki in Japan, called there "ko kibi;" little sorghum; by Roxburgh i. 296, in Hindustan, and by Graham in the environs of Bombay.

"1259 A. D." (Yule cath. i, p. cxxi), Mangu succeeded by Khoubilai, now khan of the Tartars.

"In this year" (art de verif.), Nooreddin Ali succeeded by Kotoz, third Memluk sultan of Egypt. Who, before the close of the year (Marcel 162) defeated the Tartar army of Hulagu-Khan in Palestine.

"In this year" (Humb. cosm. v.), the *magnetic variation* in Italy found by Petrus Peregrine to be "5° east."

"In or about this year" (Gildem.), Ebn Alwardi writing.

As early possibly as this year (see Malay ann, and Raffles x.), the city of Malacca founded by Sekander Shah, fourth ruler of Singa pura: from which place he had been driven out by the Javan forces.

"1260 A. D." (ann. Jap., and art de verif.), abdication of Fikakusa II. in favour of his younger brother Kame-jamma or Ki-zan, now eighty-ninth dairo of Japan.

"The same year = 1st year of the 'king-ting' of Li-tsoung." Commencement of the reign in Northern China of Khoubilai khan of the Tartars, under the name of "Chitsou of the Youan" (Chinese chron. table, and Pauth. 349). Khoubilai introduced *Lamaism* or the Tartar religion; but through his minister the sage Hiu-heng, governed the Chinese according to their own usages. — He constructed the Northern portion of the Great canal.

The event amounted to a dissolution of the Tartar Empire, the middle portion having a seat of government at Almalik in Central Asia, and Kipchak or the Western portion at Sarai on the Wolga — (Yule p. cxxi).

"The same year" (Alst.), at Adrianople, Joannes IV. succeeded by Michael VIII. Palaelogus, as the legitimate Byzantine emperor.

"The same year" (Lubke and Lutrow), by Nicola Pisano, his marble-reliefs on the pulpit of the Baptistery at Pisa finished. — Those on the pulpit of the cathedral at Siena, were finished "in 1266."

"The same year" (art de verif.), Kotoz succeeded by Beybars, fourth Memluk sultan of Egypt. Besides his mosque and tomb at Cairo, Beybars constructed various works of public utility, here, and at Alexandria, Damietta, and Rosetta. His inscriptions and coins are remarkable for an accompanying figure of a lion; in violation of the precepts of the Muslim religion.

The fanatical sect of Bathenians or Hassassins (according to Marcel) exterminated by Beybars: — (evidence will however be given, that the sect continued to exist more than two centuries later).

"1261, July" (Alst., and Blair), Constantinople recovered from the crusaders by the emperor Michael VIII.

"The same year" (Nicol.), a synod at Paris, "To implore the aid of Heaven against the conquest made by the Tartars over the Christians." Also synods at Lambeth, and Ravenna, on the same subject. And at Mayence, "To make preparations for resisting the Tartars."

"Aug. 29th" (Alst., and Nicol.), Alexander IV. succeeded by James Panteleon patriarch of Jerusalem, now Urbanus IV., twenty-sixth pope. Richard of Cornwall ruling Germany and Italy, though residing almost constantly in England; being a brother of king Henry III.

"1263, Nov. 18th" (Nicol.), a synod at Paris. A hundredth "of the revenues of the clergy of France was granted for five years, in aid of the wars in the Holy Land."

"1264 A. D. = 5th year of the 'king-ting' of Li-tsoung, and 1st year of the 'tchi-youan' of Chi-tsou" or Khoubilai-Khan (Chinese chron. table), beginning of the Sixty-sixth cycle.

"May 14th" (Blair), Henry III. defeated and taken prisoner by the barons under Montfort earl of Leicester: and "according to some" authorities, the *Commons* of England first summoned to parliament. — The earl of Leicester was defeated in the following year by prince Edward.

"Aug. 26th" (Nicol.), a synod at Paris. A tenth of the revenues of the French clergy was granted "for the conquest of Sicily" to Charles d'Anjou. To whom the pope had transferred the throne from Manfred (Alst.).

"1265 A. D. = 'hian-tchun,' 1st year of Tou-tsoung, of the Soung" or Twenty-first dynasty — (Chinese chron. table).

"Feb. 5th" (Alst., and Nicol.), Urbanus IV. succeeded by cardinal Guy Foulquois, now Clemens IV., twenty-seventh pope. Who wrote besides on jurisprudence.

"The same year" (rudim. chron. Lond.), introduction of *hereditary nobility* into Sweden.

Robertus Sorbona, founder of the college of the Sorbonne at Paris, at this time writing — (Alst. p. 407).

"In or about this year" (Way pr. pm.), the author of gloss. Harl. 978 writing.

Hieracium pilosella of Europe and the adjoining portion of Asia. Called in Britain *mouse-ear* (Prior), in which we recognize the "auricola muris" of gloss. Harl. 3388 and pILOSELLA of gloss. Harl. 978, — the "muricula" or "mowseer herbe" of Galfridus pr. pm., and the "pilosella" commended by Montagnana (Spreng.): H. pilosella is termed "dens leonis qui pilosella officinarum" by Tournefort inst. 469, "pilosella alpina" by Hoppe; and is known to grow from France throughout Northern Europe as far as Lapland and Iceland (Pers., Hook., and Wats.). Eastward, was observed by Sibthorp from the Peloponnesus to Constantinople and on the Bithynian Olympus; is known to grow also in the Tauro-Caspian countries.

"1266, Feb. (= 664 A. H." of Ferisht., Elph.), Nasir-u-din Mahmud succeeded by Gheias-u-din Bulbun, now ninth sultan of Delhi. — His court was the resort of exiles, including the poet Amir Khusru and other literary men; and at different times no less than "fifteen" sovereigns driven from their dominions in the West by the Mogul Tartars.

"May 10th" (Nicol.), a synod at Cologne. Against the injustice and violence "committed with impunity for fifteen years during the vacancy of the imperial throne." — A synod in the following year at Vienna, on the same subject.

Cologne being at this time the entrepot or general mart between the North and South, Albertus Magnus was enabled to procure there much information respecting Northern regions: companies for

carrying on the whale-fishery societas walmannorum already in existence, and he describes the *Physeter* and its *ambergris* and *spermaceti;* also the unicornu marinum, the sea-unicorn or *narwhal;* the *walrus* (Trichecus rosmarus), and its skin cut into strips for cables; the *white bear* (Ursus maritimus), hunted in the water like the luter *otter* and castor *beaver;* and the *sable*, Mustela zibellina (Pouchet).

Albertus Magnus further speaks of animalium annulosorum *annelids* or worms: he is regarded by Humboldt as the first person who constructed a *hot-house* for living plants (Pouchet).

Geum montanum of the mountains of middle Europe. The garyofilata of Albertus Magnus, called also samamunda and pes leporis — (Caesalp. xiv. 12), seems to correspond: G. montana was observed by Dodoens i. 5. pl. 19 on the mountains of Bohemia, its root equally having a "caryophyllo"-like odour; is described also by Barrelier rar. pl. 399; and is known to grow on the mountains of Switzerland (Pers.).

Narcissus pseudo-narcissus of middle and Northern Europe. Called in Britain *lent-lily* or *daffodil* or *daffadowndilly*, by all the older writers "affodilly," in medieval Latin "asphodelus" (Prior); in which we recognize the affodillus of Albertus Magnus, — and the "felde lylye" having leaves like "sapharoun" of ms. Sloane 1571: N. pseudo-narcissus is described by Brunfels i. p. 129 (Spreng.), and Dodoens; is termed "n. sylvestris" by Lamarck fl. fr.; was observed by Scopoli in Carniolia; and is known to grow wild in middle and Northern Europe (Engl. bot. pl. 17, and Lindl.). By European colonists, was carried to Northeast America, where it continues under cultivation as a garden-flower. Its properties according to Lindley are "similar to those of N. poeticus," and "the flowers are said to be emetic."

"The same year" (Crawfurd vii. 11), in Java, building of the earliest of the temples of Brambanan. — The latest in "1296."

"Not more perhaps than five or six centuries ago" (Hale ethnogr. Expl. Exp. 187 to 193), the Tarawan coral-islands colonized by fugitives drifting in two canoes from Banabe. They "had just commenced their settlement, when two other canoes arrived from a land to the southeast called Amoi" (Samoa); and "for some time the two parties lived together in harmony." — Within a comparatively recent period, a great change has taken place in the condition of the people: "the grandfather of the present king of Apamama, more than a hundred years ago, visited every island of the group, for the purpose of seeing what he considered the world. At present, from the hostility which prevails between the different clusters, such an undertaking would be impossible."

Cassia Occidentalis of Tropical and Subtropical America. Called in Brazil "gajamarioba" (Lindl.), and possibly known to the Polynesians as early as this date: — observed by myself seemingly wild on the lava-covered portion of Hawaii, but usually occurring in waste places around dwellings as on Taheiti and the Samoan Islands, and regularly cultivated on Tongatabu. Eastward, was observed by E. James on the Upper Arkansas along the Rocky mountains, and therefore probably indigenous; by Nuttall, lower down on the Arkansas; and is known to occur in waste places and cultivated ground from Virginia to Florida (Ell., Chapm., and A. Gray); was observed by Sloane ii. pl. 176, Swartz, and Macfadyen, in the West Indies; by Martius in Brazil, everywhere near dwellings, and spreading rapidly (Lindl.). By European colonists was carried Westward across the Pacific to the Philippines, called in Tagalo "balatongaso" or "tighiman," its seeds while tender eaten by boys (Blanco); to Australia (R. Brown cong. 58 to 61); to Burmah, "occasionally noticed in native cultivation for medicinal uses" and called "ka-lau" (Mason); to Hindustan, having no Sanscrit name (Pidd.), but called in Tamil "payaverei," in Malabar "payavera," in Telinga "cashanda" (Drur.), observed by Roxburgh, and Wight, and now according to Drury "common everywhere," by Graham as far as Bombay abundant in the rains "among rubbish in the neighbourhood of villages," by myself around villages in the dry season; to Eastern Equatorial Africa, observed by Grant from "Gondokoro 5° N." along the Nile, by Delile in gardens at Cairo: also by European colonists was carried across the Atlantic to Western Equatorial Africa, where it is cultivated by Negro tribes (Benth. fl. nigr., and A. Dec.), probably for baths and fomentations and the leaves smeared with grease for an adhesive plaster, as among their descendants in the West Indies (Macfad.). Transported to Europe, is described by Commelyn hort. i. pl. 96; and is termed "c. americana foetida" by Tournefort inst.

One hundred and sixty-seventh generation. Sept. 1st, 1267, onward mostly beyond youth: the Chinese astronomer Ko-cheou-king: the Hindustanee writer Khusrau of Delhi d. 1315: the Jewish writers, Gerson ben Solomon, Nachmanides, Abraham Abulafia ben Samuel: the Arab writers, Ebn Khallikan the biographer d. 1282, Saad ben Manssur Ibn Kemunat, Kaswyny d. 1283: the Armenian writer Vahram: the Greek writers Acropolites d. 1282, Gregorius Cyprius d. after 1289, Nicephorus Chumnus d. 1300, and Ephraemius d. after 1300: Gulielmus de Baldensal, Jacobus de Voragine, William of Piacenza, and Lanfranc: the jurist Durandus; Henry of Ghent; Albertet; John de Joinville; Rutebeuf: the Russian theologian Cyril of Kief: the scholastic theologians, Udalricus Argentinensis, Rupertus de Russia, Aegidius Romanus, Richardus de media Villa, Henricus a Gan-

davo, Joannes Parisiensis, Thomas Aquinas, and Bonaventura: the last of the troubadours, Esteve de Bezier: the zoologists, Conrad d'Halberstadt, Guillaume de Normandie, Richard de Furnival (Pouch.): the botanists, Alfredus d. 1268, and Henri Arviel (Pouchet): the painters, Andrea Taffi d. 1294, Tommaso de Stefani d. 1310, Giovanni Cimabue d. 1390.

"The same year" (J. Glen in Orient. transl. lond.) end of the history of Armenia by Vartan.

"The same year" (Marco Polo, and Pauth. 353), a new city near Canbalu completed by Khoubilai-Khan for his seat of government: in other words, founding of the city of Pekin.

In this year (= 543 B. C. — "1809 years" in Mahavams. lxxxvii.), in Ceylon under king Paracramabahoo II. parts of the Budhist Scriptures translated by high priests.

"In or about this year" (Blair), "the police of the city of Paris established" by the first regulator Stephen Boileau.

The spherical form of the earth, "li monde est reont," maintained by Brunetto Latini tresor (Pouchet).

"1268, Apr. 16th" (Nicol.), a synod in London. A decree was "published, To remedy the disorders occasioned by the civil war."

"1269 A. D." (F. Mason ii. 24), in Burmah, death of Narapadisæthu, king of Pugan; after founding in the latter part of his reign the city of Martaban, and leaving there thirty families "to take care of the pagoda" He was succeeded by his son Nandaraza.

"1270 A. D." (rudim. chron. Lond.), the "Establishments," a body of laws by Louis IX. suppressing *private wars* and trials by wager of battle.

"1271 A. D." (Chinese chron. table), by the Western Tartars or the Youan, names first given to their empire.

Leaves of *Tamarix Germanica* called "balgou," *Glycyrrhiza hirsuta* called "nakhalsa," and *Sanguisorba* sp. called "chudou," employed by the Mongols and Bouriates as substitutes for tea — (Klaproth, and Ainsl. mat. ind. i. 1. 228).

The continuation of the Altaian mountains separating the waters of the Amour from those of the Lena and Lake Baical, called by the Bouriates from remote antiquity * "Iableni-Daba" — (Pall. trav. iv. 266).

Allium sphærocephalon of Siberia. From early times eaten around Lake Baical, — observed on its shores by Pallas iv. 418. Westward, is described by Micheli n. gen. pl. 24; and is known to occur in Italy and Germany (Pers.).

Polypodium fragrans of East Siberia. A fern called by the Bouriates "serlik," and from early times used as a substitute for tea, — observed by Pallas iv. 418 on rock around Lake Baical

"In this year" (Danish chron., and Relat. du Groenl. 207), by a strong Northwest wind ice driven in great quantities to Iceland, laden with so many bears and so much wood that the existence of land in that direction beyond Greenland was inferred: and an expedition was sent out, but without result.

"Sept. 1st" (Alst., and Nicol.), Clemens IV. after an interval of "two years and nine months" succeeded by archdeacon Thibaud Visdomini, now Gregorius X., twenty-eighth pope. The same year in France (Alst.), Louis IX. succeeded by Philip III.

"1272 A. D." (Way ed. pr. pm. pref.), Robertus Kylwarbi nominated archbishop of Canterbury by pope Gregorius X. His writings are voluminous, some of them grammatical, — and are quoted by Galfridus pr. pm.

"1273 A. D." (Alst., and Blair), Rodolph of Hapsburg made emperor of Germany and Italy, and head of a new dynasty. — Continued in the Austrian emperors to the present day.

"In the Thirteenth century" (according to Mirbel, in Pouchet), *herbaria* or collections of dried plants first formed.

As early perhaps as this century (native tradition, and Cieza. lii), at Santa Elena point of the Gulf of Guayaquil, arrival of reputed "giants" in "boats made of reeds, as big as large ships" (Japanese junks?), men of large stature, having large eyes, "hair reaching to the shoulders," and no beards; they "were dressed in the skins of animals, others only in the dress which nature gave them, and they had no women with them." Landing, they "made a sort of village," and in the absence of fresh water dug "very deep wells" in the living rock until they procured a supply, and then lined them with enduring "masonry from top to bottom." The wells — are regarded by Cieza de Leon as certainly "executed by very strong men."

Convolvulus (Batatas) edulis of Tropical America. The *sweet-potato* from Easter Island and Taheiti to Northern New Zealand is called "gumalla" or "gumarra" or "umara" (Forst. esc. 56), on Taheiti "umara" (Bert.), on the Hawaiian Islands "ouala" (Gaud.) or "uala" (Hale), in Bra-

* *Cornus alba* of East Siberia. A shrub that gave its name to the "Oulan-Bourgassen" river of the Bouriates, a tributary of Lake Baical — (Pall. iv. 359).

zilian "ietica" (Marcgr. pl. 16), in Peru "camote" (C. P.), a word according to Humboldt of Mexican origin, in Quichua "apichu," in the Quito dialect "cumar" (Markh. p. 234), and cultivated from early times; * — "boiled roots to eat not unlike chestnuts in taste" were offered to Columbus by the natives of Cuba (F. Columb. 28, or in the words of Gomara 16) "batatas que son mayzes dulces," and some of these roots were carried by Columbus to Spain. Westward, B. edulis was observed by myself under cultivation on Metia, Taheiti, the Hawaiian, Samoan, and Tongan Islands, not only the American variety, but other varieties unknown in America; also on the Samoan Islands and New Zealand, a slender-rooted kind that according to New Zealand tradition was brought from those islands at an early period. B. edulis was said to be cultivated on one of the outer Feejeean islets; and on Taheiti, the Tongan, Samoan, and Feejeean Islands, I remarked seemingly the same species springing up spontaneously, usually as a weed in cultivated ground, but distinguished by the natives and its root not used. By Oviedo, B. edulis was introduced into Spain (A. Dec.); roots were seen there by Clusius hist. ii. 77, and the living plant is described by Monardes, and Lobel; was observed by Hasselquist in Palestine; by Clot-Bey, recently introduced into Egypt; by Grant, under cultivation from Egypt to Zanzibar; by myself, the American variety on Zanzibar, also in the markets of Mocha, Muscat, and Bombay. By European colonists also, was carried Westward across the Pacific to the Philippines, observed there by P. A. Mozo, Blanco, and myself, called "camoti" in Tagalo, and several varieties distinguished by the natives; to the Moluccas by the same route (Rumph. v 368); to Japan, called there "imo" or "kara imo" (Thunb.); to China, called there "hoan-xy," and to Anam (Lour.); to Burmah, called there "ka-zwon" (Mason); to Hindustan, observed by Rheede vii. pl. 50 in Malabar, called there "kappa-kalenga," and in Telinga "grasugada" or "chillagada" (Drury),

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* *Anona muricata* of the West Indies and neighbouring portion of Tropical America. The *sour-sop* is a small tree, called in Carib "alacalyoua" (Desc.), and known from early times: — the "guanabano" was observed by Oviedo nat. hyst. 63 and hist. gen. viii. pl. 17 frequent on the islands and in Tierra firme, bearing fruit like pine-cones; "guanavana" fruit, by Cieza de Leon xxvii to lxvi from the Cauca valley throughout Lower Peru; by myself, large and depressed as though by its own weight in resting along a branch, in market at Lima: A. muricata was observed by P. Brown, Swartz, and Macfadyen, wild throughout the West Indies; by Merian pl. 14 in Surinam, wild there according to Splitgerber but growing around plantations. By European colonists, was carried to Southern Brazil, where according to Martius it tends to escape from cultivation; to the opposite African coast, cultivated at Sierra Leone (fl. Nigr.): to Ceylon (Burm., and R. Brown); to Hindustan, "in gardens Bombay" (Graham), and sparingly cultivated in Madras (Drur.); to Burmah (Mason); to Java, where its fruit is held in estimation (Graham); and in French colonies is called "corossol" or "cachiman" (A. Dec.).

Passiflora quadrangularis of the West Indies. The fruit called "grenadilles" known to the ancient Mexicans, — according to Humboldt iv. 9: the "granadilla" delicious and fragrant seen by Cieza de Leon xxviii on the Upper Cauca, described in a letter from Peru to Monardes in 1578, is clearly the highly-esteemed fruit sold under the same name at Lima, but I did not meet with the plant producing it. P. quadrangularis was observed by Jacquin am. pl. 143 in the woods of Jamaica (Pers.); is cultivated in certain French settlements for the sake of its root, which is "powerfully narcotic," or according to Martius "emetic," and its fruit "is a common article in a Brazilian dessert" (Lindl.). By European colonists, was carried to Hindustan (ms. note to Graham); and to Burmah (Mason).

Tacsonia sp. of the South American Andes. — The "grenadilles" of Humboldt are however described by him as the fruit of different species of Passiflora and Tacsonia. The species of Tacsonia are I think confined to South America, to the Andes from Bogota throughout Peru.

Chrysophyllum cainito of Tropical America. The *star-apple* or "caymito" cultivated from time immemorial in the West Indies, — but nowhere found decidedly wild (A. Dec.): "caymito" fruit was seen by Cieza de Leon xlvi to lxvi at Puerto Viejo and farther South in Lower Peru: C. cainito is described by Oviedo gen. hist. viii. 3; is termed "cainito folio subtus aureo" by Plumier x. pl. 69; was observed by Sloane ii. 170 on Jamaica, not indigenous, but sowing itself and extending beyond cultivated ground; by Jacquin am. 52, in other parts of the West Indies: is known to occur in Caracas and as far as Peru (Humb. and Kunth iii. 236). By French colonists, is called "caimitier" or "cainitier," but from the slight value of its fruit has seldom been transported beyond the American continent (A. Dec.); was observed by Mason "exotic" in Burmah.

Lucuma caimito of the Eastern declivity of the Peruvian Andes. Another Sapotaceous tree called "caimito" (A. Dec.), its fruit of superior quality known from early times, and possibly the "caymito" in question: — L. caimito was observed by Ruiz and Pavon iii. pl. 240 on the Peruvian Andes (Pers.); and according to A. Decandolle extending into Brazil.

in the environs of Bombay "rattaloo" or "sukur-kund" or "sukurid-kind" (Graham), and known to be very generally cultivated throughout Hindustan as far as Scinde (Roxb., and Burnes). The *white sweet-potato*, its roots really tuberous and not fusiform nor pointed, may prove a distinct species; it is the kind generally cultivated on the Hawaiian Islands, was observed by Blanco on the Philippines, and according to Mason is applied by the Burmese to wounds with poisoned arrows.

Physalis Peruviana of Tropical America. The *cape gooseberry* or *cherry tomato*, called in Carib "sousourou-scurou" (Desc.), in Tagalo "potocan" (Blanco); and carried to the islands of the Pacific as early possibly as this date: — observed by myself on the Hawaiian, Taheitian, Samoan, Tongan, and Feejeean Islands, and New Zealand, occurring as a weed only and everywhere neglected by the natives: by Blanco, on the Philippines; by Mason v. 455, "exotic" in Burmah; by Roxburgh, in Hindustan; by Graham, "cultivated in gardens" in the environs of Bombay, and "a plant very much resembling this", seemingly "wild on the banks of the Yena and other moist places Mahableshwur." Eastward, the "cerezilla" fruit was seen by Cieza de Leon xlvi at Puerto Viejo, North of Guayaquil; P. Peruviana by Feuillee iii. 51, and Ruiz and Pavon, in Peru; by myself, on dried-up portions of the river-bed near Lima, and in a similar locality North of Valparaiso; by Descourtilz, in the West Indies. By European colonists, was carried to Southeast Australia, observed by myself already naturalized, and about 1830 to Southwest Australia by James Drummond (A. Dec.); to the Mauritius Islands (Boj); to St. Helena and Madeira, observed by myself; to Northeast America, where I found it cultivated in our Middle States. Transported to Europe, is described by Morison xiii. pl. 3, has become naturalized in Southern Spain (Boiss. voy. ii. 436, and Dun.), and apparently the same species in Sicily (Guss. i. 270, and A. Dec.).

"1274, May 7th to July 17th" (Alst., and Nicol.), Fourteenth general ecclesiastical Council. Assembled at Lyons; the Byzantine emperor Michael VIII. and other Greeks being present. The "Greek and Latin churches were re-united." Rodolph of Hapsburg was confirmed as emperor of Germany and Italy. The mendicant Orders of monks were reduced to four; twenty-three being abolished. Bowing or "bending the knee" at the name of Jesus, was instituted. And laws were made on the future election of popes.

"1275 A. D." (ann. Jap., and art de verif.), abdication of Kame-jamma in favour of his eldest son Gouda or Go-ou-da, now ninetieth dairo of Japan.

"The same year = 'te-yeou,' 1st year of Ti-hien" or Koung-tsoung, of the Soung or Twenty-first dynasty — (Chinese chron. table).

"May 26th" (Nicol.), a synod at Constantinople. Joannes Veccus was elected patriarch of Constantinople.

"The same year" (Nicol.), a synod at Lunden. The interdict imposed on Denmark for nine years, was removed.

"The same year" (Lubke and Lutrow), in Germany, the cathedral at Regensburg commenced. — The building was finished "in 1618."

"In or about this year (= 674 A. H., comm. June 26th," Hadji-Khalfa, Gildem., and De Sacy chrest.), Kaswini writing. He speaks of "Gava" (Java), and the Chinese exchanging their wares there; sailing no farther West, on account as they allege of the diversity of religions and the distance.

Also of "Sarandib" (Ceylon) containing a footstep of "Adam the father of us all:" of many Magians (Parsees) residing on the island and Muslims associated with them; and of the burning of the widow of the native king with the corpse of her dead husband. Of the island of "Salameth in the Indian Sea," where there are fishes that ascend trees (*Anabas scandens*).

And of Mansura, a city on the Indus founded by the second Abbassid khalif for the seat of government of the Muslim prefects.

"1276 A. D. = 'king-yen,' 1st year of Touan-tsoung, of the Soung" or Twenty-first dynasty — (Chinese chron. table).

Thea laxa? of Japan. "Some six centuries ago" (Jap. centen. comm. 106), the tea plant found "growing in the province of Suriga," to all appearance indigenous, — and its qualities "led to its cultivation." T. laxa was observed in Japan by Kaempfer pl. 606, but is regarded as not distinct from T. bohea (Pers.).

"The same year" (Malay ann., Raffles x., and Crawfurd vii. 11), Sekander Shah succeeded at Malaca by Malromed Shah. Who adopted the Mohammedan religion, and took possession of the islands of Lingga and Bintan.

"Feb. 21st" (Alst., and Nicol.), Gregorius X. succeeded by cardinal Peter de Tarentaise or Innocentius V., a scholastic theologian. "July 11th," by cardinal Ottobone di Fresco or Hadrianus V., who died "Aug. 16th" without having been "consecrated pope or ordained a priest." And "Sept. 13th," by cardinal Joao Pedro of Portugal, now Joannes XXI., thirty-first pope. Edward ruling England.

"1277, about April" (Nicol.), a synod at Constantinople, and a profession of faith "made, conformable to that of the church of Rome." Another synod "July 16th," and the opponents of the union of the two churches excommunicated.

"Nov. 25th" (Alst., and Nicol.), Joannes XXI. succeeded by cardinal John Gaetan Orsini, thirty-second pope.

"Towards the end of the Thirteenth century" (Spreng.), Pier Crescenzio writing.

"The same year" (art de verif.), Beybars succeeded by Barakah-Khan, fifth Memluk sultan of Egypt.

"The same year" (Steinschneid. iii. 27), date of the Toledo manuscript of the Hebrew bible:—now registered as "cod. Rossi 782."

"1278 A. D. = 'tsiang-hing,' 1st year of Tiping, of the 'Soung" or Twenty-first dynasty—(Chinese chron. table).

"April 9th" (Nicol.), a synod at Compiegne. "Against the chapters of cathedrals, who assumed the right of imposing an interdict on towns for the preservation of their liberties."

"The same year" (Blair), Ottogar king of Bohemia defeated and slain in battle by the army of Rodolph of Hapsburg.

"The same year" (Marc. Pol. 149), in China, two churches built at "Cinghianfu" by Marsarchis, a Nestorian Christian appointed governor of that city. — A Nestorian church was seen by Marco Polo in Quinsai; and another on his way there at "Cascar" (Cashgar) in Central Asia.

In a tract published in this year (. . . .), *gunpowder* described by Roger Bacon. But according to Pouchet, the composition is "first mentioned" by Albertus Magnus mirab. mund.; and is also described by Marcus Græcus. Having been long known in China, the manufacture may have been brought from that country: — but the application to casting projectiles in warfare, appears to have been made in Europe. Cannon were used in 1346 in the battle at Crecy (Pouchet); and "harquebuses" or portable fire-arms, are mentioned by the traveller Brocquière.

The continuance of the *Greek language* in certain parts of Italy, shown by the following words of Roger Bacon comp. stud. phil. vi., "Nor would it be much, for the sake of the great advantage of learning Greek, to go to Italy, where the clergy and the people in many places are purely Greek."—I was informed at Naples, of a district at the Southeastern extreme of Italy, where Greek is to this day spoken.

Magnifying lenses also described by Roger Bacon. — Jordanus de Rivalto in "1305," speaks of *spectacles* having been invented "twenty years" before: and a manuscript of "1298" mentions "occhiali" (Pouchet).

Roger Bacon further speaks of the possibility of making an instrument for walking in safety at the bottom of the water, the *diving-bell*: and mentions *bismuth* and *manganese*; and an inextinguishable fire, regarded by Jourdan as *phosphorus* (Pouchet).

"1279 A. D." (Chinese chron. table; and Pauth. 350), end of the Soung dynasty, Ti-ping being the last native Chinese emperor. Khoubilai-Khan now ruler of all China.*

"May 4th" (Nicol.), a synod at Beziers. The archbishop of Narbonne deputed to proceed "to the next parliament in France, To complain of the encroachment of the secular over the ecclesiastical power." Also, a synod at Avignon "May 17th," "Against the usurpation of ecclesiastical property, violence committed against the clergy, and contempt of excommunications."

"November" (Blair), in England, the passage of Mortmain act; making estates inalienable.

"The same year" (art de verif.), Barakah-Khan succeeded by Salamesch; and before the close of the year, by Kalaoon, seventh Memluk sultan of Egypt. Kalaoon proved almost the only Muslim ruler of Egypt who founded charitable institutions (Wilk. theb. and eg.): and during his reign, a great impulse was given to the erection of buildings of every description in Cairo (Clot-Bey xv. 30). A coin issued at Aleppo by Kalaoon, is figured in Marcel p. 168.

The Big mound, near New Madrid on the Mississippi, found to contain a chamber which "seems

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* *Lagerstroemia Indica* of the mountains of Southeastern China. The "pe-ge-hong" that followed the court to Pekin, — according to the description by Cibot (mem. Chin. iii.), is this flowering shrub: — the "pe-ge-hong" is also mentioned by the author of the Fong-ouen-tsi-kouan, and came "from the mountains of Fou-kien." In Japan, L. Indica was seen by Cleyer iii. 5. 6 (Spreng.). Kaempfer v. p. 855; and by Thunberg, growing in the open air, and called "sibi" and "fakudsitkwa" and "fakusinda." The shrub occurs also in Cochinchina (Pers.); according to Mason, is "exotic" in Burmah; and is admitted to be also exotic in . . . . (Rumph. vii. pl. 28), and Hindustan (Roxb., Wight, and Graham). From Europe, was introduced into the greenhouses of North America, where it has become frequent.

to have been built by putting up poles, like rafters * in the roof of a house," with human bones on the floor, also a pipe, and earthen jars, some surmounted by the figure of a human head, while others in neighbouring mounds had a long narrow neck (G. C. Swallow in rep. Peabody mus. 1875).

"1280 A. D." (Wilk. theb. and eg.), the "morostan" or *hospital* at Cairo, founded by Kalaoon. The building is attached to his mosque and tomb.

"April" (Nicol.), a synod at Bourges. The clergy were forbidden "to exercise many trades therein enumerated."

"The same year" (Pauth. 359, in 1281 according to Kaempfer, compare Marc. Pol. 159), unsuccessful expedition of Khoubilai-Khan against "Zipungu" or Japan. — The abundance of *gold* in Japan, is mentioned by Marco Polo; who further describes both the Japanese and Chinese idols as many-handed (and therefore Braminical, contrary to the general impression).

"1281, Feb. 22d" (Alst., and Nicol.), Nicolaus III. succeeded by cardinal Simon de Brie, now Martinus II., thirty-third pope.

"December" (Nicol.), a synod at Paris. Complaint made "of *religious mendicants*, who preached and heard confessions."

"In this year" (Mason in beng. asiat. soc. xxxvii), the "red city of Toungoo founded by a Karen jointly with two Burmans."

"1282, A. D." (Pauth. 360), arrival in China of an ambassador from the "kingdom of Kulang;" bringing to Khoubilai-Khan "precious stones," and "black apes" (. . . .).

"March 30th, Easter day" (Alst., and Blair), "Sicilian Vespers:" the massacre of all the French residing in Sicily, "eight thousand" in number; Peter III. ruling Arragon and Naples. — The discontinuance in most parts of Europe of a beautiful religious rite may have some connexion; the "Oraciones" witnessed by myself only in Peru.

"Dec. 11th" (Blair), prince Lewellyn of Wales defeated and slain in battle by the army of king Edward: — in the following year, Wales united to England.

"The same year" (Nicol.), a synod at Saintes. Complaint made by the bishop, "That the bodies of excommunicated persons were interred in the churchyards."

"1283, January" (Nicol.), a synod at Constantinople. The patriarch Joannes Veccus "condemned by the schismatics." And in another synod "on the morrow of Easter," all the bishops "concerned in the union of the two churches were condemned."

"The same year" (Alst.), Michael VIII. succeeded by his son Andronicus II. Palæologus, sixty-second Byzantine emperor.

Journeying Eastward, Marco Polo 21. describes Turkey *carpets* as "le souran tapis dou monde e li pius biaus." — The pieces exported from Hindustan under the name of "Persian rugs," I was assured by Arabs at Muscat, are "brought from Constantinople."

The "rat de faraon" mentioned by Marco Polo 69. and 216. as eaten in Tartary, is clearly the *brown rat*, Mus decumanus: — well known to be eaten by the Chinese of the present day. Eastward

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* *Ulmus fulva* of Northeast America. The *slippery elm*: some of the above rafters "probably of elm" — (G. C. Swall.): the Narragansets informed R. Williams of a tribe "between three and four hundred miles west" who lived on the bark of trees (hist. coll. iii. 209): U. fulva has been observed by myself from Lat. 47° on the Lower St. Lawrence to 42° in Western New England; by Pursh, from Canada to Pennsylvania; according to A. Gray, is "common from Western New England to Wisconsin and Kentucky," and has "tough reddish wood, and a very mucilaginous inner bark;" was observed by Michaux on the Alleghanies (Pers.), by F. A. Michaux in Canada and the United States, but not in the maritime portion of Carolina and Georgia; by Chapman, in "rich woods, West Florida, and northward;" by Darby 77, to 31° in Louisiana; by Beck, near the mouth of the Missouri; and by Say on Long's Exp., as far as 49° on Red river of Lake Winnipeg.

Arundinaria macrosperma of Carolina and the Lower Mississippi. The *North American reed* or *cane*, growing in widely-extended beds or tracts called *canebrakes*, and from early times furnishing arrows: a lathing of split cane was placed on the above rafters — (G. C. Swall.): West of the mouths of the Mississippi, Cabeza de Vaca found the arrows of the natives of hard cane (transl. B. Smith); and those on the Roanoke according to Hariot were of "arundine" (De Bry i.): A. macrosperma is known to grow along the Atlantic as far as Lat. 37° (A. Gray); was observed by Schweinitz in 36°; by Chapman, from "Florida to North Carolina;" by N. A. Ware, in Florida, and is known to grow as far as 29°; by Michaux, on the Mississippi (Pers.); by myself, on the Kentucky shore of the Lower Ohio; by Nuttall, from about Lat. 39°, from Sandy river in Ohio and Kaskaskias on the Mississippi to the Arkansas above Verdigris, L'eau Bleu on Red river, and the Gulf; by E. James, on the Canadian branch of the Upper Arkansas; its absence from the Missouri was remarked by Baldwin.

from China, M. decumanus was aborigihally though perhaps unintentionally introduced throughout the islands of the Pacific; left behind in some instances after the disappearance of human inhabitants, as on Gardner's and Enderby's coral-islands in the Phoenix Group. At a comparatively modern period, M. decumanus was introduced into Greece and Europe; was seen in Egypt by Baumgarten iii. 5, and so far as I could judge without close examination, by myself. By European colonists, was unintentionally carried across the Atlantic to Northeast America, where it has become frequent.

At "Cascar" (Cashgar) in Central Asia, Marco Polo 51 and 152 found "hermites, abaii et monester asez de lor foi" (Lamaism, or perhaps pure Budhism); and though so far North, "banbaxe" or *cotton* was cultivated. He also speaks of "Kesimur" (Cashmere); and of (the lofty table-land of) "Pamier."

In the North, Marco Polo 213 and 71 mentions "Rosie" (Russia), and islands in that direction where "jerfaus" or *falcons* are procured (Iceland). But the country North of the "Altai" as far as the ocean, is described as subject to the Great khan, and inhabited by "sauvaje jens" called "Mecri;" who "ne ont blef ne vin" have neither corn nor wine, live on animal food, "chavauchent les cerf" use the *reindeer* for horses, and follow the usages and customs of the Tartars. He also mentions the great traffic in *furs* in that region, the *black fox;* "gibellines" (Mustela zibellina) the *sable;* the "*ermin*" (Mustela erminea); "orses toutes blances" the white or *Polar bear* (Ursus maritimus); and even *dog-sledges* (hardly in use nearer than Kamtschatka).

On reaching China, Marco Polo 85 found at Canbalu (Peking) a great *bell* sounding at night to confine the citizens to their houses. Black stones, "pieres noires qe se cavent des montaingnes" (*coal*) used for fuel. From Canbalu, a great canal leading South. And in other Chinese cities, many sagacious merchants, and men of all professions, philosophers, naturalists, "grant filosofe e grant mire naturel qe mout stuent bien nature" (l. c. 102, 148, and 151).

By government, *paper-money* was issued, redeemable for special purposes in uncoined silver and gold. While in other countries of Central and Southeastern Asia, Marco Polo 96 and 118 found "porcelaine blance celle qe se trovent en la mer" cowries (Cypræa monetas) used for money, in addition to silver and gold. — Cowries for money are mentioned also by Ebn-Arabschah in his history of Timour (De Sacy chrest. note to Makriz.).

Calamus rudentum of Tropical Eastern Asia. The common *rattan;* and clearly the split "canne" of which the rope for towing vessels on the river "Qüian" was made, according to Marco Polo 147: — Chinese near Macao making ropes of split rattan are mentioned by G. Bennet wand. (Royle); "rattan cables," by Dampier; and the cable of Chinese junks was observed by myself to consist of rattans twisted together: the living C. rudentum is termed "palma juncus albens" by Rumphius v. pl. 53; and was observed by Loureiro 260 in Anam. Westward, by Graham "in gardens" only near Bombay: boxes and bales of merchandise secured with rattans may have been brought at an early period to Egypt, but in Europe these stems continued so little known that one is figured by C. Bauhin (ed. Matthiol. 58).

"1285, Apr. 2d" (Alst., and Nicol.), Martinus II. succeeded by cardinal Giacomo Savelli, now Honorius IV., thirty-fourth pope.

"The same year" (rudim. chron. Lond.), in England, the court of king's bench instituted. And the abbey church of Westminster completed.

"The same year" (Alst.), end of the chronicle of Martinus Polus.

"1286 A. D." (Nicol.), a synod at Naumburg. Against "those who imprisoned bishops and clerks."

"In this year" (Humb. cosm. v.), *charts, astrolabes,* and the *compass* mentioned by Raimundus Lullius maravill. orb. as in use among the Barcelonians. — He died "in 1315" (Pouchet).

"July 8th" (Nicol.), a synod at Ravenna. The practice introduced by the laity of inviting jongleurs and *buffoons* at weddings or when knighted, was condemned.

"The same year" (Pauth.), by the mandarins of Fou-kien, the ships visiting one of the ports of Southern China stated to have come from "more than ninety foreign kingdoms."

"In this year (= 685 A. H." of Ferisht. Elph.), Bulbun succeeded by his grandson Kei Kobad, now-tenth sultan of Delhi.

The Persian poet Saadi writing. — He died "in 1291."

Tulipa Gesneriana of the Uralian plains. Called in Britain *tulip*, by old writers "tulipan" the Turkish word for turban, in Persian "dulbend" (Prior), in Hindustanee "lala" or "shaqaik" (D'roz.): the "tulipe" of the gardens is mentioned by Saadi — (Babour-nameh, and Klapr. mem. ii. 155): T. Gesneriana was observed by Pallas trav. i. 384 abounding on the Yaïk; was brought from Constantinople in or about 1554 (Balbin., and Beckm.) probably by Busbecke, and became at once a favourite garden flower throughout Europe; is described by Camerarius; was observed by Rauwolf under cultivation on Lebanon; is known to occur seemingly wild in Thrace, Cappadocia, and Russia (Pers., and Spreng.); and Hindustanee names indicate its presence in Northern Hindustan. By European colonists, was carried to Northeast America, where it continues in gardens.

"In this year" (Way pref. pr. pm.), the most highly esteemed of medieval dictionaries, the catholicon or summa of Johannes Januensis de Balbis completed. — The work is quoted by Galfridus pr. pm., and was first printed "in 1460."

Teucrium scorodonia of Europe and the adjoining portion of Asia. Called in Britain *wood-sage* (Prior), in which we recognize the salgia silvestris of Johannes Januensis cath., — identified by Galfridus pr. pm. with the "ambrosia," and translated "wylde sawge" in the Ortus vocab.: T. scorodonia is termed "chamædrys fruticosa sylvestris melissæ folio" by Tournefort inst. 205, "t. sylvestre" by Lamarck fl. fr.; and is known to grow in woods throughout middle Europe as far as Britain (Pers., and Curt. lond. v. pl. 40). Eastward, was observed by Sibthorp, and Chaubard, in the Peloponnesus.

"About this time" (Klapr. chrest. p. vii and 249), Aisin Gioro elected chief by Tungusi tribes associating along the Sounggari above its confluence with the Amour. The new nation received the name of "Mandchou."

Tombs covered at great expense with large stones, not uncommon in Daouria, are claimed by the Tungusi * as those of their ancestors — (Pall. trav. iv. 342). The Tungusi are further described by Pallas as having the face broader and more flattened than the Mongols, but their language manners and costume much resembling those of the Bouriates Mongols; their hair black and long, with very little beard.

Rhododendron chrysanthum of the mountains of East Siberia as far as Kamtchatka. A low shrub called by the Tartars "schei" tea, by the Koibales "kaschkara," by the Cossacks on the Upper Yenisei "sabyna-trawa," in Daouria by both natives and Russians "tchernogriff" or "kelarsk" (Pall.), and from early times employed medicinally: — observed by Steller, its leaves intoxicating a tame deer, and employed in consequence by his Russian servants to intoxicate themselves; observed also by Gmelin iv. pl. 54 in East Siberia; by Sokoloff, on the high mountains of Daouria; by Pallas iv. 532 and fl. i. pl. 30, on the mountains along the Upper Yenisei. Its medicinal properties are commended by Koelpin (Lindl.).

"In this year" (mission to Ava p. 79), ten Chinese envoys murdered at the Burmese court for insisting on wearing boots in the royal presence.

"1287 A. D." (Marco Polo, and Pauth. 360), Nayen commanding in Eastern Tartary, and who had been baptized a Christian, conspiring against his relative Khoubilai-Khan, and defeated by him in battle.

"March 18th" (Nicol.), a synod at Wurtzburg. "A levy of the tenth penny on all ecclesiastical property" was obtained by the pope.

"The same year" (Lubke and Lutrow), in Sweden, the cathedral at Upsal commenced; under a French architect, Estienne de Bonneuil.

"1288 A. D." (art de verif.), Gouda succeeded by Fusimi, cousin of "Fikakusa," and now dairo of Japan.

"Feb. 15th" (Nicol.), Honorius IV. succeeded by cardinal Jeronimo, now Nicolaus IV., thirty-fifth pope. Philip IV. le Bel ruling France; and Margaret ?, Scotland. — Under the pontificate of Nicolaus IV., "the commencement of the year at Rome was fixed at Easter."

Simeon de Cordo Januensis, physician to pope Nicolaus IV., at this time writing. He had visited Sicily and the Greek islands — (Spreng., and Pouchet).

Pimpinella dissecta of Western Europe. The saxifraga distinguished from the pimpinella by Simeon de Cordo, differing according to a proverb in having no hairs, — mentioned also by Matthæus Sylvaticus pand. 573 f. 162 (Spreng.), may be compared: the "saxifraga" of the drug-shops is described by Ruel iii. 85 as smoother than the "pampinule:" P. dissecta is described by Dodoens p. 315 (Spreng.); is known to grow in woods from Paris to the Mediterranean (Retz obs. iii. pl. 2, Thuill, and Thore), according to Lindley, the medicinal "effects as in P. saxifraga."

Pimpinella magna of Western Europe. Much resembling the preceding, — but regarded as distinct: described by Miller, and Linnæus; observed by Scopoli in Carniolia; known to grow from Denmark to the Mediterranean (fl. Dan. pl. 1155; Engl. bot. pl. 408, Jacq. austr. pl. 396), and

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* *Ribes procumbens* of Daouria. Called there "mochovaia smorodina," known from early times, — and observed by Pallas iv. 362.

Pyrus baccata of East Siberia. Called beyond Lake Baical "iablotchki," its fruit resembling a little apple and known from early times, — observed by Pallas iv. 142 abounding on the Selenga; known to grow also on the Schilka river of Daouria (Pers.).

Ulmus microphylla of East Siberia. A small tree called beyond Lake Baical "ilimovnik," and known from early times, — observed by Pallas iv. 143 abounding on the Selenga.

according to Lindley as far as "the Levant," its medicinal properties "similar in effect to P. saxifraga."

Potentilla recta of Europe and the adjoining portion of Asia. The seven-leaved quinquefolium of Simeon de Cordo of Genoa — is referred here by Sprengel: P. recta is termed "pentaphyllum malus" by Brunfels ii. 33, "quinquefolium rectum luteum" by Tournefort inst. 297; was observed by Sibthorp, and Gittard in Southern Greece; and is known to occur along walls and on the margin of cultivated ground in middle Europe (Jacq. austr. pl. 383, Crantz, Lam. fl. fr., Lap., and Pers.).

Imperatoria ostruthium of Northern Europe, and about mountains farther South. Called in Britain *master-wort* (Prior): the ostrutium of Simeon Januensis — is referred here by Rhodius comm. Scrib. Larg. 10: I. ostruthium is described by Anguillara p. 211; was received from Ferrante Imperato of Naples by C. Bauhin pin. iv. 1; is termed "i. major" by Tournefort inst. 317; and is known to grow along the base of the Alps from France to Austria, and in "moist meadows and woods" as far as the Baltic and Sweden (Pers., Koch, Fries, and Lindl.); but in Britain is regarded as not certainly indigenous (Blackw. pl. 279, Engl. bot. pl. 1380, Wats., and A. Dec.). Eastward, the "kumēnokarnavathin" of Maximus Planudes morb. may be compared: I. ostruthium was observed by Sibthorp in waste places on Cyprus. By European colonists, was carried to Madeira ( ); to Iceland (Wats.); and to Newfoundland, where it was observed by Pilaye (Dec.). According to Burnett, and Lindley, the umbels are flattish "eight or ten inches wide," and the root "acrid and bitter, it is used as a masticatory in toothache, and many writers speak well of it as a febrifuge." (See Saponaria officinalis.).

Blechnum boreale of Western Europe. Called in Britain *hard fern* from the rigid texture of the frond (Prior): the Citrium of Simeon Januensis — is referred here by Manardus: B. boreale is termed "waldt asplenon" by Tragus i. pl. 188, as observed by him in the woods of Germany; is known to grow also as far as Britain.

"Nov. 11th" (Nicol.), a synod at Saltzburg. "Forbidding the bishops to render homage to the lay lord of the province."

"In this year (= 687 A. H." of Ferisht., Elph.), Kei Kobad succeeded by Jelal-u-din, a Khilji "seventy" years of age and now eleventh sultan of Delhi.

"1289 A. D." (Garc. de la Vega), rebellion of the Chancas, the first in Peruvian history; the Chancas defeated in battle at Yuhuar-Pampa near Cuzco, and abdication of the fleeing Yahuarhuacac in favour of his son Ripac or Huira-cocha or Viraçocha, now eighth Inca of Peru.* — Viracocha added a province to the empire; and constructed a canal one hundred and twenty leagues long, to irrigate the province of Chinchasuyu. The mummy of Viracocha, "that of a very old man" (Markham edit: Ciez. p. li), and those of four other Incas were seen by G. de la Vega in 1560 in an apartment at Cuzco.

"1290 A. D." (art de verif.), Kalaoon succeeded by Khalyl, eighth Memluk sultan of Egypt.

"In this year" (Way ed. Pr. pm. 267), the Jews totally expelled from England by Edward I. In Italy (Lubke and Lutrow), building of the cathedral at Orvieto.

The same year = "1216 an. jav.," date of a Javan inscription in which "the descendants of Prabu" are mentioned — (according to the translation in Raffles append. 9).

"1291, May 19th" (Blair), the city of Ptolemais re-taken by sultan ..... : the finishing blow to the crusades.

"The same year" (Alst.), a synod in London. A decree, That no one should give estates to the priesthood, nor the priesthood be allowed to purchase without the king's consent.

"1292, March 17th" (Nicol.), a synod at Bremen. "Against those who imprisoned bishops."

"The same year" (Nicol.), a synod at Chichester. A statute, Forbidding "the depasturing of cattle in churchyards."

"In this year (= 691 A. H." of Ferisht., Elph.), invasion of the Punjab by Mogul Tartars repelled by sultan Jelal-u-din. On this occasion, "three thousand" of the enemy joined his standard, soon after embraced the Mahometan religion, and a place in the suburbs of Delhi was assigned for their residence — to the present day called Moghulpura.

"1293 A. D." (art de verif.), Khalyl succeeded by Beydarah; and after a single day, by Naser, tenth Memluk sultan of Egypt. Besides his mosque and tomb at Cairo, Naser built bridges, fountains, academies, and other works of public utility. A copper coin issued by him, is figured in Marcel p. 172.

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* *Porliera hygrometrica* of Western Peru. A rigid Zygophylloid bush, closing its leaflets on the approach of rain, and called in Peru "tūrucasa," employed medicinally from early times, — its properties being similar to those of guaiacum (Lindl.): observed by Ruiz and Pavon prodr. pl. 9 among rubbish in sunny situations in Peru (Pers.); and according to Lindley extending into Chili.

"From this year" (Blair), "a regular succession of English parliaments."

About this time, or according to some writers, four centuries earlier (Blair), the "motion of trepidation" or the *variation of the sun's declination*, discovered by the Arabian astronomer Thebit-ben-Corah.

The following plants known from early times to the natives of Florida, *Platanthera ciliaris* their "rattle snake's master," the root employed both internally and externally.

Of the fragments of pottery, arrow-heads, and other implements of stone and bone in the rubbish-heaps of Florida, some as early probably as this date.*

Quercus virens of Carolina and the Lower Mississippi. The *live oak*, a large tree growing in the vicinity of the sea, known to the natives from early times: — "evergreen oaks" were seen by Cabeza de Vaca on the North shore of the Mexican Gulf: Q. virens was observed by Catesby i. pl. 16, and Elliot, in Carolina; by F. A. Michaux, from Lat. 37° to 30° and along the Gulf to and beyond the mouths of the Mississippi; by Darby, not North of 30° 22′ on the Lower Mississippi, nor West of the Sabine; by N. A. Ware, and Chapman, in Florida; and by Bartram, as far as 28°. Its timber is highly valued for ship-building.

Yucca aloifolia of the seashore from North Carolina to Florida and Vera Cruz. The generic name aboriginal, — but the plant called by colonists *Spanish bayonet* (A. Gray): Y. aloifolia is known to grow near Vera Cruz and on Jamaica (Pers.); was observed by Baldwin at 29° in Florida; by

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* *Andromeda* (*Leucothoe*) *acuminata* of Carolina and Florida. A shrub with a hollow stem, from early times "used by the natives for making their pipe-stems" — (Pursh): observed by Bartram catal., and Michaux, in Florida; by Walter, and Elliot, in Carolina; by Schweinitz, and Curtis, as far North as 36°.

Zamia pumila of Florida. The *coontie* is a low palmetto-like plant, its trunk yielding the "kun-ti hat-ki" white bread, prepared by the Seminoles from early times — (Fontaneda transl. B. Smith, and Laudonn.): Z. pumila was observed by Baldwin, and N. A. Ware, commencing at Lat 30°; by Chapman, in "low grounds South Florida," and *Florida arrow root* procured from its trunk; is known to grow also in Domingo (Pers.). Transported to Europe, is described by the younger Linnæus, and Jacquin rar. iii. pl. 635. The Zamia of the Bahamas, furnishing according to Lindley "one of the best kinds of arrow root," may be compared.

Smilax pseudo-china of Carolina and Florida. Called on the Roanoke "tsinaw" (Hariot), and from early times bread made by the natives from its tuberous rootstock; also in Florida, the "kun-ti tsah-ti" red bread of the Seminoles — (B. Smith edit. Fontan.): S. pseudo-china was observed by Sloane i. pl. 143 on Jamaica (Pers.); by Chapman, in "woods and thickets, Florida, and Northward;" by Walter 245, and Elliot, as far as the Santee; and the "tsinaw" of the Roanoke is described by Hariot as the root of a briar similar to china-root used for making bread (De Bry i. 17). Transported to Europe, is described by Plukenet alm. pl. 110 (Lindl.).

Pachyma cocos of the alluvial Atlantic border of North America. The *tuckaho* is a large hard-crusted fungus growing underground in sandy pine-barrens; and a root like the truffle and sweet, eaten from early times by the Seminoles, — is mentioned by Fontaneda: the "okeepenauk," a round root as large as a man's head, found by Hariot eaten crude by the natives on the Roanoke (De Bry i), may also be compared: and the "tockowhough" of the natives on James river is enumerated by Strachey: P. cocos is described by Schweinitz, as observed by him in Carolina; and is known to grow as far North as 40° in peninsular New Jersey.

Pinus tæda of Carolina and the Lower Mississippi. The *loblolly* or *old-field pine*, a lofty tree, known to the natives from early times, — and probably the "pines" seen by Cabeza de Vaca on the North shore of the Mexican Gulf: "abietes" large and lofty for masts of ships, were seen by Hariot on the Roanoke: P. tæda was observed by F. A. Michaux from Lat. 38° throughout the maritime portion of North Carolina; by Pursh, from Virginia to Florida; by Elliot, in South Carolina and Georgia; by Chapman, in Florida, having "valuable but sparingly resinous wood;" by Darby, on Pearl river, and to Lat. 30° on the Mississippi.

Sabal Adansoni of Carolina and the Lower Mississippi. The *dwarf palmetto*, known to the natives from early times; — clearly the "dwarf palmettos like those of Castile" seen by Cabeza de Vaca on the North shore of the Mexican Gulf, and the "palmitoes upon low palm trees like those of Andaluzia" seen by De Soto in Florida: S. Adansoni is termed "chamærops acaulis" by Michaux i. 207; was observed by Elliot on the sea-islands of Carolina and Georgia; by N. A. Ware, in Florida; by Chapman, "in the lower districts, Florida to North Carolina," its "stem short, buried in the earth;" by Nuttall, not North of 33° on the Mississippi; and by Darby, in Opelousas. Transported to Europe, is described by Guernsent soc. philom. lxvii. pl. 25, and Jacquin hort. iii. pl. 8 (Pers.).

Chapman, in "sands along the coast, Florida to North Carolina," its palm-like trunk "four to eight feet high." Transported to England, its introduction is recorded by Gerarde; the plant is described also by Parkinson, C. Commelyn, and Dillenius elth. pl. 324; was observed by Clot-Bey in Egypt, under cultivation by European residents; and has recently been introduced into Hindustan (Lush, and Graham).

In this year (= "Jan. 8th, 1305 — 2d — 11 years" in litt., Yule cath. 197), arrival at Pekin of the first Catholic missionary, John of Montecorvino. He was treated with great respect, — built churches, and remained until his death in 1328 (= "1336 — 8 years" in litt. emb. Chin., Yule 314).

"Towards the close of the Thirteenth century" (Pouchet), the earliest treatise on *hunting* issued. — The "Livre du roi Modus" followed, written in the first part of the Fourteenth century.

"1294, March 9th" (Nicol.), a synod at Saumur. A statute, Prohibiting "the imposition of pecuniary penalties in confession."

"July 5th" (Alst., and Nicol.), Nicolaus IV. succeeded by Peter de Morone or Celestinus V.: who, abdicating and retiring into a monastery, was succeeded "Dec. 24th" by cardinal Benedict Gaetano, now Bonifacius VIII., thirty-seventh pope. Adolphus of Nassau ruling Germany and Italy; and John Baliol, Scotland.

"In this year (= 693 A. H." of Ferisht., Elph.), Ala-u-din, nephew of sultan Jelal-u-din, proceeding Southward with an army "about seven hundred miles" unexpectedly fell upon Deogiri (Dowlatabad), defeated the Mahratta king Ramdeo, and compelled a ransom and cession of territory.

From China returning by sea, Marco Polo 166 visited "Cianba" (Tsiompa); and Java, where the Muslims had introduced their religion. He also speaks of the Greater Java (Sumatra?), regarded by mariners as "the largest island" in the world; of "Necuveran" (Nicobar Islands) where the people go naked and have no king; of "Angaman" (Andaman Islands); and of the "Cariaines which is spread over Ava" (the earliest historical notice of the *Karens*, according to Mason in beng. as. soc. vii.).

On reaching "Seilan" (Ceylon), Marco Polo 178 found "Adam's Peak" of the Saracens called "the monument of Sergamon Borcam" by the Idolaters. In Hindustan, he saw peacocks "d'autre faison qe ne sunt les notres" (*Pavo cristatus*): and ascertained, That ships from China came to "Mellibar;" and merchandise was carried thence Westward to Alexandria (l. c. 157, 183).

On Arab authority, the home of the legendary bird "ruc" is placed by Marco Polo 191 on "Madeigascar" (evidence, that the fossil *gigantic bird-eggs* occurring there were already known). This island and "Zanghibar" were the principal seat of the trade in *elephants' teeth* (brought of course from Interior Africa). The people of the former island were Muslim, and of the latter, all Idolaters (a statement which seems to imply, that the Arabs had not as yet occupied Zanzibar). — Continuing his return Westward, Marco Polo reached Europe in "1295."

"The same year" (Yule cath. I. 87), date of an inscription on Java by Uttungadewa, claiming to be sovereign over the whole island, having subjected "five kings." About this time an envoy from Khoubilai demanding homage and tribute insulted and sent back! — an avenging expedition by the Chinese was repelled (Yule, and Odoric 21).

"1295 A. D. = 'youan-tching,' 1st year of" Timour-Khan or "Tching-tsoung, of the Youan" or Twenty-second dynasty — (Chinese chron. table).

"July 19th (= 695, Ramzan 17" of Ferisht., Elph.), Jelal-u-din succeeded by his nephew Ala-u-din, now twelfth sultan of Delhi. — One of his maxims was, That religion has no connection with civil government.

"The same year" (.... rudim. chron. Lond.), *letters of marque* first granted to privateers. By Edward king of England, against the Portuguese.

1296 A. D. (= "1221 an. jav.," Raffles x.), in Java, Raden Tanduran son of Munding Wangi and lawful heir finding himself excluded from the government, left New Pajajaran and proceeding Eastward founded Majapahit. Here he was joined by adherents enough to establish a rival kingdom, — and war ensued with his half-brother Chiong Wanara.

"In this year" (Lubke and Lutrow), the cathedral at Florence commenced.

"In this year" (transl. in mel. Remus. iii. 102), visit of a Chinese official to Tchin-la or Cambodia.* He found there men versed in astronomy, who predicted eclipses both of the sun and moon,

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* *Nageia Japonica* of Japan. Called there "yamamomo," and furnishing perhaps the wooden combs enumerated by the Chinese official as imported into Cambodia from China: — its wood used in Japan for making these implements (Thumb. trav.); and its bark, in the process of dyeing (Jap. centen. comm. 31 and 80): N. Japonica is described also by Kaempfer amoen. v. pl. 874.

Cymbidium striatum of Japan. The "jonc appelé lan" enumerated by the Chinese official as

but by a different method from the Chinese. Of three religions, Budhism was the most flourishing; the other two are described as peculiar. The natives did not bury their dead, but exposed them to beasts and birds of prey; the custom of burning the dead being confined to the descendants of Chinese emigrants.

Soja hispida of Japan. Enumerated by the Chinese official 141 as unknown in Cambodia: — "miso" beans are mentioned in 1444 in the annals of the Japanese emperors (transl. Tits. and Klaproth); were observed by Kaempfer v. 837, and Thunberg, under frequent cultivation near Nagasaki and elsewhere; are known to be made into the condiment called "soia" (Pers.) in English *soy;* also into a white porridge in general use among the Chinese and called by them "teu hu" or "tauhu" (Loureir.). Westward, S. hispida was observed by Mason in Burmah; by Roxburgh, and Graham, in the gardens of Hindustan. Transported to Europe, is described by Jacquin rar. pl. 145.

Garcinia elliptica of the Siamese countries. One of the two trees yielding *gamboge* and called in Burmah "tha-nat-dau" (Mason): the "kiang-hoang" resin found according to the Chinese official among trees in Cambodia — is referred by Remusat to the "hoang-kiang" or gamboge: the "ossareh-rewund" rhubarb-juice of Persian medical writers, is also referred here by Royle: G. elliptica, described by Wallich, is regarded by Mason as probably a species growing South of the Tavoy river in Burmah and ascertained by him to yield gamboge. In Europe, gamboge was first made known by Clusius, who "in 1603" received specimens by the way of Amsterdam from China (Pereir.): its use as a pigment and medicine has since become general, and specimens were seen by Rouyer in the drug-shops of Egypt.

Urtica (*Boehmeria*) *nivea* of Subtropical China and Japan. *China-grass* or *nettle-hemp* is called in Bengal "kunkhoora," in Assam "rheea" (Royle), in Burmah "gwon" (Mason), and in Malay "ramee" (. . . .): the "tchu" was unknown in Cambodia when visited by the Chinese official; — the "tchou-ma" of the Imperial treatise on Agriculture lxxviii. 3 is referred here by Stanislas Julien, is mentioned also in the Nong-tching-tsiouen-chou general treatise on Agriculture: B. nivea is described by Rumphius v. pl. 79; was observed by Loureiro in Anam and China, often cultivated;

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unknown in Cambodia, — is referred here by Remusat. C. striatum was observed by Thunberg pl. 9 in Japan.

Nephelium litchi of Cambodia and the Philippines. A tree called in Tagalo "alpai" or "alipai" or "alupai" or "lechias" (Blanco); and the "li-tchi" fruit of Cambodia was found by the Chinese official agreeing in shape with that of China but sour: — the "plums" met with on the Philippines by Mendoza are referred to the li-tchi by Navarrete, who found trees wild on the Batam mountains near Manila, the fruit inferior to that produced in China, where it is accounted "queen of fruits;" N. litchi was observed by Blanco wild on the Philippines, and a variety resembling that of China growing on mountains; by Loureiro, in Anam; by Nieuhoff, Osbeck, and Sonnerat pl. 129, in these or the neighbouring countries. By European colonists, was carried to Burmah, where according to Mason v. 448 the trees "bore their first fruit last year;" to Bengal, where it has been successfully cultivated (Mason); to the environs of Bombay, observed "in gardens" by Graham; to Zanzibar, brought it was said in "an American ship from Sumatra," the trees at the time of my visit bearing fruit.

Citrus torosa of the Philippines. The *double-leaved citron* is called in Burmah "shouk pouk" (Mason), in Tagalo "suha" (Blanco); and the orange of Cambodia was found by the Chinese official agreeing in shape with that of China (C. aurantium) but sour: — C. torosa was observed by Blanco frequent in woods on the Philippines, the petiole wider than the leaf, the fruit exceedingly acid and not eaten, one variety called "colobot" used by the natives in bathing; was observed also in the environs of Manila by Mr. Rich; by Mason v. 453 to 760 "exotic" in Burmah, cultivated as far North as Tavoy Lat. 14°, its fruit small, one variety "with a smooth, and another with a rough skin." Eastward from the Philippines, a "wild orange suitable for making lemonade" was observed by Labillardiere on Waygiou (near New Guinea); C. torosa was observed by myself on the Feejeean and Samoan Islands, aboriginally introduced and now naturalized, a low tree with orange-like fruit, but two-thirds of the diameter rind, the contained pulp intensely acid and found by Mr. Rich used by the natives in "washing their hair," the leaves in drying separate from the stem and also become disjointed.

Jasminum arborescens of Tropical Eastern Asia. A small tree with large white fragrant flowers called in the environs of Bombay "koond" (Graham); and the "jasmin des Indes" enumerated by the Chinese official among the fragrant flowers worn by the king of Cambodia, — may be compared: J. arborescens is termed "nyctanthes grandiflora" by Loureiro, as observed by him in Anam. Westward, is described by Roxburgh i. 95; was observed by Lush in the vicinity of Bombay, at "Dapooree, introduced from China" (Graham).

by Mac Gowan, around the "base of hills from Cochinchina to Yellow river" (Royle fibr.); by Kaempfer, and Thunberg, growing abundantly in Southern Japan; by Blanco, frequent in Northern Luzon; is known to occur on Celebes and Borneo, and its fibres are exported from Sumatra; according to Mason v. 519, is "exotic" in Burmah, cultivated around Ava and recently in Tavoy; was observed by Roxburgh, Royle, and Wight, under cultivation in Hindustan, the fibres according to Lankester "second to none in strength and beauty" are "used throughout the East for making textile fabrics" (Drur.). Transported to Europe, was thence according to Clot-Bey introduced by the way of France into Egypt, where it is now successfully cultivated.

"1297 A. D." (Nicol.), a synod at Constantinople. Respecting an anathema pronounced by the patriarch Athanasius against the emperor.

"In this year (= 697 A. H." of Ferisht., Elph.), by Sultan Ala-u-din of Delhi, Guzerat conquered, and now placed under Muslim government.

"The same year" (rudim. chron. Lond.), in England, king Edward compelled to a solemn confirmation of Magna Charta; with the addition, That no *tax* shall be levied without the consent of the knights, citizens, and burgesses, assembled in parliament. Regarded as the origin of the present constitution of parliament.

"1298 A. D." (Blair), on the Asiatic side of the Bosphorus in Bithynia, the Greek armies defeated by Osman or Othman. Regarded as the beginning of the Turkish empire; a new phase in the progress of the Muslims.

"Before the close of the 13th century (= a patrum memoria" of Petrarch, Major edit. Bethenc.), Lancerote, one of the Canary Islands, visited by Lancelote Malocello, a Genoese. A castle said to have been built by him — continued extant in the days of Bethencourt 32.

Plocama pendula of the Canary Islands. A. Rubiaceous plant called in Guanche "balo" (Webb), and known from early times. — Transported to Europe, described by Aiton i. 292, and Gmelin syst. 390 (Pers.).

Buphthalmum . . . . sp. of the Canary Islands. Called there "joriada" (Webb), and known from early times. B. sericeum, with a tree-like trunk, — is known to grow on Teneriffe (Pers.): and from transported specimens is described by the younger Linnæus.

Canarina campanula of the Canary Islands. A sort of bell-flower called in Guanche "bicacaro" (Webb), and known from early times. — Transported to Europe, is described by Plukenet alm. pl. 276, and Linnæus.

Visnea mocanera of the Canary Islands. Called in Guanche "mocan" (Webb), and known from early times; — growing in mountain woods (Pers.). From transported specimens, described by Linnæus the younger, and Jussieu.

Convolvulus floridus of the Canary Islands. A shrubby prostrate species full of beautiful flowers, called in Guanche "guaydil" (Webb), and known from early times: — growing on the rocks of Teneriffe (Pers.). Transported to Europe, is described by Linnæus the younger, and Jacquin pl. 34.

Digitalis Canariensis of the Canary Islands. Called there "nota (gnota)," and known from early times — (Webb). Received from the Canaries (Pers.), is described by Plukenet alm. pl. 525, Commelyn hort. ii. pl. 53, and Linnæus.

Cneorum pulverulentum of the Canary Islands. Called in Guanche "orixama" (Webb), and known from early times: — growing on Teneriffe (Pers.). Transported to Europe, described by Linnæus, and Ventenat hort. cels. pl. 77.

"1299 A. D." (art de verif.), Fusimi succeeded by his son Fusimi II. or Go-Fusimi, now at the age of eleven dairo of Japan.

"The same year" (Nicol.), a synod at Constantinople. Convened by the emperor Andronicus II., To annul the marriage of his nephew. The marriage was notwithstanding declared valid.

Corchorus capsularis of Tropical Eastern Asia. An annual erect plant eaten as a potherb like C. olitorius, and having the same Sanscrit name "putta," called in Bengalee "put" (Royle) or "ghinalita pat" (Drur.), in Tagalo "pasao na bilog" (Blanco); and the καψικον, so called according to Actuarius from its involved capsules, and employed by him medicinally — (Ruel ii. 5), may be compared: C. capsularis was seen in Hindustan by Rumphius v. pl. 78; by Graham, "common in Bombay, springing up in gardens and cultivated grounds," by Nimmo farther North and South "in both Concans;" by Wight, in other parts of the peninsula; and by Roxburgh, and Royle, extensively cultivated especially in Bengal for its fibres called *jute*, of which gunny bags are made. Farther East, by Mason v. 521 "a common weed" in Burmah, enumerated as indigenous; is known to be cultivated in China; and was observed by Blanco on the Philippines. Transported to Europe, is described by Plukenet alm. pl. 255.

"1300 A. D." (Alst., and Nicol.), the "jubilæum" instituted by pope Bonifacius VIII. Commencing the year "at Christmas, which custom was followed by nearly all his successors in the Fourteenth century" (see above).

"As early as this date" (German archæologists, and Bryan dict. paint.); *playing-cards* in use in Europe.

"In or about this year" (Velasco, and Markh. edit. G. de la Vega ii. p. 348), Caran succeeded by Duchicala now twelfth scyri of Quitō.

One hundred and sixty-eighth generation. Jan. 1st, 1301, onward mostly beyond youth: the Persian writer Munsur Mohammed wr. 1300 (Ainsl.): the Jewish writers, Isaac Israeli ben Joseph, Jacob ben Machir, Esthori Parchi, Isaac Lattas ben Jehuda, Kalonymos, Benjamin ben Jehuda: the Greek writers, Manuel Philes, Nicephorus Callistus d. after 1327, Thomas Magister d. 1310, Pachymeses d. after 1310, Maximus Planudes d. after 1327: Marsilius Patavinus, Dante: Nicolaus Alexandrinus; Bernard de Gordon; Ermengaud Blasius: the scholastic theologians, J. Duns Scotus, Augustinus de Ancona, Alanus, Petrus Aureolus, Antonius Andreæ, Durandus a. s. Portiano, Hervæus Natalis, and Franciscus Mayronis: the botanists, Albertus de Saxonia, and Petrus Apono d. 1314 (Pouch.): the painter Giotto d. 1336.

"The same year" (Schouw. xii.), a lava-stream issuing on the isle of Ischia in the bay of Naples.

"In or about this year" (Steinschneid. ii. 12), short dissertations by various celebrated Christian writers, translated into Hebrew by Jehuda ben Moses of Rome; to show his brethren, "That the Christian nation is not destitute of all true science."

"In this year (= 5th of the 'ta-tĕ' of the Yuan dynasty," geogr. Chin. transl. Klapr.), a military government together with a naval station established on Tan-lo or Quelpaerts Island.

"1302 A. D." (art de verif.), abdication of Fusimi II. in favour of Nidsio II. or Go-Nidsio, eldest son of Gouda, and now dairo of Japan.

"Apr. 10th" (Nicol.), a synod at Paris. Convened by Philip IV. le Bel, who had imprisoned the bishop of Pamiers; On a Bull "in favour of that prelate" sent by pope Bonifacius VIII.

"Oct. 30th" (Nicol.), a synod at Rome. Philip IV. le Bel was threatened by the pope. And the decretal "Unam Sanctam" was composed; tending to prove, "That the pope possesses the right of appointing, correcting, and deposing sovereigns."

"1303, March 12th" (Nicol.), a synod at Paris: and the pope "accused of heresy, simony, and other crimes." In another synod "June 13th," the accusation was repeated; and "before September," upwards of "seven hundred acts of appeal, consent, and adhesion, from ecclesiastical bodies, bishops, and others" were obtained by Philip IV. le Bel.

"In this year" (Markham edit. note p. 92), the city of Sultanieh in Persia founded by Mohammed Khodah Bundah, of the house of Jenghiz and the first Persian ruler of the sect of Ali.

Periploca Græca of the Tauro-Caspian countries. A woody-stemmed climber called in Greece "galaxitha" (Sibth.), by the Russians "svidina," and known from early times, — observed by Sokolof along the Kouma within sight of Caucasus (Pall. trav. v. 218); by Sibthorp, in hedges in Bithynia and on mount Athos; is known to occur also in Syria (Pers.). Transported West, is described by Gesner, Matthioli, Lobel, Camerarius, C. Bauhin, and Tournefort inst. 93. Was observed by Osbeck on the seashore near Canton; and clearly by European colonists was carried to Northeast America, where escaping from cultivation it has been observed by myself seemingly wild near Salem, and according to A. Gray also "near Rochester" N. Y.

"Aug. 16th (= 3d moharram A. H. 733" of Abul Fazl, Orient. transl. lond.), the fortress of Chaitur captured by sultan Ala-ad-din of Delhi. "The non-military inhabitants having refrained from taking any share in the defence, were permitted to remain secure from slaughter." Ferishta places the event in "A. H. 703" = 1303 (Elph.).

"Oct. 22d" (Nicol.), Bonifacius VIII. succeeded by cardinal Nicolas Bocasi, now Benedictus X., thirty-eighth pope. Albertus of Austria ruling Germany and Italy. The dispute with Philip IV. le Bel, was amicably terminated by pope Benedictus X.

"1304 A. D." (Crawfurd vii. 11), the island of Ternate visited by Javanese and Malays to procure *cloves*, and many of them settle there.

"1305, June 15th" (Alst., and Nicol.), after an interval of "eleven months," Benedictus X. succeeded by Bertrand de Goth archbishop of Bordeaux, now Clemens V., thirty-ninth pope.

"Sept. 15th to Oct. 5th" (Nicol.), a synod in London. Convened by king Edward, "To consider the means of establishing a lasting peace between England and Scotland."

The writings of Arnoldus de Villanova condemned to be burned by the Inquisition at Tarragona, but accepted and praised by pope Clemens V. — (Pouchet). Arnoldus died "in 1312."

Dianthus carthusianorum of Europe and the adjoining portion of Asia. A *pink* included in the tunica herba of Arnoldus, — and others (Fuchs., and Caesalpinus vi. 44): D. carthusianorum is described by Brunfels ii. 58, and Fuchsius pl. 352 (Spreng.); is termed "caryophyllus sylvestris vulgaris" by Tournefort inst. 333; and is known to grow from 55° in Russia as far as France, but not in the more humid climate of Scandinavia and Britain (Vill., All., Scop., and A. Dec.); was observed by Sibthorp around Constantinople and on the Bithynian Olympus; by D'Urville, in the

Crimea; and is known to grow from Caucasus to the mouth of the Ural (C. A. Mey., Sokoloff, and Ledeb.).

Dianthus superbus of middle Europe. Called in Germany "wild negele," and included in the "tunica herba" of Arnoldus, — and others (Fuchs. pl. 353, and Spreng. comm. D. iv. 1): known to grow from Denmark throughout middle Europe (fl. Dan. pl. 578, Lam. fl. fr., and Pers.).

Solidago virgaurea of Northern climates. Called in Britain *golden-rod* (Prior), and the Virga aurea of Arnoldus — is referred here by Dalechamp and others: S. virgaurea is termed "virga aurea latifolia serrata" by Tournefort inst. 484; is known to grow throughout middle and Northern Europe as far as Lapland (flor. Dan. pl. 663, Engl. bot. pl. 301, and Wats.). Eastward, was observed by Sibthorp on the Bithynian Olympus and in the environs of Smyrna; by Hasselquist, on the Mediterranean border of Egypt; is known to grow on Caucasus (Bieb.) and throughout Siberia (Wats.); was observed by Thunberg in Japan, called "tojakf" or "senbli" or "senbuli" and used medicinally. Farther East, is known to grow in Ilaska (Wats.) and throughout Canada; was observed by Colmeister in Labrador (Pursh), and by myself along the Lower St. Lawrence and on the White mountains.

"1306 A. D. (= 706 A. H." of Ferisht., Elph.), by sultan Ala-u-din, Malik Cafur sent with an army against Deogiri (Dowlatabad) and the Mahratta king Ram Deo, in the course which the Caves of Ellora are first mentioned. Ram Deo came out of his fortress, accompanied Cafur to Delhi where he was received with favour, and returned loaded with honours.

"In this year" (Humb. cosm. iv.), the triangular configuration of Southern Africa * represented in the map of the world by Marino Sanuto Torsello, — also in the Genoese Portulano Mediceo "1351," the Planisferio de la Palatina "1417," and the Mappa-mondo of Fra Mauro Camaldolese "1457-9," known therefore in Europe "178" years before the actual circumnavigation by B. Diaz in "May 1487." (The information probably obtained from Arab navigators on the Indian Ocean).

"In this year" (F. Mason ii. 26), in Burmah, Magadu or Wayærau king of Martaban, assassinated. He was succeeded by his brother Krunglau: — during whose reign of four years, the city of Maulmain is first mentioned.

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* *Cestrum venenatum* of Austral Africa. A large woody bush; — said to be employed by the Hottentots to destroy wild beasts by impregnating baits of flesh with its juice; a decoction of the bark reduced to the thickness of jelly, used by them to envenom their arrows (Thunb. fl. 193, and Lindl.).

Brunsvigia toxicaria of Austral Africa. An Amarylis-like plant; — the viscid juice of the bulbs a dangerous poison, one of the ingredients used by the Bushmen to envenom their arrows, and supposed to add most powerfully to the activity of the poison (Patters. trav. pl. 1, Thunb. trav., and Lindl.). As transported to Europe, the plant is described by Ker bot. reg. pl. 567, and Aiton i. 405.

Sideroxylum toxiferum of Austral Africa. Besides the venom of serpents, a third plant whose juice is used by the Hottentots for poisoning arrows — (Thunb. trav. iii. 1).

Curtisia faginea of Austral Africa. Employed by the Hottentots for the shaft of their javelins, which are pointed with iron — (Thunb. iii. 4, and Soland.).

Cyperus textilis of Austral Africa. Fine mats made of rushes, and principally of this plant, by the Hottentots — (Thunb.).

Restio dichotomus of Austral Africa. Employed by the Hottentots for making brooms and thatching dwellings — (Thunb.). From transported specimens, described by Linnæus, and Rottboell pl. 2.

Roridula dentata of Austral Africa. Placed in dwellings for the purpose of catching *flies* — (Thunb.): described also by Burmann. And from transported specimens, by Linnæus.

Among the woods suitable for making implements, *Cunonia*, *Trichilia Capensis*, *Curtisia*, *Olea verrucosa*, *O. Capensis*, *Gardenia Thunbergia*, *G. Rothmannia*, *Royena villosa*, *Virgilia Capensis*, *Protea grandiflora*, *P. barbata*, *Brabejum stellulifolium*, and *Ilex crocea*, — are enumerated by Thunberg.

Mimosa Capensis of Austral Africa. Furnishing charcoal — (Thunb.).

Caroxylon salsola of Austral Africa. An irregular leafless shrub six feet high, growing throughout the Karro, and used as a substitute for soap — (Thunb., and Pers.). From transported specimens, described by the younger Linnæus suppl. 173.

Carissa arduina of Austral Africa. A thorny shrub called "gatagay," the berries said to be eaten by the Hottentots, — the root also eaten in Austral Africa (Thunb.). Carried to Hindustan in 1837 by A. N. Shaw (Graham): and as transported to Europe, described by Miller pl. 300, and Linnæus.

Umbellif. incert. of Austral Africa. An Umbelliferous plant called "gli" by the Hottentots, who obtain from the root, mixing honey, a sort of mead that induces intoxication — (Thunb.).

Euphorbia genistoides of Austral Africa. When eaten, induces retention of urine — (Thunb.). From transported specimens, the plant is described by Linnæus.

"1307 A. D." (Blair), beginning of the association of the Swiss cantons.

"The same year" (Nicol.), a synod at Sis in Armenia. "To cement the union between the churches of Armenia and Rome."

"The same year" (Alst.), end of the chronicle of Siffridus Presbyter.

"1308 A. D. (ann. Jap., and art de verif.), Nidsio II. succeeded by Fannasono, younger brother of Fusimi II., and now ninety-fourth dairo of Japan.

"The same year = 'tchi-ta,' 1st year of Wou-tsoung, of the Youan" or Twenty-second dynasty (Chinese chron. table). By order of Wou-tsoung, the Hiao-king of Confucius, a treatise on filial piety, was translated into the Mongul language — (Pauth.).

The power of the Lamas and *Lamaism* increasing in China: a religion "founded on the idea of the continued incarnation of Budha in the person of the Grand lama" — (Remusat, and Pauth. p. 367 and 378). In regard to the forms of the religion, Huc and Gabet found the Budhists coinciding with the Catholics in the "crosier, mitre, dalmatica, cope or pluvial, double-choired liturgy, psalmody, exorcisms, censer, benedictions, rosary, ecclesiastical celibate, spiritual retreats, worship of saints, fasts, processions, holy water." (H. Yule in soc. Hakl.).

"The same year" (Alst., Blair, and Nicol.), removal of the French pope Clement V. from Rome to Avignon in France. And Albertus of Austria succeeded by Henricus VII., as emperor of Germany and Italy. — Avignon continued the seat of the papacy "seventy" years.

"In this year" (Danish chron., and Relat. du Groenl. 205), fearful thunder in Greenland and a church called Skalholt burned by lightning, the storm accompanied with "broken rocks" and great quantities of ashes (the result apparently of some volcanic eruption).

"1309 A. D." (Wilford as. res. ix. 178), end of the Vansavali, a list of the kings of Guzerat.

The aboriginals of Virginia "conceaved not to have inhabited" the low country below the falls of James river "much more than three hundred years" (Strachey 33); and some of the fragments of pottery, as well as arrow-heads and other implements of stone or bone contained in rubbish-heaps on tributaries of the Chesapeake and Delaware, as early probably as this date.*

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* *Liriodendron tulipifera* of Northeast America. The *tulip-tree*, improperly called "poplar" or "white poplar," known to the natives from early times: — the "white-poplar" was seen by Strachey on James river: L. tulipifera is known to grow from the Connecticut river and 44° on Lake Champlain (F. A. Mx., and Eat.). Westward and Southward; has been observed by myself along the Atlantic as far as 39°; by Catesby i. pl. 48, in South Carolina, and by Chapman in "low grounds Florida," though according to F. A. Michaux rare in the maritime portion of Carolina, Georgia and Florida: by myself abounding on the Ohio and Wabash; by Nuttall, not on the Arkansas nor lower down the Mississippi than 35°; but was seen by Darby on the Washita and at Baton Rouge. Transported to Europe, is described by Hermann lugd. 613 (Spreng.), Trew, and Miller; and by European colonists, was carried to Madeira (A. Dec.).

Podophyllum peltatum of Northeast America. The *may-apple* is a vernal woodland herb, its fruit eaten from early times: — "certaine ground aples a pleasant fruite" were seen by Newport on James river; and the "mandrake" is enumerated by Josselyn 2d voy. 77 as "very rare" and "found in the woods about Pascataway:" P. peltatum is known to grow as far as 44° along the Atlantic and 46° on the St. Lawrence (Hook.); has been observed by myself from 43° to 38°; by Elliot, in South Carolina; by Chapman, in "Florida and northward;" by Nuttall, on the Arkansas; by Beck, near St. Louis; and was received by Hooker from Lake Huron. Transported to Europe, is described by Trew pl. 29.

Sanguinaria Canadensis of Northeast America. The *bloodroot*, another vernal woodland herb, is sometimes called by the Virginia natives "puccoon" (Clayt.), but "musquaspenne" — as heard by Strachey, who describes its root as of the bigness of a finger and red as blood, withering in drying to almost nothing, but used by the natives on James river to paint mats and other articles: S. Canadensis is known to grow "throughout Canada" (Hook.), from at least 47°; has been observed by myself along the Atlantic from 43° to 38°; by Schweinitz, at 36°; by Catesby i. pl. 24, and Elliot, in South Carolina; by Michaux, from Canada to Florida; by Chapman, in "Florida and northward," and by Croom as far as 30° 30'; by Nuttall, on the Arkansas, and by E. James at the lead mines of Missouri. Transported to Europe, is termed "chelidonium maximum Canadense" by Cornuti 212.

Batschia canescens of the Ohio and its tributaries. The *puccoon*, called by the natives on James river "pocones," "a small roote that groweth in the mountaines," dried and used medicinally as well as to paint their heads and garments — (Strachey): B. canescens is termed "anchusa floribus sparsis caule glabro" by Gronovius p. 24 as seen by Clayton in Virginia; was observed by Michaux on the Tennessee; by Elliot, in the upper district of Carolina; by Nuttall, and Pitcher, on the Arkansas; and according to A. Gray grows from Western New York to Kentucky and Wisconsin.

Batschia Carolinensis of Northeast America. An allied species — not known to be used for

Robinia pseudacacia of the tributaries of the Mississippi, from the Alleghanies Westward. The *American locust*, a tree known to the natives from early times, and perhaps in some instances planted by them: — Strachey on James river met with a "kind of low tree" bearing a "cod-like pease,"

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dyeing; observed by myself from Lat. 40° along the Atlantic, but full "thirty miles" from the sea, as remarked by Elliot in Carolina; is known to grow in Virginia (A. Gray); was observed by Walter, and Michaux, in Carolina; by Chapman, in "dry pine barrens, Florida to South Carolina;" by Nuttall in Arkansas; and according to A. Gray, grows in "dry woods, Michigan to Wisconsin." From transported specimens, is described by Morison iii. 11. 28. 4, and J. F. Gmelin syst. ii. 315.

Carya amara of Northeast America. The *bitter-nut hickory* known to the natives from early times: — a kind of "walnutt" with "fruit little, thin-shelled, and the kernel bitter," was seen by Strachey on James river: C. amara, by myself from the Merrimack Westward; by F. A. Michaux from 45° in Vermont throughout Ohio and Illinois; by A. Gray, "common" (in central New York); by Pursh, from New England to Maryland and the Alleghanies; by Elliot, in South Carolina; by Chapman, in "Florida, and northward;" by Darby, on Pearl river in Louisiana; and by Nuttall, on the Arkansas.

Carya tomentosa of Northeast America. The *hickory*, known to the natives from early times: — "walnut" growing on the Hudson and "good for fuel," is enumerated by the remonstrants against Stuyvesant: C. tomentosa was observed by F. A. Michaux from Lat. 43° on the Atlantic throughout Kentucky and Tennessee to Upper Carolina and Georgia; by myself, to 39°; by Pursh, in Virginia; by Croom, near Newbern; by Elliot, in South Carolina; by Chapman, in "rich soil, Florida, and northward;" by Darby 178, at 31° on Pearl river in Louisiana; by Nuttall on the Arkansas; and by Baldwin, as far as 39° on the Missouri.

Carya alba of Northeast America. The *shell-bark hickory*, a tree with scaling bark, its nuts eaten by the natives, and oil obtained from them to season their aliments — (F. A. Mx.): "two kinds of nuts that will yield oil," were seen by Hariot on the Roanoke (De Bry i.); a kind of "walnutt" with hard shell, meat sweet, of which the Indians make oil, was seen by Strachey on James river: C. alba was observed by F. A. Michaux from 43° on the Atlantic throughout the Ohio States to South Carolina; by myself, from 43° to 39°; by Michaux, in Lower Virginia; by Schweinitz, at 36°; by Elliot, in the upper country of Carolina; by Chapman, "in the upper districts, Georgia, and northward;" by Short, in Kentucky; and by Nuttall, on the Arkansas. Notwithstanding the demand for its nuts, its cultivation does not appear to have been attempted.

Carya sulcata of Northeast America. The *hard-nut hickory*, its bark also scaling, and its nuts eaten by the natives from early times: — is perhaps one of the "two kinds" of oil-yielding nuts seen by Hariot on the Roanoke (De Bry i.): a third kind of "walnutt," as the last, exceeding hard shell, and passing sweet kernel, was seen by Strachey on James river: C. sulcata, by F. A. Michaux from Lat. 40° rare along the Atlantic, throughout the Ohio States; by Pursh, on the Alleghanies; by Croom, around Newbern; by Elliot, rare in the low country of Carolina; and according to A. Gray, grows in "rich woods, Pennsylvania to Illinois and Kentucky, nuts nearly as sweet as in the last."

Carya glabra of Northeast America. The *pignut hickory*, known to the natives from early times: — included doubtless in the "walnut of different sizes in great abundance" on the Hudson, mentioned by the remonstrants against Stuyvesant: "smalnuts" were seen by Higgeson near Salem; "walnut," the nuts "smooth" and "some three-cornered, all of them but thinly replenished with kernels," by Josselyn in Eastern New England: C. glabra, by myself from the Saco and Lat. 46° near Montreal Westward and Southward; by F. A. Michaux, from 43° on the Atlantic to Georgia and throughout the Ohio States; by Pursh, in Virginia; by Croom, around Newbern; by Elliot, in South Carolina; by Chapman, in "woods, Florida, and northward;" by Darby, in Louisiana North of 31°; by Nuttall, on the Arkansas; by Baldwin, at 39° on the Missouri; its wood according to A. Gray "very tough and valuable," and its "exceedingly tough sprouts used as *hickory withes*."

Polygala senega of Northeast America. The *seneca snakeroot*, called by the natives "senega," and from early times the root used against the bite of the rattle-snake — (Kalm trav. iii. 5, and Forst. cat.): P. senega is known to grow from the border of New England (A. Gray) Westward and Southward; was received by Hooker from the Saskatchewan Lat. 50°; by A. Gray, from Wisconsin; was observed by Short in Kentucky; by Pursh, in Canada and on the Alleghanies; by Conrad, at 40° on the Delaware; by Schweinitz, at 36°; by Elliot, on the Alleghanies of Carolina; and according to Chapman, grows in Tennessee. From transported specimens, is described by Linnæus amæn. ac. ii. pl. 2.

Apios tuberosa of Northeast America. A Leguminous vine called by the natives "hopnis" (Forst. cat.), and its tubers eaten from early times: — the "openawk," round roots strung together, some as large or larger than a walnut, growing in marshy places and good for food when cooked, were

and supposed by his party to be the "locust:" R. pseudacacia is known to be indigenous among the Alleghanies from Lat. 40° (F. A. Mx.) to Carolina (Ell.); was observed by F. A. Michaux, and myself, indigenous along the Ohio; by Darby, as far as Natchitoches on Red river; by E. James, on

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seen by Hariot on the Roanoke (De Bry i.); "ground nutts," by Newport on James river; "ground-nuts," by Gosnold on Elizabeth Island, and according to a Latin poem and one in English attributed to Bradford, proved a resource to the Plymouth colonists during the famine a year after their arrival: A. tuberosa was received by Hooker from Lat. 47° on the Lower St. Lawrence; was observed by myself along the Atlantic from 43° to 39°; by Michaux, from Virginia to Carolina and Illinois; by Croom, near Newbern; by Elliot, in South Carolina; by N. A. Ware, in West Florida; by Bartram, as far as 28°; by Chapman, in "swamps, Florida to Mississippi, and northward;" by Nuttall, on the Arkansas; by Long's Expedition, on the Platte. Transported to Europe, is described by Cornuti pl. 76.

Cerasus serotina of Northeast America. The *rum cherry* or *American black cherry* is a large tree known to the natives from early times, and its fruit eaten: — "cherry-trees" were seen by Newport on James river; "wild cherries" are enumerated by the remonstrants against Stuyvesant as growing on the Hudson; and wild cherries "blackish red when ripe and of a harsh taste," by Josselyn rar. 60 in New England, who further states that "transplanted and manured they grow exceeding fair:" near the sea, C. serotina has been observed by myself only in the cultivated state; but was found by F. A. Michaux in Maine, and is known to grow on the Mississippi as far as St. Peter's river 45° (Long's Exp. ii. 222); was observed by A. Gray in "woods, common" (in central New York); by F. A. Michaux, on the Genessee, and abounding in Ohio, Illinois, Kentucky, and Tennessee; by Chapman, in "woods, Florida to Mississippi, and northward;" by Darby, in Opelousas; and by Nuttall, on the Arkansas. Transported to Europe, is described by Miller, and Ehrhart iij. 20.

Opuntia vulgaris of the alluvial Atlantic border of North America. The *prickly pear*, known to the natives from early times, and its fruit eaten: the "metaquesunnauk" of the natives on the Roanoke — is described by Hariot as an elegant fruit of the shape and almost as large as our "pirorum," red without and within, growing on a plant whose leaves are full of prickles (De Bry i.): "prickle peare," the same as seen on Bermuda, was found by Strachey on James river: and "Spanish figs which grow out of the leaves" are mentioned by the remonstrants against Stuyvesant: O. vulgaris is known to grow from Nantucket (A. Gray) and 42° on the Hudson throughout peninsular New Jersey (C. P.); was observed by Nuttall from New Jersey to Florida; by Elliot, in South Carolina; by Chapman, in "dry sandy soil, Florida and northward, near the coast." Transported to Europe, is described by Io. Robin pl. 7.

Nyssa multiflora of Northeast America. The *black gum* or *upland tupelo*, a tree known to the natives from early times: — known to grow from Lat. 41° along the Atlantic (Torr.); observed by Marshall, F. A. Michaux, and myself, from Lat. 40°; by F. A. Michaux, in Georgia, Tennessee, and Kentucky; by Elliot, in South Carolina; by Chapman, in "rich upland woods, Florida to Mississippi, and northward;" by Darby 117, to 31° in Louisiana.

Nyssa biflora of Northeast America. The *swamp tupelo*, known to the natives from early times: the "wenomesippaguash" of the Narragansets — is referred by R. Williams to the "vine tree;" and "the horne bound tree that to be cloven scornes" was observed by W. Wood "growing with broad-spread arms, the vines twist their curling branches about them, which vines afford great store of grapes" (V. labrusca): N. biflora has been observed by myself along the Atlantic from 43° 30′ to 41°; by F. A. Michaux, from the lower part of New Hampshire to Pennsylvania; by Pursh, in Virginia and Carolina; by Elliot, in South Carolina; by Chapman, in "swamps, Florida to North Carolina, and westward;" by Nuttall, in Lat. 34° on the Arkansas, and by E. James as far as the Canadian branch.

Viburnum dentatum of Northeast America. The *arrow-wood* is a large shrub, known from early times: the "smale elderne" by the Indian fletchers sought, — observed near Plymouth by W. Wood i. 5, is referred here by Tuckerman: V. dentatum is known to grow from Lat. 47° on the Chaudière (Hook.); has been observed by myself along the Atlantic as far as 39°; by Schweinitz, at 36°; by Pursh, from the mountains of New York to Carolina; by Elliot, on the mountains of Carolina; by Baldwin, as far as 31°; by Chapman, in "rich damp soil, West Florida to Mississippi, and northward;" by Short, in Kentucky; and according to the fl. Mex. seen by Decandolle, grows within the bounds of Mexico.

Vaccinium stamineum of Northeast America. The *deerberry* known from early times: the "rawcomenes" of the natives on James river, — described by Strachey as "like our goose-berries," and the "goosberyes" seen there by Newport, are referred here by Forster cat.: V. stamineum is

the Canadian branch of the Upper Arkansas. Beyond these limits, though known to Chapman only from "the upper districts," was seen by Baldwin at St. Mary's, by Croom as far as 30° 30′, and is now cultivated throughout our Atlantic States. Transported to Europe, is described by Duhamel; was seen by Forskal in gardens at Constantinople, by Clot-Bey in the gardens of Egypt.

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known to grow in Michigan, and along the Atlantic from Lat. 43° 30′ (A. Gray); was observed by myself from 41° to 39°; by Schweinitz, at 36°; by Elliot, in South Carolina; by Michaux, from Pennsylvania to Florida; by Chapman, in "Florida, and northward;" by Croom, as far as 30° 30′; and by Baldwin to 30°; by Short, in Kentucky; by Darby 153 in Louisiana; by Humboldt and Bonpland, at Real del monte, 1420, in Mexico (Steud., and Kunth).

Vaccinium (*Gaylussacia*) *dumosa* of Northeast America. The *hairy huckleberry*, having inferior hairy fruit, eaten by the natives from early times: — known to grow along the coast from 43° 30′ (A. Gray); observed by myself from 42° 30′, in bogs near Salem, throughout peninsular New Jersey to 38° in the Delaware peninsula; by Michaux, from Virginia to Florida; by Elliot, in South Carolina; by Baldwin, in Florida (Collins); by Chapman, "Florida to Mississippi, and northward." Transported to Europe, is described by Andrews pl. 112, and Aiton.

Diospyros Virginiana of Northeast America. The "piakmine" or *persimmon* called by the Louisiana natives "ougoufié" — (Bossu trav. 349): loaves made of the substance of prunes "like unto brickes, also plummes of the making and bigness of nuts and have three or four stones in them," were seen by De Soto on the Mississippi (soc. Hakl.); "mespilorum genus," by Le Moyne in Florida; "mespila" unfit to eat until soft and tender "rutilo colore," by Hariot on the Roanoke (De Bry i.); "pessemmins," by Strachey on James river; and "medlars" on the Hudson, by the remonstrants against the policy of Stuyvesant: D. Virginiana is known to grow from about 41° 30′ in New England (F. A. Mx., and A. Gray) and on the Mississippi (Long's Exp.); was observed by F. A. Michaux throughout the Southern and Western States; by Elliot, in South Carolina; by Croom as far as 30° 30′; by Bartram to 28°; by Chapman, "Florida to Mississippi, and northward;" by Nuttall, on the Arkansas, and var. "pubescens;" by E. James, as far as the junction of the Canadian.

Ipomoea pandurata of Northeast America. Called by the natives "mechameck" (Lindl.), and known from early times: — the "galbanum mechoacon otherwise called rubarbum album" was employed medicinally by Dr. Bohun on the James river in the time of Strachey 31: I. pandurata was observed by Torrey as far North as 41° on the Atlantic; by Michaux, in Virginia (Pers.); by Elliot, in South Carolina; by Baldwin, as far as Matanzas in Florida; by Chapman, "Florida to Mississippi;" by Nuttall, on the Arkansas; by Short, in Kentucky; and was received by A. Gray from Illinois. The powdered root "requires to be given in larger doses than jalap" (Lindl.).

Collinsonia Canadensis of Northeast America. The *rich-weed* or *horse-balm*, from early times used by the natives against the bite of the rattle-snake — (Kalm trav. i. 197, and Forst. cat.): C. Canadensis has been observed by myself along the Atlantic from 43°; by Bartram, at 40°; by Schweinitz, at 36°; by Pursh, from Canada to Carolina (Benth.); by Nuttall, on the summit of Table mountain in North Carolina; by Elliot, on the mountains of Carolina; by Chapman, "Florida to Mississippi, and northward;" by Short, near Lexington in Kentucky; by A. Gray, as far as Michigan. From transported specimens, is described by Linnæus.

Laurus (*Benzoin*) *odoriferum* of Northeast America. The *spice-bush* or *fever-bush*, known to the natives from early times: — "a precious gem called wine benjamin, that they say is excellent for perfumes," procured according to Higgeson from "trees" growing near Salem: B. odoriferum has been observed by myself along the Atlantic from 43° to 38°; by Schweinitz, at 36°; by Elliot, in South Carolina; by Michaux, from Canada to Florida; by Baldwin, as far as 31°; by Chapman, "Florida, and northward," a "shrub six to ten feet high;" by Short, in Kentucky; by Long's Exp., on the Mississippi as far as 41°; and by Nuttall, on the Arkansas. Transported to Europe, is described by Plukenet alm. pl. 139, and Commelyn hort. pl. 97.

Morus rubra of Northeast America. The *red mulberry*, known to the natives from early times: — "mulberrie trees" were observed by De Soto frequent on the route to Apalache; "mulberry-trees," by Strachey on James river, planted around native dwellings, and said to grow naturally in some parts of the country in groves; and "mulberries" on the Hudson, are enumerated by the remonstrants against Stuyvesant: M. rubra was observed by F. A. Michaux from Lat. 45° on the Connecticut river and Lake Champlain Westward and Southward throughout Ohio, Kentucky, and Tennessee, but rare in the lower portion of our Southern States; by Schweinitz, at 36°; by Chapman, in "rich woods, Florida, and northward;" by N. A. Ware, in Florida and Opelousas; by Long's Expedition, on the Mississippi as far as 41°; by Nuttall, and Pitcher, on the Arkansas, and by E. James on the Lower Canadian. From transported specimens, is described by Linnæus.

Castanea pumila of Northeast America. The *chinquapin*, called "chechniquamins" by the

Fragaria Virginiana of Northeast America. A *strawberry* called by the New England natives "wuttahimneash," and from early times bruised with meal in a mortar and made into bread, — further described by R. Williams (hist. coll. iii. 221) as "the wonder of all the fruits growing naturally" in

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natives on James river, — growing according to Strachey on little trees and very like small acorns; according to Newport, "little sweete nutts like acorns, a verye good fruite," and again "certaine sweet thynn-shelled nutts" (archæol. am. iv. 42): "castaneæ" were seen by Le Moyne in Florida: C. pumila has been observed by myself along the Atlantic from 40° 30′; by F. A. Michaux, from 40° to Florida, West Tennessee, and Louisiana; by Schweinitz, at 36°; by Catesby i. pl. 9, and Elliot, in South Carolina; by Chapman, "Florida, and northward;" by Baldwin, as far as 31°, by Croom to 30° 30′; by Darby, in Opelousas; by Nuttall, on the Arkansas, and by E. James on the Canadian branch.

Castanea Americana of Northeast America. The *American chestnut*, called by the Narragansets "wompimish," and canoes sometimes made of its trunk (R. Will. 18), its nuts also dried in a peculiar manner so as to preserve them for a dainty all the year — (Gookin coll. 3): "chesnuts" were seen by De Soto among the mountains; "castanearum quantitas," by Hariot on the Roanoke (De Bry i.); and "chesnuts," by Higgeson near Salem in New England: C. Americana, by myself along the Atlantic from 44° to 38°; by Schweinitz, at 36°; by Elliot, in the middle district of Carolina; by Chapman, in "West Florida, and northward;" by F. A. Michaux, on the Alleghanies of Carolina and Cumberland mountains of Tennessee; and by Short, in Kentucky.

Corylus Americana of Northeast America. The *American hazel* used for bows from early times: — "avellane" were seen by Verrazzanus on the coast towards the mouth of the Hudson; "corylus," of which bows were made by the natives, by Hariot on the Roanoke (De Bry i.); "filberds," by Higgeson near Salem; and "hazle-nuts" on the Hudson, by the remonstrants against Stuyvesant: C. Americana, by Michaux from Canada to Florida; by myself along the Atlantic from 43° to 40°; by Schweinitz at 36°; by Elliot, in the upper district of Carolina and Georgia; by Chapman, in "West Florida, and northward," its branches "tough and flexible;" by Short, in Kentucky; by myself, on the Wabash; and by Nuttall, on the Arkansas.

Myrica cerifera of Northeast America. The *wax-myrtle* or *bayberry*, perhaps one of the three kinds of berries yielding oil to the natives on the Roanoke (Hariot); among the Nantucket natives, the "medomhumar" punishment for boys consisted in filling their nostrils with water in which the woody portion of its root had been steeped — (Z. Macy in hist. coll. iii. 159): the "myrtle" was seen by W. Wood i. 5 near Plymouth; M. cerifera, by Lapylaie in Newfoundland; by myself, along the Atlantic from 45° to 42°; and was received by A. Gray from Lake Erie. From transported specimens, described by Linnæus.

Myrica Carolinensis of Carolina and the Lower Mississippi. — Possibly the oil-yielding berry seen by Hariot on the Roanoke (De Bry i.): observed by myself along the Atlantic from 39° in the Delaware peninsula; by Schweinitz, at 36° near Fayette; by Elliot, in South Carolina; by Chapman, "mostly near the coast, Florida, and northward;" and by Nuttall, in Arkansas.

Orontium aquaticum of Northeast America. An Araceous aquatic sometimes called *golden club* (A. Gray): clearly the "sacquenummener" of the Roanoke, growing in stagnant water, its berries like capparis but a little larger and requiring eight or nine hours cooking (Har. in De Bry i. 19); and "ocoughtanamims" of James river, "growing in watry valleis and very much like unto capers," and which are poisonous unless boiled "nere halfe a daie" — (Strachey): O. aquaticum is known to grow from Lat. 42° in Massachusetts (A. Gray) and on the Hudson (Eat.); was observed by myself to 39°; by Elliot, in South Carolina; by N. A. Ware in Florida, and by Croom on the Ocklockony; by Chapman, in "ponds and slow-flowing streams, Florida, and northward;" but was not seen by Nuttall West of the Alleghanies. From transported specimens, is described by Linnæus.

Sagittaria variabilis of North America. The *American arrow-head*, called by the natives in Northwest America "wappatoo" (R. Brown jun.), in Northeast America "katniss," and its root extensively eaten — (Kalm trav. ii. 97, and Forst. cat.): S. variabilis has been observed by myself along the Atlantic from 43° to 40°; by Pursh, from Pennsylvania to Carolina; by Schweinitz, at 36°; by Elliot, in South Carolina; by Chapman, "Florida, and northward;" by Short, in Kentucky; by Nuttall, on the Arkansas; by E. James, at the sources of the Platte; by Drummond, to 54° on the Saskatchewan; and in Northwest America, its name "wappatoo" was found by R. Brown jun. transferred by the natives to the newly-introduced potato.

Zizania aquatica of Northeast America. The *Indian rice* is a subaquatic reedy grass, its seeds from early times collected and eaten: — "genus arundinis" bearing grain that resembles rye or wheat and is boiled and eaten, was seen by Hariot on the Roanoke (De Bry i. 19); and "nattourne" growing as our bents in meadows, its seed not unlike rye but much smaller, by Strachey on James

New England, abounding especially "in some parts where the natives have planted" (abandoned clearings exposed to the sun): "strawberyes" were seen by Newport on James river; and "fraga" as large and sweet as in English gardens, by Hariot on the Roanoke (De Bry i.): F. Virginiana is known to grow on Newfoundland and throughout Canada to Slave Lake Lat. 62° (Hook.); was observed by myself along the Atlantic from 45° to 39°; by Pursh, from Canada to Carolina; by Elliot, in the Upper district of Carolina and Georgia; by Chapman, in "rich woods, Florida to Mississippi, and northward;" by Croom, as far as 30° 30′; and by Beck, near the mouth of the Missouri. Transported to Europe before 1613, is described by Besler hort. 7 f. 8 (Spreng.), has since become abundantly cultivated, furnishing the most approved garden varieties; is probably the species enumerated by Clot-Bey as recently introduced and successfully cultivated in Egypt.

Sassafras officinale of Northeast America. The *sassafras* tree, called by the Narragansetts "sasaunckapämuck" (R. Will. 16), and known from early times: — "sassafras" was seen by Amadas and Barlow on Roanoke island; "saxefras" wood was one of the earliest articles of commerce with New England (J. Smith n. e. trials), and a voyage to procure some was made in 1603 by Pring: S. officinale has been observed by myself along the Atlantic from 43° to 38°; by Schweinitz, at 36°; by Catesby i. pl. 55, and Elliot, in South Carolina; by Chapman, in "Florida, and northward;" by Croom, as far as 30° 30′; by F. A. Michaux, from 43° to Florida, and throughout the Ohio States to the Missouri; by Long's Expedition, as far up the Mississippi as 43°; by E. James, at the junction of the Canadian and Arkansas; and was seen by Hernandez at Mechoacan Lat. 20° in Mexico. Transported from Florida to Europe, became known "in 1571" to Monardes pl.: the imported bark and wood continue to be employed medicinally (Lindl.); and "sassafra" wood, imported by the way of Greece, was found by Forskal mat. med. in the drug-shops of Egypt.

Quercus alba of Northeast America. The *white oak:* dried acorns of the "mangummenauk" macerated in water for food by the natives on the Roanoke (Har.); acorns dried and boiled for food by the Narragansetts (R. Will. key 16); and "white-oak acorns" boiled for oil by the natives of New England — (Joss. rar. 47): Q. alba was also seen in New England by W. Wood i. 5, and Higgeson; by F. A. Michaux, from the Lower Kennebec and 46° in Canada to Illinois, and along the Atlantic to 28°; by myself, from 43° 30′ to 38°; by Elliot, in South Carolina; by Chapman, in "damp woods, Florida to Mississippi, and northward;" by Darby, on the Washita river; by Nuttall, on the Arkansas; by E. James on its Canadian branch; and by Long's Expedition, as far as 48° on Rainy Lake. (See Acer rubrum).

Juniperus Virginiana of Northeast America. The *red cedar* or *American savin*, called by the Narragansetts "mishquawtuck" — (R. Will. key 16): "savins" were seen by Cabeza de Vaca on the North shore of the Mexican Gulf; "cedrus," by Hariot on the Roanoke (De Bry i.); the "cedar tree" by W. Wood in New England, not "very high" and its wood "more desired for ornament than substance, being of colour red and white, like eugh, smelling as sweet as juniper:" J. Virginiana is known to grow from Lat. 45° in New England (Kalm) and 50° on Lake Winnipeg (Long's Exp. ii. 81); has been observed by myself from 43° 30′ along the Atlantic to 38°; by Elliot, in South Carolina and Georgia; by Chapman, "Florida, and northward;" by Bartram, as far as 28°; by F. A. Michaux, from 44° in New England to Cape Florida, St. Bernard's Bay, and in the Western States; by Darby, near Natchitoches; by Nuttall, on the Arkansas; by E. James, at the sources of the Arkansas as far as the Rocky mountains.

"1310 A. D." (Blair), the island of Rhodes captured by the Knights of St. John; and made the residence of this monastic Order.

"The same year" (Nicol.), synods at Paris, Mayence, Senlis, Ravenna, and Salamanca. On the accusations against knights Templars, some of whom were found guilty.

The same year = "718 Hej.," inscribed in Palestine on the great tower at Ramleh: completed (according to Mejr-el-Din, Kitt. cycl. bibl.) in this year by sultan Naser.

"In this year" (Humb. cosm. ii., Klaproth gives 1294), the Persian writer Rashid-eddin com-

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river: Z. aquatica was observed in Fox river of Lake Huron by Marquette in 1673; and is known to form beds in inundated situations from "Lat. 50°" on the Winnipeg River (Mackenz., and Long's Exp. ii. 111) along the Mississippi and its tributaries; was observed by Nuttall along the Arkansas; by Short in Kentucky; by myself, from the St Lawrence near Quebec to 39° along the Atlantic; by Elliot, in South Carolina; by Chapman, in "Florida, and northward;" and was received from Florida by Pursh.

Cypripedium acaule of Northeast America. The *moccasin flower* of the natives, from early times in great esteem for decking their hair — (Catesby, and Cutl. p. 486): C. acaule was observed by myself from 48° on the Lower St. Lawrence to 38° in the Delaware peninsula; by Croom, near Newbern; by Elliot, only in the Upper district of Carolina; and by Short, in Kentucky.

posing his history of the rulers of Cathay. Japan is described under the name of "Djemen kou" (Klapr. note to ann. Jap.).

Raschid-eddin speaks of "a kind of stone" in China "which is used instead of fire-wood" — (Yule cath. 261), obviously mineral *coal*.

"In this year (= 710 A. H." of Ferisht., Elph.), Cafur sent against the Belal raja of Carnata. Marching by Deogiri (Dowlatabad) he captured Dwara Samudra the capital, put an end to the dynasty of Belal, and reduced the territory as far as the seacoast, where he built a mosque at Adam's Bridge opposite Ceylon. — The mosque continued standing in the days of Ferishta.

"1311, Oct. 16th" (Alst., and Nicol.), Fifteenth general ecclesiastical Council. Assembled at Vienne in France. Among other acts, The oaths of princes were declared to be "non subjectionis sed fidelitatis, not of subjection but of fidelity." — In a second session "Apr. 3d," the Order of knights Templars was suppressed by the pope, "reserving to the church the disposal of their persons and possessions."

Franciscus of Piedmont may have been at this time writing. He quotes Arnaldus, Asirnius, Gualterius, and Egidius.

Scabiosa arvensis of Europe and the adjoining portion of Asia. Called in Greece "kōuphōla-hanōn," in Britain with other species *scabious*, in medieval Latin "scabiosa" (Prior), in France "scabieuse" (Nugent), in which we recognize the SCABIOSE of Franciscus Pedemontium f. 241, — Urbanus (Trag.), and J. J. de Manliis, regarded as a remedy for all who are "raudig" or "grindig" itchy or mangy (Brunswyck, and Prior): S. arvensis is termed "s. pratensis hirsuta quæ officinarum" by Tournefort inst. 465; and is known to grow in meads and cultivated ground throughout middle Europe as far as Britain (Curt. lond. iv. pl. 13, and Pers.). Eastward, was observed by Forskal, Sibthorp, and Chaubard, abounding from Constantinople to the Peloponnesus.

"1312 A. D. = 'hoang-tsing,' 1st year of Jin-tsoung II., of the Youan" or Twenty-second dynasty (Chinese chron. table). Among other reforms in government, Jin-tsoung II. prohibited the appointment of eunuchs to political station. He also re-established the "Tribunal of historians;" taking great pains to collect and preserve historical documents.

"In this year" (Auger., and Spreng.), Vitalis de Furno, author of a treatise on Materia Medica, appointed cardinal by pope Clemens V.

"1313 A. D." (Skeat ed. Piers Plowm. 118), by pope Clemens V., first public sale of Indulgences.

"In this year" (Blair), the Order of knights Templars having been suppressed, as above stated, the Grand master Molay with several of the knights burned alive at Paris.

"The same year" (S. F. Haven in archæol. Amer. iv. 259), in England, in competition with the long-established "German" company called "Merchants of the Steelyard," a home company incorporated, under the name of "Merchants of the Staple."

"1314, May 7th" (Nicol.), a synod at Paris. An article, Forbidding "ecclesiastical judges to use vague and general citations."

"1315, October" (Nicol.), a synod at Senlis. The bishop of Chalons, imprisoned by Louis X. on suspicion of being accessory to the death of Philip IV. le Bel, was released and his possessions restored.

Thlaspi bursa-pastoris of Europe and Northern Asia. Called in Britain *shepherd's-purse* (Prior), in Italy "borsa pastore" (Lenz), in which we recognize the BURSAM PASTORIS of the Liber Saladini, — and J. Jacobi de Manliis: T. bursa-pastoris is termed "bursa-pastoris major folio sinuato" by Tournefort inst. 216, and is known to occur as a weed in Italy and throughout middle and Northern Europe as far as Lapland and Iceland (fl. Dan pl. 729, Hook., and Wats.). Eastward, seems figured in the Vienna manuscript of Dioscorides 38 (Cockayne, and myself); was observed by Sibthorp, Chaubard, and Fraas, frequent in Greece and on the Greek islands and called "tzōurkas" or "tragia." Farther South, was observed by Hasselquist in Palestine; and is known to occur in Abyssinia (Rich.). Farther East, is known to occur in Persia, Nepaul, and throughout Siberia to Daouria and Kamtchatka (Don, Dec., and Ledeb.); was observed by Wight in Tropical Hindustan; and by Thunberg in Japan, frequent on the margin of fields and along roads and called "neko no samsin." By European colonists, was carried across the Atlantic to Northeast America, where it has become naturalized and a frequent weed throughout our Atlantic States as far as Florida (Chapm.), following the fur traders Northward as far as Great Bear Lake (Hook.), and Westward as observed by myself to the trading-posts of Colville and Fort Nisqually in Oregon: also by European colonists was carried to the Straits of Magellan and Chili (Dec., and Beechey); to Austral Africa, and to the Mauritius Islands (Harv., and A. Dec.).

"1316 A. D." (Nicol.), a synod at Adena in Armenia. The decrees of the synod of Sis, For the re-union of the churches of Armenia and Rome, were confirmed.

"Aug. 7th" (Alst., and Nicol.), after an interval of "two years," Clemens V. succeeded by car-

dinal James d'Euse, now Joannes XXII., fortieth pope. Louis II. Bavarus ruling Germany and Italy; Edward II., England; Robert, Scotland; and in France, Louis X. succeeded by Philip V.

"Dec. 19th (= 716 A. H., Shawal 6" of Ferisht., Elph.), death of sultan Ala-u-din of Delhi. He was succeeded

"1317, March 22 (= 717 A. H. Moharrem 7" of Ferisht., Elph.) by his third son Mobarik Khilji, now thirteenth sultan of Delhi.

"June 1st" (according to an Arabic inscription on the walls, Leps. eg. and sin. p. 232), after a victory of Naser over the infidels, opening of a mosque at Old Dongola.

"In this year" (Remus. iv. 172), the Wen-hian-thoung-khao, a historical encyclopedic work by Ma-touan-lin,* offered to and approved by the emperor Jin-tsoung. — It was published "in 1321," and the author died soon afterwards.

"In this year," Matthæus Sylvaticus (according to his own statement) at Salerno writing his Pandectæ: dedicated by him to Robert king of Sicily.

Serratula tinctoria of Europe and the adjoining portion of Asia. A *saw-wort* called in Germany "sichelkraut" (Grieb) or "sichelmoren" (Trag.); and the CRITHAMUS AGRESTIS of Matthæus Sylvaticus pand., — is referred here by Tragus ii. 32: S. tinctoria is termed "jacea nemorensis quæ serratula vulgo" by Tournefort inst. 444; is known to grow from Denmark throughout middle Europe (fl. Dan. pl. 281, and engl. bot. pl. 38), its juice affording a yellow dye (Pers.); was observed by Sestini in the environs of Constantinople (Sibth.).

Lysimachia dubia of the East Mediterranean countries. The PERSICARIA MINOR of Matthæus Sylvaticus, — described by Cæsalpinus vi. 65 as having leaves like those of "lysimachie purpureæ" and flowers purple and whitish, may be compared: L. dubia is termed "l. spicata purpurea minor" by Buxbaum i. pl. 33; was observed by Sibthorp on the marshy shores of the Nicæan Lake; and according to Persoon the petals are connivent.

Thesium linophyllum of Europe and the adjoining portion of Asia. Called in Britain *bastard toad-flax* (Prior), and the LINARIA of the Pandecta, — and Ortus Sanitatis 261, may be compared: T. linophyllum is termed "anonymos lini folio" by Clusius hist. i. 324, "linaria montana flosculis albicantibus" by C. Bauhin pin. 213, and known to grow throughout middle Europe (Tourn. inst. 509, engl. bot. pl. 247, and Hayne); observed by Linnæus as far as Scania and Smoland; by Sibthorp, and Chaubard, from the Peloponnesus to the Greek islands.

"In this year" (Rawdon Brown, and Major edit. Zen. p. 4), the first name on the List of commanders on voyages from Venice to Flanders, — continued "down to 1533," and preserved in the Venetian archives.

"In this year" (Major edit. Bethenc. p. xli), by a treaty, Denis king of Portugal securing a Genoese, Emmanuele Pezagno, as hereditary admiral of his fleet, he and his successors to make unfailing provision of twenty experienced Genoese captains to command the king's galleys.

"1318 A. D. (= 718 A. H." of Ferisht., Elph.), Harpal, the insurgent Mahratta chief, defeated in the Deccan and captured by sultan Mobarik. Who also sending an army under Khusru, a converted Hindu, conquered Malabar.†

"1319 A. D. (= 1979th of Synmu," art de verif.), abdication of Fannasono in favour of Daigo II. or Go-Daigo, younger brother of Nidsio II., and now dairo of Japan.

"1320 A. D." (Alst.), at Frankfort, an assembly of the principal men of the Empire, Louis II. Bavarus being present. "Against the insolence of the pope."

"The same year" (Alst. p. 307), the Turks, crossing the Hellespont, first enter Europe.

"1321 A. D. = 'tchi-tchi,' 1st year of Yng-tsoung II., of the Youan" or Twenty-second dynasty — (Chinese chron. table).

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* *Aucuba Japonica* of Central Asia. A spotted-leaved shrub called in China "tsing-mou" or "thsing-mou" green-wood (Rem.); but the "tsing-mou" found according to Ma-touan-lin in Ki-pin (Cophene) and Po-sse — (Persia), is regarded by Remusat mel. iii. 211 to 251 as not certainly belonging here: A. Japonica was observed by Thunberg planted for ornament in Japan. Transported to Europe, is described by Lamarck ill. pl. 759; and from Europe was carried to Northeast America, where it continues in greenhouses.

Rhus sylvestris of Eastern Asia and Japan. The *wild wax tree*, perhaps the "arbres a cire" abounding according to Ma-touan-lin in the country of the An-thsai — (Asii or Asiani according to Remusat mel. iii. 239): R. sylvestris is known to grow in Japan (Jap. centen. comm. 56).

† *Bragantia Wallichii* of Western Hindustan. An Aristolochioid shrub three to four feet high called in Malabar "alpam" (Drur.); in which we recognize the "alpam" of the Malabar proverb "As soon as alpam root enters the body poison leaves," — mentioned by Bartolomeo: B. Wallichii was observed by Rheede vi. pl. 28 in Malabar; by Nimmo, in "S. Concan, rare" (Graham 250) nearly as far as Bombay; by Wight, and Drury, as far as Travancore and Wynaad.

"In the time of Yng-tsoung and of Chun," 1321 to 1367 A. D. (topog. Cant., and Pauth. p. 473), commerce was twice interrupted, and after a year, re-opened. A decision, That foreign nations should bring a tribute every three years. The regulations at Canton were made extremely severe. Ships bringing tribute, were compelled to discharge cargo and wait through the harvest. And "a hundred and twenty-two houses were built for the accommodation of foreigners."

"March 24th (= 721 A. H. Rabi-ul-awal" of Ferisht., Elph.), sultan Mobarik and all the Khilji family put to death. "Aug. 22d (= 721 A. H. Rejeb 30" of Ferisht.), the usurper Khusru succeeded by Gheias-u-din Toghlak, now fourteenth sultan of Delhi. — He built at Delhi the fort of Toghlakabad, remarkable for its massive grandeur.

"In this year (= 721 A. H.," Gildem.), the geographical work of Abulfada completed. He speaks of Malabar, where according to a traveller's account, from the abundance of water and creeping plants the whole face of the country is green (a circumstance that seemed extraordinary to one brought up in the Desert): of the city of Kandahar "built by Alexander:" and of "Lauhaur" (Lahore) also called "Lahaver," described in the Allubab as a great city of India, and the birthplace of many learned men. — He died "in 1331" (Pouchet).

1322 A. D. = "1247 an. jav." (Raffles x.), supposed date of the treaty of partition between Raden Tanduran and his half-brother Chiong Wanara; dividing Java by a line running due South from a stone column placed at Tugu. — After the death of the half-brother, the kingdom soon became united, with the seat of government now at Majapahit. The stone column at Tugu, a few miles West of Semarang, continued standing when Raffles was writing.

"April 1st" (acta sanct., and rec. voy. et mem. p. 7), four Franciscan missionaries on their way to Cathay (China) driven by a storm to Tana (near the site of Bombay), and put to death by the Muslim ruler of the country. Their companion, a Dominican named Jordanus Catalani, absent on a visit to Paroco (Baroach), returned and with the aid of a resident Genoese the bodies were transported to Supera (Sefer or Sefarah el Hend) and buried in a church. — In a letter dated "Jan. 1323," Jordanus gives an account of the affair, having perhaps by this time reached his destination Columbum or Palumbum (Palembang in Sumatra). He describes his residence as situated in India Major, the pole star only two fingers breadth above the horizon, the sun for six months casting a shadow South, and the days and nights not exceeding each other a full hour at any season. "April 9th 1330," he was appointed bishop of Columbum by pope Joannes XXII.

He describes the ships sailing to Cathay as very large (Chinese junks); while those built in India Major were sown together with thread from a certain herb, and though of good size were not decked. A portion of that India was called Champa, where *elephants* are used for all kinds of work, supplying the place of horses, mules, donkeys, and camels.

He had heard of the existence on a very great island of homines parvulini pigmy men, no larger than a boy three or four years old but all shaggy like a goat, living in the forest and rarely met with: — clearly the *Borneo orang*, Pithecus satyrus.

The avis ad modum milvi having according to Jordanus mirab. the head white and the body above and beneath tota rubea, snatching fish from the hands of the fishermen, — is clearly the *Bramin kite*, Haliætus Ponticerianus.

Jordanus had heard of a third India (Madagascar and Equatorial Africa), where the huge bird called roc is found, also animals ad modum catti producing the finest of known perfumes (*civet*), and others ad modum asini but with transverse stripes black and white and very beautiful (*Burchell's Zebra*, Equus Burchellii).

While passing through Babylonia, fuit visa tortuca carrying upon its back five men (*Galapagos tortoise*, Testudo).

Inga xylocarpa of Tropical Hindustan and Burmah. The *iron-wood* is called in the environs of Bombay "jamba" (Graham), in Telinga "conda-tangheroo" (Drur.); and the tree "harder than all, which the strongest arrows can scarcely pierce" seen by Jordanus in Hindustan, — may be compared: I. xylocarpa was observed by Graham on the Ghaut and the "hilly parts of the Concan;" by Roxburgh cor. pl. 100, and Wight, in other parts of Hindustan, its wood used by the natives for plough-heads and for knees and crooked timbers in shipbuilding. Farther East, was observed by Mason, v. 529, abounding in Burmah "from Mergui to Toungoo" and called "pyen-ka-do," its trunk "thirty and forty feet without a branch" by "eight and nine" in circumference, the wood extremely durable but so hard that workmen "are reluctant to try their tools on it at any price."

Entada scandens of wooded Tropical shores from Hindustan to the Polynesian islands. A woody vine called in the environs of Bombay "garbee" or "gardul" (Graham), in Burmah "kung-nyen" (Mason), in which we recognize the carrobiae of stupendous size seen by Jordanus mirab. in India Minor: — E. scandens was observed in Hindustan by Rheede viii. pl. 32 and ix. pl. 77, Roxburgh, Wight; by Graham, "along the range of Ghauts" running "over the highest trees," the stem found by Gibson in one instance "full six feet in circumference," and the seeds employed by the

natives as "antifebrile." Farther East, the seeds were found by Mason v. p. 503 employed for the same purpose by the natives of Burmah; but according to Rumphius v. pl. 4, are roasted and eaten like chestnuts in Sumatra and Java. Eastward from the Malayan archipelago, its huge pods dangling from tree-tops were occasionally observed by myself along the shore of the Feejeean and Samoan groups of islands. By Polynesian or possibly European colonists, was carried to the West Indies, no Carib name being given by Descourtilz notwithstanding that the pods furnish food "servent de nourriture."

Cinnamomum Loureirii of the mountains of Cochinchina. Called in China "kio kui," in Japan "ni-kei" (Lindl.): the cinnamon tree is enumerated by Jordanus mirab. as large, growing in India Major and producing fruit and flowers after the manner of cloves garyophyllorum;—*cassia-buds*, said to be unexpanded flowers of a Cinnamomum, are further described by H. Yule as bearing some resemblance to cloves; and *flowers of cassia* according to Lindley are the product of C. Loureirii; described by Loureiro as growing on the lofty mountains Westward toward Laos, the old and young branches equally worthless, but the middle-sized shoots furnishing bark about a line thick, superior to that of Ceylon and sold at a much higher price.

"In this year" (Crawfurd vii. 11), Javanese and Arabs visiting Ternate in great numbers and settling there.

"1323 A. D." (De Wailly pl. ix. 2), inscriptions of this date presenting the following form of the letter J.

Hardly earlier than this year, Odoric of Friuli, a Franciscan, arriving at Tana (near the site of Bombay). Taking the bones of the four murdered missionaries, he proceeded by sea to Coromandel, Sumatra, Java, and deposited them at Zayton in China, where were two houses of friars minor.—After spending "three years" in Northern China before "1328," he returned to Venice, and died "in January 1331" (Yule cath. i. 6).

He mentions the *sumpit* or tube for blowing poisoned darts,—used by the natives of Southern Borneo, Celebes, and the Moluccas (Yule i. 90).

The *goose* domesticated in China (Anser cygnoides?) is described by Odoric 29 as having "a bone on the top of its head about the size of an egg." Fishing with domesticated *cormorants* (Phalacrocorax carbo) is also mentioned; and the *silk fowl* (a variety covered with wool-like down).

Amomum cardamomum of the mountainous parts of Java, Sumatra, and as far as Burmah. A. Scitamineous plant producing the *round cardamons* of commerce (Nees) or "amomum verum" of the old apothecaries (J. E. Smith): the "melegetæ" growing according to Odoric on Java—(Yule i. 88) may be compared: A. cardamomum is described by Rumphius v. pl. 65; and was observed by Mason indigenous in Burmah. Westward, according to Lindley, is "commonly cultivated in gardens in" Hindustan, its "seeds agreeably aromatic." Transported to Europe, is described by Blackwell pl. 584 and 585.

Rhapis arundinacea of . . . . The "cassan" canes of Odoric 22, growing on Panten or Thalamasyn (Borneo) and "along the ground like what we call dog's grass" (Cynodon dactylon), "and at each of their knots they send out roots, and in such wise extend themselves for a good mile in length," the stems in thickness "much about the same as the canes in our Frank countries,"—may be compared with the *ground rattan* (see Royle fibr. Ind.). From transported specimens, R. arundinacea is described by Aiton (Steud.).

"1324 A. D. = 'tai-ting,' 1st year of Tai-ting-ti" or Tai-ting II. (Chinese chron. table), beginning of the Sixty-seventh cycle.

"Nov. 21st" (Nicol.), a synod at Toulouse. A canon, Forbidding "clerks to shave oftener than once a month."

"1325 A. D." (Clavig. i. 112 to 123, Humb.; and Holmes suppl.), the Aztecs at a lake where they settled, building a temple, and around it "huts of reeds and rushes;" the beginning of the city of Mexico.

The following plants known to the Creeks from early times,* "toonau" *Amaryllis atamasco*, its

* *Sisyrinchium anceps* of Northeast America. The *blue-eyed grass*, considered by the Creeks "an infallible emmenagogue" and "used by the Cherokees as an emetic"—(Baldw. reliq. 60). Transported to Europe is described by Plukenet amalth. 61. 2 (Spreng.), received by Dillenius elth. pl. 41 from Bermuda, termed "s. angustifolium" by Miller, "s. gramineum" by Curtis, has also reached without human intervention the Western shore of Ireland, found wild at a single point (A. Dec.). At its home in North America, has been observed by myself from 45° to 40° along the Atlantic, in sunny situations, and especially in grass-grown clearings; by Pursh, from Canada to Carolina; by Schweinitz, as far as 36° in Upper Carolina; by N. A. Ware, and Chapman, in Florida; by Nuttall, in Pennsylvania and on the Arkansas; and by E. James, along the Missouri and Platte.

bulbous root eaten in times of scarcity; "micco hoyenejau" dwarf willow *Salix tristis*, their "king physic" or "great medecine," the root bruised in a watery infusion as a tonic, becoming emetic when used freely; *Agave Virginica*, one of the two plants called "rattle-snake's master;" *Aesculus Paawia*, used to intoxicate fish; "Iuchau loobe thluceo" large turtle liver, *Asarum Virginicum*.

Of fragments of pottery, arrow-heads, and other implements of stone or bone, found in rubbish-heaps from the Roanoke to and beyond the Lower Mississippi, some as early probably as this date.*

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* *Nelumbium luteum* of Carolina and the Lower Mississippi. The *American water-lotus* is called from its hard smooth seeds *water-chinquapin*. Fruit like a bean, from early times of the highest value among the natives West of the mouths of the Mississippi and employed as a medicine, — as on the visit of Cabeza de Vaca: N. luteum is regarded by A. Gray as perhaps introduced by the natives into certain detached localities in our Atlantic States as far as Connecticut and Lake Ontario; but was observed by Elliot in South Carolina; by N. A. Ware, in Florida; by Chapman, "near Tallahassee, and northward and westward, not common;" by Nuttall, on the Arkansas; by E. James, on the Arkansas and Lower Missouri; by Short, in Kentucky; and by Michaux, in Illinois.

Nuphar advena of North America. The *spatter-dock* or *yellow water-lily* known from early times to the natives, and its roots cooked and eaten: — West of the mouths of the Mississippi, Cabeza de Vaca found the natives obliged to get roots from below the water, and one or two other kinds of roots eaten, but poor food, requiring two days roasting: in New England, Josselyn rar. 44 found roots of the "water-lily with yellow flowers" after long boiling eaten by the natives: N. advena is known to grow from Lat. 51° in Newfoundland (Lapylaie) and 56° in Central North America to the Gulf; was observed by myself along the Atlantic from about 44° to 38°; by Elliot, in South Carolina; by Chapman, "common;" by Drummond, near Jacksonville in Lower Louisiana; by Short in Kentucky; by Nuttall, on the Arkansas; and by myself, not far from Puget Sound. In Northern New England, moose-deer, while searching with head under water for these roots, were killed by the natives (Jossel. rar. 44).

Gordonia lasianthus of Carolina and the Lower Mississippi. A flowering Camellioid tree, thirty to fifty feet high, called *loblolly bay;* and the "tree of peace" of the natives of Louisiana — is identified by Bossu 349 with the "white bays" bearing a "white flower like a tulip:" G. lasianthus was observed by Catesby i. pl. 44 in Carolina; by Chapman, "Florida to North Carolina, and westward;" and is known to grow in swamps in the alluvial district along the sea from Lat. 37° (Pursh) to the Mississippi (A. F. Mx.).

Hypericum corymbosum of Northeast America. Among simples valued above gold by the natives of Louisiana, "excellent oil for healing" — was made of "St. John's wort" (Bossu 353 to 355): a "St. John's wort" is enumerated by Josselyn 44 in 1670 as peculiar to North America: H. corymbosum was received by Hooker from Lake Huron at Lat. 47° on the Lower St. Lawrence; was observed by myself along the Atlantic from 45° to 38°; by Walter, Michaux, and Elliot, as far as 33° in South Carolina; by Beck, near St. Louis on the Mississippi; and by Nuttall, and Pitcher, on the Arkansas. (Compare H. prolificum).

Ilex cassine of Carolina and the Lower Mississippi. The *yaupon* is a large shrub, its leaves from early times used as tea: — West of the mouths of the Mississippi, Cabeza de Vaca found the Cutalchiches drinking a tea from the leaves of a tree like an oak (transl. B. Smith): in West Florida, "a decoction of it" called "liquor of valour" drank by the natives (Bossu, and Forst. cat.): and among the Creeks, a strong decoction termed "black drink" taken at the opening of their councils, acting according to Lindley "as a mild emetic:" I. cassine is termed "cassine vera Floridanorum" as seen by Catesby ii. pl. 57 in South Florida; was observed by Baldwin in Lat. 30°; by Chapman, in "light sandy soil along the coast, Florida to North Carolina;" by Walter, and Elliot, in South Carolina, and is known to grow as far as Lat. 37° (Bart.); Westward, was observed by E. James on the Washita river; by H. Little, in the delta of the Mississippi. Transported to Europe, is described by Plukenet pl. 376, and Miller dict. pl. 83.

Rubus trivialis of Carolina and the Lower Mississippi. — West of the mouths of the Mississippi, Cabeza de Vaca found the natives living on *blackberries* for a month in the spring — (transl. B. Smith): R. trivialis is known to grow along the Atlantic as far as Lat. 37° (Pursh); was observed by myself from the mouth of Cape Fear river to 33°; by Walter, Michaux, and Elliot, to and beyond the Santee; by Chapman, in "dry sandy soil, Florida to North Carolina, and westward;" by Croom, as far as 30° 30′; by H. Little, in the delta of the Mississippi; and by Nuttall, on the Arkansas.

Passiflora incarnata of Carolina and Florida. A *passion-flower* known to the natives from early times: the "maracock" vine bearing "a good sommer cooling fruiet" of "the bignes of a queen apple, and hath manie azurine or blew karnels, like as a pomegranet" — observed by Strachey in the cultivated fields of the natives on James river, is referred here by Bennet: P. incarnata was

Juglans nigra of Northeast America. The *black walnut* is a large tree, known to the natives from early times: — West of the mouths of the Mississippi, Cabeza de Vaca found natives coming to eat walnuts, of the size of those of Galicia (transl. B. Smith): the "black walnutt" with which ships are laden, was seen by Strachey in 1610 on James river: J. nigra, though comparatively rare along the Atlantic, has been observed by myself from nearly 41° to 38°; by Schweinitz, in 36°; by Elliot, in the Upper country of Carolina, rare along the seacoast; by Chapman, in "Florida, and northward;" by N. A. Ware, from Indian river and Alachua to Opelousas; is known to abound in rich woods from Lat. 43° on the Genessee Westward (F. A. Mx.); was observed on Long's Expedition i. 339 very little beyond 43° on the Mississippi; by Nuttall, in 34° in Arkansas; by E. James, on the Canadian branch of the Upper Arkansas; and a walnut was seen by Pike ap. 22 at Carracal in Lat. 30°. Black walnut timber is highly valued, much resembles mahogany, and has become a very general substitute for cabinet furniture.

Celtis Occidentalis of Northeast America. The *hackberry* or *sugarberry* is a tree, known to the natives from early times and its fruit eaten: — West of the mouths of the Mississippi, Cabeza de Vaca found the natives seeking the fruit of certain trees which is like a pea* (transl. B. Smith): C. Occidentalis has been observed by myself along the Atlantic from Lat. 43° to 39°; by Tradescant, in Virginia; by Elliot, on the sea-islands of South Carolina; by Baldwin, as far as 31°, also on Bermuda; by Chapman, in "rich soil, Georgia, and northward;" by F. A. Michaux, in our Middle, Southern, and Western States; by Long's Expedition ii. 36, on the Red river of the North as far as 49°. Transported to Europe in 1656 (Ait.), is described by Miller dict. pl. 88, and Scopoli ii. 100 (Pers.); and was observed by Clot-Bey in the gardens of Egypt.

"In this year (= 725 A. H." of Ferisht., Elph.), Gheias-u-din Toghlak succeeded by his son Mohammed Toghlak, now fifteenth sultan of Delhi. — He patronized literature; founded hospitals and almshouses, and acknowledged the Investiture of the caliph in Egypt.

"In this year (= 725 A. H." of Makrizi, De Sacy, and Gildem. p. 39), Ibrahim commanding a ship from Calicut, weary of the impositions inflicted on merchants by a Yemen chief, entered the Red Sea and proceeded direct to Djidda; where he was honorably treated. — Others following his example, Aden hitherto the stopping-place for vessels declined, and Djidda became the seat of commerce with India.

Euphorbia officinarum of Tropical Arabia and Africa. A cactiform *spurge* called in Yemen "schörur" (Forsk.), its stems congested in a tuft a foot high, and its milky juice from early times employed by the Arabs as cathartic: — observed by Forskal p. 94 at Djobla among the mountains of Yemen. Transported to Europe, is described by Commelyn hort. i. pl. 11, and Blackwell pl. 340 (Pers., and Lindl.).

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observed by Nuttall in 38° in the Delaware peninsula; by Pursh, in Virginia and Carolina; by Elliot, in South Carolina; by Chapman, "in open or cultivated ground, common;" by Croom, as far as 30° 30′ in Florida; by Baldwin, on Bermuda: Westward, by Pitcher on the Arkansas; and was received by Muhlenberg from Tennessee. Transported to Europe, is described by I. Robin 3, and Jacquin rar. pl. 187 (Pers.).

* *Celtis Mississippensis* of the Lower Mississippi. Possibly the species in question, — and that seen by Darby 119 at 31° in Louisiana: C. Mississippensis is described by Bosc; was observed by Nuttall on the Mississippi, Red river, and Arkansas, and termed "c. integrifolia;" by Chapman, as far East as Apalachicola, but "perhaps introduced;" and was received by A. Gray from West Kentucky. "C. crassifolia," its leaves serrate but also having a long tapering point, was observed by F. A. Michaux on the Ohio and in Tennessee, and by Nuttall on the Arkansas.

Persea Carolinensis of the alluvial Atlantic border of North America. The *red bay* is a tree called by the natives on the Roanoke "ascopo," and known from early times, — described by Hariot as like a bay tree and with the bark hot and acrid (De Bry i. 8): "lauri" were observed by Verrazanus on the coast in Lat. 34°; by J. le Moyne, in East Florida; and by Cabeza de Vaca, on the North shore of the Mexican gulf: P. Carolinensis is known to grow as far as 38° in the Delaware peninsula (A. Gray); was observed by Catesby i. pl. 63, and Elliot, in South Carolina; by F. A. Michaux, from Lower Virginia to Florida and the Mississippi; by Chapman, in "rich shady woods, Florida to North Carolina," and a shrubby variety with larger flowers in "pine-barren swamps;" by Croom, as far as 30° 30′; and by Darby, in Opelousas.

Zizania miliacea of Carolina and the Lower Mississippi. An aquatic reed-like grass, known from early times: — West of the mouths of the Mississippi, Cabeza de Vaca found a kind of small grain ground by the natives with walnuts: Z. miliacea is described by Michaux; was observed by Elliot in South Carolina; by Chapman, in "deep marshes and ponds, Florida, and northward," the "staminate and pistillate spikelets intermixed;" by H. Little, in the delta of the Mississippi; by Nuttall, in Salt river of Arkansas and as far as 35°.

"1326 A. D." (Alst. p. 226), in Asia Minor, Othman succeeded by his son Orchan, second Turkish sultan. The captured city of Bursa became Orchan's seat of government.

Cufic and Arabic inscriptions on tombs around Oufa, of princes anterior to the Russian occupation: and not far from Verkoturia, ruins of an ancient Tchoud or Tartar fortress — (Pall. trav. ii. 11 and 377).

Polygonum undulatum of the Uralian plains. Called by the Russians "kizlez" or "kapousta," by the Baschkirs "kamouslouk" and eaten by them from early times — (Pall. trav. ii. 33); observed by Gmelin fl. iii. pl. 10 in Siberia; by Pallas, beyond Oufa, the stems before flowering agreeably acid.

Valeriana phu of Eastern Europe and the adjoining portion of Asia. Called in the Baschkir country "zemlianoï ladan" ground-incense, and from early times employed medicinally — (Pall.): described by Valerius Cordus f. 3, and Blackwell pl. 250; known to grow as far West as the Upper Rhine and Silesia (Pers.); observed by Pallas ii. 136 on the East side of the Ural mountains.

Adonis Volgensis of the Uralian plains. Called by peasants "starodoubka," and used medicinally from early times, — observed by Pallas i. to ii. 26 on the Lower Volga, and becoming more frequent Eastward beyond the Yaik.

Lilium martagon of West Siberia. Called "sarana," and from early times its root collected and eaten by the Baschkirs, — observed by Pallas ii. 185 to 239 on the route to and around Ekaterinbourg; by Jacquin pl. 351 as far West as Austria, and by Sibthorp on the mountains of Greece (but not found by others, Fraas). Farther West, is described by Dodoens p. 201, and C. Bauhin pin. 87; is termed "martagum" by Camerarius ep. 571 (Schmiedel ed. Gesn. i. p. 90), "l. floribus reflexis montanum flore rubente" by Tournefort inst. 370; has become naturalized in Italy, and on the mountains of Sicily and France (Fée, and Lenz), in various parts of middle Europe as far as Sweden, and within about three centuries in Britain (Engl. bot. pl. 2799, Pers., Fries, and A. Dec.).

Allium nutans of the Uralian plains. Called in the Baschkir country "lisoun" (Pall.), and known from early times: — observed by Gmelin i. pl. 12 in Siberia; by Pallas trav. ii. 408, in the grassy country near Tcheliabinsk.

"Sept. 22d" (Blair), an army brought by queen Isabella into England, against her husband Edward II. — Who, in "January" following, was deposed by parliament, and was succeeded by his son Edward III.

"1327, Jan. 20th" (Skeat ed. Piers Pl.), in England Edward II. deposed, and on the "25th" succeeded by Edward III.

"In this year" (Ideler, and E. A. Soph.), Maximus Planudes writing.

Artedia squamata of the East Mediterranean countries. An Umbelliferous annual: the σεληνοανηθων prescribed by Maximus Planudes morb. mat. — may be compared: A. squamata is termed "thapsia orientalis anethi folio semine eleganter crenato" by Tournefort cor. 22; was observed by Rauwolf on Lebanon (Pers.); by Sibthorp, in the Peloponnesus and along the river Limyrum in Lycia; and the scarious fruit-margin is described by Persoon as "lobatoalata magna."

"1328 A. D. = 1st year of the 'tchi-ho' of Tai-ting-ti, and 1st year of the 'thian-li' of his successor Wen-tsoung II." (Chinese chron. table). The Grand lama on a visit from Tibet, was received with the highest honours in the palace of Wen-tsoung II.: an act condemned by Chinese historians.

"The same year" (Alst.), Andronicus II. succeeded by Andronicus III., sixty-third Byzantine emperor.

The sect of Bathenians not extinct: Ebn Batuta 5 and 9 finding in Syria "Ismailiah," who "act as arrows" for sultan Naser. Farther South, he describes the inhabitants of Hali in Yemen as aboriginal Arabs, "and their sultan of the tribe Beni Kenana."

From Aden continuing South, Ebn Batuta 9 reached Makdashu in Equatorial Eastern Africa; Mambasa, "abounding in *bananas*, lemons, and citrons;" and Kulwa (Keelwa). But from a remark on leaving, he does not appear to have seen *cocoa palms* on the African coast.

Chionanthus? sp. of Eastern Equatorial Africa. A *wild olive* called there "meesoo" (Grant); and the "jammoon" having fruit "like an olive with a stone except that exceedingly sweet" observed by Ebn Batuta at Mambasa on the East African coast, — may be compared: the "meesoo" was observed by Grant "in low moist ground" from about 6° 30′ S. to "3° 15′ N." on the Nile, a "handsome lofty tall-trunked tree," with "edible, large pea-sized, one-stoned drupes in clusters." (See Olea? dioica.)

"1329, December" (Nicol.), a synod at Paris. "To determine the limits of the royal and ecclesiastical jurisdictions."

"1330 A. D." (Nicol.), a synod at Lambeth. An article, Forbidding "the appointment of any *hermit* without the permission of the bishop of the diocese."

As early as this year (see Pallas trav. iv. 88), the Samoyedes dwelling along the Arctic shore

of Siberia from the vicinity of the White Sea to the Yenisei,* having come according to their own account from the East. — Soujef found them resembling the Tungusi and having coarse black hair with very little beard (Mongolians), keeping *reindeer*, but living by hunting, and sometimes fishing; having "tadib" magicians, called in at funerals; but any one pronouncing the name of a dead man becomes the mortal enemy of the whole family, though the name is preserved and given to a child of the second or third generation. Each Samoyede has an idol in his tent; and the women bury the placenta in some by-place, beyond the reach of beasts of prey.

Polygonum viviparum of the Arctic region and mountains farther South. Called in Sweden "mortog" or "swingras" (Linn.), its root from early times collected in summer by the Samoyedes, and eaten with the flesh of reindeer and wild game — (Gmelin): the plant is mentioned by Matthioli 674 (Spreng.); is termed "bistorta minima" by Bauhin hist. iii. 539, "b. alpina media et minor" by C. Bauhin pin. 192, and Tournefort inst. 511, is known to grow from Lapland "to 56°" at or near the sea-level and farther South on the mountains of middle Europe (fl. Dan. pl. 13, Engl. bot. pl. 669, Pers., and Wats.), also in Russia and Siberia (Amm., and Pall.): was observed by Rudbeck the younger, and Linnæus, in Lapland and Sweden; by Haller, and Decandolle, on the mountains of Switzerland; by Sibthorp, on the mountains of the Peloponnesus; by Bieberstein, on mount Alwar in Armenia; by Pallas, at Lake Baical; by Gmelin, throughout Siberia to Kamtchatka. Westward, by Sabine from Spitzbergen to Greenland (Hook.); is known to grow on Melville Island in Arctic America (Wats.); was observed by . . . . in Labrador (Pursh); by Oakes and myself, on the alpine portion of the White mountains; by E. James, on the Rocky mountains; by Mertens, at Norfolk Sound on the Pacific; and according to A. Gray, grows as far South as the "shore of Lake Superior."

"The same year" (Nicol.), in a synod at Kherna in Armenia, Obedience was promised by the Armenian church to the pope.

The Piana affluent of the Volga (according to Pallas trav. i. 76) received its name at the time of the wars between the Russians and the Mordouan princes; and a ruined intrenchment opposite Lopatina probably belongs to the same period. — He found the Mordouans nearly all converted to Christianity, and differing from the Russians only in language and the dress of the women.

Adonis vernalis of the Uralian plains. Yellow-flowered, and from early times employed in dyeing by the Mordouans, Tchouvaches, and Tartars, — (Pall. trav. i. 94 to iii. 26): observed by Pallas i. 94 to iii. 26 on the Volga and in West Siberia; by Crantz in Austria, and known to grow as far West as France (Mill. dict. pl. 14, Pers., and Steud.).

Rubus saxatilis of Northern climates. Called by the Mordouans "eidalopart," and from early times used medicinally, — observed by Pallas i. 110 at 55° on the Volga and Ural; by Bieberstein, on Caucasus. Westward, by Clusius 116; is known to grow from Switzerland to Britain (Smith fl. 545), Denmark (fl. Dan. pl. 134), and Lapland (Wats.); was observed by Hooker on Iceland; by Michaux, from Hudson's Bay to the seashore of Canada; by Pursh, from Canada to the mountains of New York and Virginia; by Bigelow, in the environs of Boston (Dec.); by Torrey as far as 41° on the Hudson; by myself, from 46° near Montreal to 40° along the Atlantic; and was received by A. Gray from Wisconsin.

Stellaria dichotoma of the Uralian plains. Called by the Mordouans "souti-aat," and from early times employed medicinally in decoction — (Pall. trav. i. 110): known to grow also in Siberia (Smith ined. pl. 14).

Acer tartaricum of the Uralian plains. A shrub called at Samara "neclenn," known from early times, — and observed on the Lower Volga by Pallas trav. i. 234.

Anemone (*Pulsatilla*) *patens* of the Uralian plains. Called at Samara on the Volga "odnomesetschnik" throughout Siberia "vetrenitza" wind-flower (Pall.), and from early times used in dyeing, — observed by Pallas i. 225 to iii. 25 from the Volga to the Irtich, vernal and fugacious; known to grow Westward as far as Silesia (Pers.).

Anemone sylvestris of the Uralian plains. Called on the Lower Volga "ovetschié kounichko," and known from early times, — observed by Pallas i. 257 abundant and forming streaks on the plains.

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* *Arctostaphylos alpina* of the Arctic region and mountain-summits farther South. A dwarf shrub called by the Russians at the mouth of the Obi "amprick," known from early times, — and observed by Soujef (Pall. trav. iv. 34); observed by Gmelin on the mountains of Verchoturia, Olecmense, and at Ochotsk; by Baumgarten i. 365, on the mountains of Transylvania; and known to grow in Lapland (Wats.), Finland and Sweden (Fries), Scotland (Lightf. pl. 11), on the Swiss Alps, and on the Pyrenees (Clus. pann. 77, Dec., and A. Dec.). Westward, was observed by Hooker on Iceland; by Parry, at Five-hawser Bay; by Lapylaie, on Newfoundland; by Oakes, on the White mountains; was received by A. Gray from mount Katahdin; is known to grow on the Rocky mountains (Wats.); and was observed by Chamisso on Unalascha.

Spiræa crenata of the Uralian plains. A handsome shrub called at Samara "tavolga," known from early times, — and observed on the Lower Volga by Pallas i. 235: known to grow as far West as Hungary (Pers.).

Bunias Orientalis of the Uralian plains. A tall Cruciferous plant called on the Lower Volga "dikaia retka," and from early times its stem eaten crude, — observed by Pallas i. 276 frequent throughout; by Gmelin iii. pl. 57, in Siberia; known to be frequent also about Caucasus and through Southern Russia as far as Transylvania (A. Dec.), Livonia and Lithuania (Ledeb.), Galicia (Zawadski), and Northeastern Germany (Koch, and Rohl). Was received by Linnæus from Russia, but "in 1779" was found by Retz fl. scand. 128 springing up spontaneously in Scandinavia; "in 1819" had become frequent in Sweden, Norway, and Denmark (fl. Dan. pl. . .), and "in 1820" a pernicious weed at Upsal that could not be extirpated (Wahlenb.); in Belgium, after being cultivated became naturalized "before 1827" (Lestib.); was observed by Lejeune "in 1824" in clefts of rocks near Limbourg, Dison, and other places, "exotic and naturalized;" and from at least "1827," when mentioned by Chevalier as seemingly naturalized, has become clearly naturalized around Paris (Mut., and Cosson).

Hieracium Sibericum of the Uralian plains. Called on the Lower Volga "skerda," by Baschkirs "chaké," and from early times its stem eaten crude, — observed by Pallas i. 276 to ii. 28 frequent there as far as Oufa; by Gmelin ii. pl. 10, in Siberia (Pers.).

Lychnis Chalcedonica. of the Uralian plains. The *scarlet lychnis* is called on the Lower Volga "dikoé mouilo" or "koukouschkino," or simply "koukouts" soap, from foaming in water so as to be used like soap, — observed there by Pallas trav. i. 282 to 299. Transported to Europe, is termed "flos constantinopolitanus" by Dodoens . . ., and Lobel hist. 183; is described also by Dalechamp pl. 820, Gerarde, and Parkinson; has become a favourite garden flower, known even in Japan (Thunb.). By European colonists, was carried to Northeast America, where it continues in gardens.

Hedysarum grandiflorum of the Uralian plains. A beautiful species, known from early times, — observed by Pallas iii. 490 abundant on the Lower Volga, becoming rare on the Irtich. Termed "astragalus grandiflorus" by Linnæus (Steud).

Trifolium spadiceum of Sweden and Germany. Resembling T. agrarium, but the flowers ferruginous; employed medicinally by the Mordouans — (Pall. trav. i. 110): termed "t. pratense flore rufescente" by Vaillant paris 196, but hardly known beyond the limits of Sweden and Germany (Smith in Sibth.): observed by Linnæus in mountain meads as far as Upsal; by Schreber pl. (Pers.), probably in Germany.

Centaurea jacea of middle Europe and the adjoining portion of Asia. Called in Sweden "knappar" or "hattar" or "gohlschjadra," and from early times used for dyeing wool yellow (Linn.), and by the Mordouans medicinally — (Pall. i. 110): termed "jacea nigra pratensis latifolia" by C. Bauhin pin. 271, and known to occur in meads and fallow ground throughout middle Europe (fl. Dan. pl. 519, Engl. bot. pl. 1678, and Pers.): observed by Linnæus in Sweden, frequent in fallow ground and sunny meads as far as Scania; by Sibthorp, on mount Athos.

"1332 A. D. (= 1992d of Synmu," art de verif.), civil war and resignation of the dairo Daigo II. in favour of Kouo-gien; who received a visit from the cubo Takaudsi; — but at the end of two years, re-established Daigo II. in office.

As early perhaps as this year (Pall. trav. iv. 51), a fortified city of the Ostiaks in existence at Langivach on the Lower Obi, — but Soujef found there only a single but inhabited "iourten." The Ostiaks, one of the first people of Siberia with whom the Russians came in contact, are a nation of fishermen along the Lower Volga, mostly having reddish or blond hair (White Race), dwelling in villages along the river from three hundred versts below Tobolsk to the gulf, but having *dog-sledges* for travel in winter, herds also of *reindeer* belonging to the more wealthy. Soujef found the Ostiaks simple-minded, timid, full of prejudices, and very uncleanly in their mode of living; they practise *tattooing*, and burn a dried fungus on the skin as a substitute for *moxa;* have hereditary chiefs, not much regarded after the Russian conquest; also schamans or priest-sorcerers; perform religious rites to the dead, and to certain mountains and trees; and the idol most venerated by them and the Samoyedes near the Obi is in the Voksarskoï country "seventy versts" North of Obdorsk and "67°," is composed of two persons, male and female, and is carefully concealed from the Russians.

Empetrum nigrum of Arctic and Subarctic climates. A diminutive spreading shrub having the alpine or Arctic aspect, though extending into lower latitudes, called in Britain *crow berry* or *crake berry* from the Danish "krake bär" (Prior), in Sweden "krak-ris" or "krakling" or "skraken" or "lopperis" (Linn.), by the Russians at the mouth of the Obi "vodæniza" and by the Siberians "schikscha" (Soujef), and known from early times: — termed "erica baccifera" by Clusius pan. 29, "e. b. procumbens nigra" by C. Bauhin pin. 436, and known to grow in Arctic and Subarctic Europe and Asia, and on the mountains of Switzerland (Petiv. 72, fl. dan. pl. 975, Engl. bot. pl. 526, and Pers.): observed by Scheffer, and Linnæus, frequent in cold sterile places in Lapland and Sweden;

grows according to Watson in perhaps every county in Scotland; according to A. Decandolle, at the altitude of "7500 feet" on the mountains of Switzerland; was observed by Savi on the Appenines; by Bieberstein, on the upper portion of Caucasus; by Soujef, at the mouth of the Obi (Pall. trav. iv. 34); by Gmelin, from the Yenisei to Kamtchatka; by Chamisso, in Kamtchatka, at Bering's Straits, and on Unalaska. Westward, by Hooker on Iceland; is known to grow in Greenland as far as 71° (Wats.); was observed by Parry in Arctic America; by Michaux, on the seashore of Canada; by myself, on the Lower St. Lawrence and near the sea-level along the Atlantic as far as 45° on Mount Desert, also on the alpine portion of the White mountains; and was brought by Long's Second Expedition from the country around the sources of the Mississippi.

"1333 A. D. = 'youan-toung,' 1st year of Chun-ti III., of the Youan" or Twenty-second dynasty — (Chinese chron. table).

"Sept. 12th" (Ebn B. 12 to 14, and Yule cath. 404), Ebn Batuta after returning to Egypt, crossing the Mediterranean and Black Sea, journeying near the "mountains of the Russians, Christians with red hair and blue eyes ugly and perfidious," and as far North as Bulgar on the Wolga, where he heard of *dog-sledges* used in the "Land of darkness forty days" distant, accompanying sultan Mohammed Uzbek to Astrachan, proceeding thence to Bokhara and the city of Balkh "since its destruction by Jenghiz Khan remaining in ruins," arriving at the Indus. He continued on to Kabul, the Punjab Desert, and reached Delhi while the sultan was engaged in re-peopling it (his attempt to transfer the inhabitants and seat of government to Dowlatabad having failed, according to Elphinstone).

One hundred and sixty-ninth generation. May 1st, 1334, onward mostly beyond youth: the Persian writer Sultan Aly of Korassan wr. 1334 (Ainsl.): the Jewish writers, Abraham de Kaslar, Bongodas Cohen, Emanuel ben Jacob, Aaron ben Elia, Levi ben Gerson, Moses Narboni, Joseph ben David Jewani, Immanuel of Rome, Matatja ben Moses: the Arab writer Ebn Khaldun: the Greek writers, Matthaeus Blastaris d. 1335, Armenopulus d. after 1350, Nicephorus Gregoras d. after 1359, Nicolaus Cabasilas, Gregorius Palamas d. after 1351, Barlaam, Nilus of Rhodes, Leontius Pilatus, Petrus Bertrandus, Landulphus Carthusianus, Simon de Cassia, Richardus Radulphus, Astesanus Astensis, John Cenobarba, Guy de Chauliac: the scholastic theologians, William Occam, Monaldus Dalmata, Nicolaus de Lyra, Pelagius Alvarus, Petrus Paludanus, Guido Carmelita, Adamus Goddam, Joannes de Bacone, Thomas Argentinensis, Richardus Armachanus, Nicolaus de Gorram, Alphonsus Vargas, Robertus Holcot, and Gregorius Ariminensis; Jean de Roquetaillade (Pouchet): the botanist Bartholomew Glanville; the painter Stefano il Fiorentino d. 1350.

"Dec. 20th" (Alst., and Nicol.), Joannes XXII. succeeded by James Fournier, now Benedictus XI., forty-first pope.

"The same year" (Crawfurd vii. 11), the island of Machian conquered by the people of Ternate.

"In the first half of the Fourteenth century" (Pouchet), the composition of *potter's varnish* first described by Pierre le bon de Lombardie.

"1337 A. D. (= 1997th of Synmu," art de verif.), Daigo II. succeeded by Quo-mio, younger brother of Kouo-gien, and now dairo of Japan. — He reigned two years, or according to other accounts "twelve."

"Beginning of June" (Blair), the first *comet* whose course is described with astronomical exactness, Nicephorus Gregoras being the observer. (Enumerated by J. R. Hind, and Humboldt cosm. i. 1, among those whose *orbit* is known from Chinese observations.)

"1338 A. D." (Crawf. vii. 11), in Java, building of the magnificent Buddhist temple of Boro Budur.

"In this year" (Yule cath. 313), arrival of envoys bearing a letter from the Chinese emperor to the pope, requesting his blessing and the frequent exchange of messengers. In his reply dated Oct. 31st in the "fourth" year of his papacy, Benedict XI. commences, We although unworthy "locum Dei tenemus in terris." He appointed legates in return, including John de' Marignolli, — who reached the court of Uzbek on the Volga "in 1339," Armalec in Central Asia "in 1340," and Pekin in China "in 1342" (an event noted also in the Chinese annals). After remaining "three years," John de' Marignolli proceeded South through China, and embarking at Zayton not earlier than "Dec. 26th 1346," returned by sea, by the way of the island of Saba South of the Equator, and Ceylon.

"1339 A. D." (Alst.), at Spires, an assembly of electors, dukes, bishops, counts, and the most learned in divine and human affairs; convened by the emperor Louis II. Bavarus. Against the tyranny of the pope.

"In this year" (Yule cath. 281), through unprofitable dealings with Edward III. of England failure of the Bardi of Florence, having extensive commercial relations with the Eastern countries. Pegolotti, a factor in their employ, writing commercial directions, especially in regard to Constantinople and the trade overland between the Black Sea and China.

Laurus caryophyllus of Anam. The imported fistuchi di gherofani mentioned by

Pegolotti — (Yule cath. 305) may be compared: clove twigs, such as are imported into the Arab countries, were seen by Ebn Batuta in the Malayan archipelago; and L. caryophyllus, by Loureiro i. 308 growing in Anam. The "canelle giroflée," clove-cinnamon, is said in Trevoux dict. to be the inner bark of the "noix giroflée," a tree of Madagascar (Yule 473).

"1340 A. D. (= 741 A. H." of Ferisht., Elph.), the Muslim Empire in Hindustan having reached its farthest limits, Bengal about this time revolted under a Muslim officer, and was never again subdued. Coromandel almost immediately followed, and with equal success; — and four years later, Telingana and Carnata.

"About June 23d" (Blair), near Helvoetsluys, the French defeated in *naval combat* with Edward III. of England.

In this year (= "14th of Edward III.," Fabyan, chron. lond. 57, and Skeat ed. P. Plowm.), nobles coined, the beginning of "the series of *English* gold coins." — They "continued the only gold coin till the angels of Edward IV., 1465."

"The same year" (Nicol.), a synod at Saltzburg. A priest was degraded.

"In this year" (Garc. de la Vega), Viracocha succeeded by Pachacutec, now ninth Inca of Peru. — He reigned "fifty, or according to some sixty years" (addit. art de verif.).

Many sayings of the Inca Pachacutec have been preserved, and among them, that "He who attempts to count the stars, not even knowing how to count the marks and knots of the quipus, ought to be held in derision" — (Blas Valera, and G. de la Vega vi. 36).

Bombax (Eriodendron) anfractuosum of Eastern Equatorial America. A large tree called in Brazilian "zaamonna" (Piso), and known from early times: * — observed in Brazil by Piso; by Jacquin am. pl. 176, and Descourtilz, in the West Indies, but no Carib name given, and according to Macfadyen i. 93 is readily propagated by stakes placed in the ground. By European colonists was carried Westward across the Pacific to the Philippines, where it has become well known and is called in Pampango "bulac castila," in Tagalo "boboi," in Bisaya "doldol;" to the neighbouring islands (Rumph. i. pl. 80); to Burmah, "exotic" but "often planted, and the floss" on the seed preferred to that of the indigenous cotton-trees (Salmalia); to Hindustan, called in Bengalee "shwet-shimool," in Tamil "elavum," in Malabar "pania" or "paniala," in Telinga "poor," in Hindustanee "huttian" (Drur.), observed by Rheede iii. pl. 50 in Malabar, by Ainslie, Roxburgh, Wight, and Drury, in other parts of the peninsula, by Graham "in gardens Bombay," but according to Auld seemingly "wild in Kandesh" and called "shameula;" to Eastern Equatorial Africa, observed by myself planted on Zanzibar, by Grant in "7° 27′ S. and 2° N." on the Nile, and called "meesoofee."

Copaifera Jacquini of the West Indies. An Amyroid tree yielding *copaiva balsam*, known from early times: — observed in the West Indies by Jacquin am. pl. 86, and Descourtilz, but no Carib name given. The imported drug according to Lindley is "an acrid, bitter, nauseous liquid resin with stimu-

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* *Ionidium poaya* of the unwooded portion of Interior Brazil. Suffruticose and very shaggy, its root from early times taken as emetic: — observed by A. Saint-Hilaire rem. 308 in the Western parts of Minas Geraes and elsewhere, its roots substituted for true ipecacuanha, and called "poaya do campo" (Lindl.).

Ionidium brevicaule of Brazil. An allied species from early times used for an emetic; — the powdered bark of the root is rubbed up with sugar and milk: observed by Martius med. pl. 8 (Lindl.).

Ionidium urticæfolium of Brazil. Also from early times used for an emetic: — observed by Martius med. pl. 4 and 9 (Lindl.).

Cassia hirsuta, of Brazil. Called there "fedegozo" (Lindl.), and known from early times: — observed by Martius. From transported specimens, described by the younger Linnæus suppl. 231 (Pers.).

Cassia falcata of Brazil. Known there from early times: — observed by Martius (Lindl.). From transported specimens, described by Linnæus hort. cliff. 159 (Pers.).

Acacia niopo of Eastern Equatorial America. A tree called "niopo" by the Guahibos of the Orinoko, "parica" by the Muras and other tribes on the Upper Amazon (Spruce); and from early times its seeds roasted, pulverized, and used as stimulant narcotic snuff: — observed by R. Spruce (Mark. edit. Ciez. p. 341).

Peperomia peltata of Tropical America. Called in Brazil "caa-peba" broad-leaf (Lindl.), and from early times used medicinally, — its fruit in decoction as a powerful diuretic (Dietr., and Mart.).

Peperomia umbellata of Tropical America. Called in Minas Geraës "caapeba," in Southern Brazil "periparaba" (Lindl.), and from early times its roots used medicinally: — observed in Brazil by Martius trav. ii. 93; by Plumier pl. 73, and Swartz, in the West Indies (Pers.); described also by Humboldt and Bonpland n. g. i. 59.

lant, diuretic, and cathartic properties," and according to Hayne is furnished by various species: "balsamum copaivæ" was seen by Forskal mat. med. in the drug-shops of Egypt.

Copaifera multijuga of Eastern Equatorial America. A forest-tree, perhaps the "copan" of the Brazilians — seen by Lerius 202, and referred to this tribe by Sprengel: the copaiva tree was observed by Nieuhoff in Brazil, wild and very lofty; and according to Schomburgk (note to Ralegh) grows also in the Guayana forest. C. multijuga according to Hayne furnishes the *copaiva balsam* exported from Para (Lindl.).

Copaifera coriacea of Interior Brazil along the Southern Tropic. Known from early times, — and observed by Martius in the province of S. Paul (Lindl.).

Copaifera Langsdorfii of Interior Brazil along the Southern Tropic. Known from early times, — growing in the same district (Desf. in mem. mus. vii. 376) with the last species, and both according to Martius furnishing the *copaivæ balsam* of Brazil (Lindl.).

Anacardium Occidentale of Eastern Equatorial America. The *cashew-nut* is a large Terebinthoid tree called in Brazilian "aca-iou" — according to Lerius 205, who found difficulty in distinguishing it among high trees; grows wild according to Piso 57 in Northern Brazil, and much used by the natives; wild also in Guayana (Aubl. 392): but South of Lat. 13° was found by A. Saint-Hilaire nowhere indigenous, by myself, only under cultivation: in the West Indies was observed by Jacquin am. 124, and Descourtilz, but no Carib name given, is probably only planted, as also in Nicaragua, Panama, and Guyaquil, and was not seen wild in the portion of America traversed by Humboldt and Bonpland (A. Dec.). By European colonists was carried Westward across the Pacific to the Philippines, called in Tagalo "casoi," in Ylocano "ballogo," and its fruit sold in market (Blanco); to the neighbouring islands, its Malay name derived from the American (A. Dec.) and the tree observed by Rumphius i. 177 on Amboyna and Celebes; to Java, cultivated there (Blume); to Burmah, "exotic" and called there "thee-ho-tha-yet" (Mason); to Hindustan, having no Sanscrit name (Roxb., and Pidd.) but called in Bengalee "hijli-badam," in Tamil "mundiri-marum," in Malabar "paranki-mava" or "kappa-mavakum," in Telinga "munta-mamidi" or "jidi-mamidi," in Hindustanee "kaju" (Drur), was observed by C. Acosta in 1578 in gardens at Cochin, by Rheede iii. pl. 54 in Malabar, by Roxburgh, Wight, and Drury, from Chittagong to Trichinopoly, by Graham as far as Bombay; to Eastern Equatorial Africa (Lour., and myself): also by European colonists was carried across the Atlantic to the Islands of Fernando Po and S. Thomas (fl. nigr. 288); and in French is called "pommier d'acajou" (A. Dec.). From transported specimens, is termed "anacardium indis familiaris" by Ruellius i. 37; is mentioned also by C. Stephanus; nuts brought from Brazil to Lisbon were seen by Clusius; were found by Rouyer imported by the way of Europe into Egypt.

Ipomoea operculata of Brazil. Called there "jeticucu" (Piso), and from early times employed medicinally: — observed in Brazil by Piso 93, and Martius. Said by Guibourt to furnish a part of the *mechoacan* of commerce (Lindl.).

"1341 A. D." (Alst.), Andronicus III. succeeded by Joannes V. Palaeologus, sixty-fourth Byzantine emperor. And in this year (Alst. p. 307), Mysia and Thrace devastated by the Turks.

"The same year (= 742 Hej.," Pall. trav. i. 192), date of the latest Arabic inscriptions in the cemetery of the ruined city of Bolgari, on the Lower Volga.

Cirsium heterophyllum of Europe and the adjoining portion of Asia. A thistle called in Sweden "borstar" or "gullborste" or "brundborste" (Linn.), and known from early times: — termed "cirsium singulari capitulo magno s. incanum varie dissectum" by C. Bauhin pin. 377, "cirsium singulari capitulo squamato vel incanum alterum" by Tournefort inst. 447, and known to grow in meads throughout Northern and middle Europe (Engl. bot. pl. 675, Lapeyr. in act. toul. i. pl. 19, and Pers.): observed by Linnæus in Lapland and Sweden, in depressed situations in meads; by Haller pl. 21, in Switzerland; by Allioni pl. 34, in Piedmont; by Sibthorp, in the environs of Constantinople.*

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* *Cirsium oleraceum* of Northern Europe and Asia. A thistle, its leaves from early times cooked and eaten by the Russians — (St. Bielke, and Linn.): termed "carduus pratensis" by Lobel ic. ii. 11, "cnicus pratensis latifolius" by C. Bauhin pin. 376: observed by Linnæus in Sweden, in moist places in the open ground of Scania.

Galium boreale of Subarctic climates. Called in Finland "mattara," and from early times its root used there for dyeing wool — (Lin. fl. lapp.): observed by Linnæus very rare in Lapland, but frequent throughout Sweden; by Pallas trav. i. 45, on the Volga below Moscow, but not East of the Ural; known to grow as far South as Germany (Poll.), France (Lam. fl. fr., and Pers.), and Switzerland (Wats.). Westward, was observed by Hooker on Iceland, and received from Canada from 68° to Niagara Falls; was observed by Darlington as far as 40° near Westchester, Penn.; by Pursh, near Wilksbarre and along the Lakes; by Drummond, at 54° on the Saskatchewan; by Nuttall, at the Southern sources of the Columbia; and by Mertens, at Norfolk Sound on the Pacific.

Cytisus supinus of the Uralian plains. Called on the Volga "raketnik" (Pall.), and from early times valued there as excellent feed for sheep, — observed by Pallas i. 30 nearly as far West as Moscow; by Jacquin i. pl. 20, on the sunny hills of Pannonia and Austria; known to grow also in Siberia (Pers.).

Silene Tartarica of the Uralian plains. Known from early times: — observed by Pallas along the Volga nearly as far West as Moscow; described also by Linnæus, and known to grow as far as Tartary (Pers.).

Cineraria palustris of Northern Europe and the adjoining portion of Asia. Called on the Volga "vipadaschnaiatrava," and from early times bruised with oil and applied medicinally, — observed by Pallas as far South as the forest of Mourom; by Linnæus, in Scania in Sweden; and is known to grow as far as Denmark (fl. Dan. pl. 573).

Salix arenaria of Northern Europe and the adjoining portion of Asia. Its bark from early times used in tanning *Russia leather*, — as witnessed by Pallas i. 70 at Arsamas on the Volga: S. arenaria was observed by Wahlenberg in Lapland; by Lightfoot, in Scotland; by Haller pl. 14, on the mountains of Switzerland; and is known to grow in Denmark (fl. Dan. pl. 197).

Iris Siberica of the Uralian plains. Called in Russian "boubentschik" (Pall.), and known from early times: — observed by Pallas trav. i. 52 along the Volga; known to grow also in Siberia, and as far West as Austria and Germany (Jacq. fl. pl. 3, Roth, Moench, Pers., and Steud.).

Bidens tripartita of Europe and Northern Asia. Called in Britain *bur marigold* (Prior), at Constantinople "agriō katĕphithia" (Forsk., and Sibth.), in Russian "tckerjoda," and from early times used on the Volga in dyeing — (Pall. trav. i. 95): the "verbena supina" of Tragus 211 is referred here by Sprengel: B. tripartita is described also by Ray syn. 187, and Thuillier 422; is termed "b. foliis tripartito divisis" by Tournefort inst. 462; is known to occur in Britain and throughout middle Europe (Curt. lond. iv. pl. 57, Roth, and Pers.); was observed by Brotero in Northern Portugal; by Forskal, and Sibthorp, around Constantinople and Smyrna; by Bieberstein, along the Taurian mountains; by Gmelin, on the Tobol river in Siberia; and is known to grow in Dahuria: the whole plant according to Lindley "acrid and when chewed excites salivation powerfully." Notwithstanding its North American aspect, is given as distinct from *B. frondosa*.

Stipa pennata of the Uralian plains. A plumed grass called by Russians "rovouil-trava," and known from early times, — observed by Pallas i. 262 frequent in barren soil on the Lower Volga. Westward, is termed "gramen spicatum aristis pennatis" by Tournefort inst. 518; was observed by Sibthorp, and Gittard, from mount Athos to Cyprus and the Peloponnesus; and is known to grow as far as Germany and Sweden (Pers.).

Lycopodium complanatum of Northern Europe and America. Called in Sweden "jœmna," and from early times used to dye woof yellow (Linn.); on the Volga, in dyeing generally — (Pall. trav. i. 93): termed "muscus terrestris ramosus pulcher" by Bauhin hist. iii. 757, "sabina sylvestris" by Tillands pl. 69, observed by him, and Linnæus, abounding in Sweden, though seemingly unknown in other parts of Europe. Westward, was received by Dillenius musc. pl. 59 from America (Linn); was observed by myself frequent in the forest from 45° to 40° along the Atlantic; by A. Gray, "common" in central New York, in one form extending "far northward;" grows according to Chapman in our Southern States, in "woods along the Alleghanies."

"The same year" (art de verif.), Naser suceeeded by Abubekr; and after "forty days," by Koutchouk, twelfth Memluk sultan of Egypt.

"July 1st" (Boccaccio, Webb, and Major edit. Bethenc.), under instructions from Alphonso IV. of Portugal, sailing of Angiolino del Tegghia for the Canary Islands, commonly called the "Rediscovered." According to the Genoese pilot Nicoloso de Recco, in proceeding from island to island the land was full of, "goats, sheep, and wild hogs," and "inhabited by naked men and women" dwelling in cabins "made with much skill of square stones." On one island, the sailors found a chapel or temple containing only the stone statue of "a man with a ball in his hand," naked with the exception of "an apron of palm-leaves;" but in general they were afraid to land, and on no island did they venture far from the shore. The natives communicated from island to island only by swimming, and of those swimming out to the boats, four "were taken on board and afterwards carried away." These four were "courageous and very intelligent" beardless young men, with "handsome faces," and "long light hair" veiling their bodies to the waist; they "were uncircumcised," and wore only "a sort of apron" forming "an effectual covering," that of the chief consisting of palm-leaves hanging from a cord, that of the others of reed fibres "painted in yellow and red:" their language was unknown, but "was soft, and their pronunciation rapid and animated like Italian;" they sang very sweetly, and danced almost as well as Frenchmen; they were gay and merry, and "much more civilized than many Spaniards;" showed "remarkable faithfulness and honesty," knew nothing of "sabres," nor of the use of "gold and silver money." "Marriage was observed among them, and the married wore aprons," but "the maidens went quite naked."

"1342, May 7th" (Alst., and Nicol.), Benedictus XI. succeeded by cardinal Peter Roger, now Clemens VI., forty-second pope.

"The same year" (Nicol.), a synod at Saumur. A canon, Forbidding "the holding of pleas in churches or their vestibules."

"The same year" (Blair), in England, "knights and burgesses first sit together in the same house of parliament."

Ranunculus bulbosus of Europe and the adjoining portion of Asia. Called in Britain with allied species *king-cob* or *king-cup* or *gold-cup* or *butter-cup* or *crowfoot* (Prior), in which we recognize the pes corvi identified in gloss. Sloane v. f. 45 with the ramys fote having a yellow flower and "a knobe in the rote"—(Cockayne): R. bulbosus is described by Valerius Cordus f. 121, Fuchsius, Urzedowa (Spreng.), and Lobel pl. 667; is termed "r. pratensis radice verticilli modo rotunda" by Tournefort inst. 289; and is known to grow in France and throughout middle Europe as far as Denmark (fl. Dan. pl. 551, and Pers.). Eastward, was observed by Sibthorp, and Chaubard, from the Peloponnesus to Constantinople. By European colonists, was carried to Northeast America, where it has become naturalized, occurring in Newfoundland, Canada (Hook.), but as yet according to A. Gray "very abundant only in E. New England, seldom found in the interior." The plant according to Lindley is "exceedingly acrid, raising blisters and producing extensive inflammation" but "not affecting all persons alike."

Osmunda regalis of Northern Climates. Called in Britain *osmund* or *osmund the waterman* or *flowering fern*, by Brunswyck "osmundi," in the Ortus Sanitatis 294 "os mundi," and in a Vocabulary in Mayer and Wright p. 139 "bon-wurt" (Prior): the dichefern of gloss. Sloane v. f. 40—is referred here by Cockayne: O. regalis is termed "o. vulgaris et palustris" by Tournefort inst. 547; and is known to grow in wet ground throughout middle and Northern Europe (Engl. bot. pl. 209, and Lindl.). Eastward, was observed by Sibthorp on mount Athos and around Constantinople. Farther East, was observed by Nuttall along the Arkansas; and by myself in our Atlantic States from Lat. 43° to 38°.

"July 22d" from Delhi, Ebn Batuta 17 to 19 proceeded South to Kalyur, having a fortress on the top of a high mountain (hill-fort at Gwalior): Dawlatabad, "one of the greatest and strongest forts in India:" Goa, and Malabar, where "no one travels on beasts of burden, but nobles are carried by men" (*palanquins*): Hili, the termination of the voyage of ships of China, after touching only at "Kalicut and Kawlan," near the point of the peninsula.*—After waiting until Spring, Ebn Batuta was left behind, and being unwilling to return to Delhi, proceeded after a while to the Maldive Islands (Yule cath. 416).

At the Maldive Islands, "wada" or *cowries* (Cypræa monetas) were used instead of coin; and were exported to Bengal. The islanders had been converted (from Christianity, see Abu Zeid) to Islamism by Abu'l Barakat, a Mognebine (or Barbary Arab).

"The same year" (art de verif.), Koutchouk succeeded by Schahabeddin; and before the close of the year, by Emadeddin, fourteenth Memluk sultan of Egypt.

"1344 A. D." (art de verif.), Emadeddin succeeded by Schaban-Kamel, fifteenth Memluk sultan of Egypt.

"August" (Ebn B. 21, and Yule cath. 422), Ebn Batuta leaving the Maldive Islands for Ceylon. He next proceeded to the neighbouring portion of Hindustan,—and sailing Eastward in a Chinese "junk," some of which are large enough to contain "a thousand men," was captured by "infidel Hindus" in "twelve war-vessels," and carried to Bengal. But at length, he reached Java and the city of Shumutrah; where the Muslim king "gave permission to go to China, a thing he is not always prepared to grant, and put him on board a junk."

"1344 or 1345 A. D." (Nicol.), a synod in Armenia. On the errors of the Armenian church.

"1345 A. D." (Nicol. brit. nav., and Humb. cosm. v.), at the outfit of the George, the royal ship of king Edward III., "sixteen *hour-glasses*" were purchased in Flanders.

About the close of the year, Ebn Batuta arriving at Zaitun in China, where he re-joined the Embassy. In all the provinces of China, Ebn Batuta 18 to 23 found a town for the Muslims, who are made much of by the Tartar emperors; and at El Khansa, he found Jews, Christians, and "Turks who worship the sun" (Parsees). *Paper-money* was in use: and if anything was not entered in the register of all the goods in a vessel, the vessel and freightage were forfeited. The Chinese

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* *Dolichos Sinensis* of the Malayan Archipelago. In Hindustan called "choulee" or "hurrea lobeh" or "suffeed lobeh;" the "lubia" seen there by Ebn Batuta—may be compared: D. Sinensis was observed in Hindustan by Rheede viii. pl. 41, Roxburgh, Wight, and is enumerated by Graham as "commonly cultivated" in the region around Bombay. Farther East, is described by Blanco as well known in the Philippines, and called in Tagalo "quibal."

were in general "the richest people in the world;" and China was "the best and safest country for travellers." At the city of Fanjanfur, he met a townsman from Tangiers, whose brother he afterwards saw in Sudan. — Returning by sea to Sumatra and the West, Ebn Batuta arrived at Zafar (Dhofar in Southern Arabia) in April or May 1347; and continuing on by the way of Maskit El Torayat (Muscat), Hormuz, Saman, reached the city of Saba (in Interior Arabia) after an absence in all of "twenty years."

"1346 A. D." (art de verif.), Schaban-Kamel succeeded by Zeyneddin, sixteenth Memluk sultan of Egypt.

"Aug." (Humb. cosm.), the West coast of Africa as far along the Desert as Rio de Ouro N. Lat. 23° 40′, visited by the Catalan navigator Don Jaime Ferrer: — Cape "Bugeder" (Bojador) is laid down in the Catalan map "of 1375" (Major pr. Henr. 47).

"In this year" (Ibn Batut., and Major pr. Henr. 48), death at Timbuctoo "of Abu-Ishac-es-Sahili," a famous poet of Granada. — His tomb continued in after times "one of the curiosities of Timbuctoo." The stone mosque and royal palace, "the only two remarkable buildings in the city," were built by "an experienced architect of Granada" (Leo Afr.).

"Aug. 26th" (Blair), the French defeated by Edward III. at Cressy: "perhaps the first battle in which *cannon* were used" (Pouchet moy. age). — In the following year, Calais was captured by the English.

Maundeville on his journey found the king of Hungary very powerful, holding Slavonia, a great part of Comania and Bulgaria, "and the realm of Russia a great part" to the border of Prussia.

Continuing Eastward, Maundeville 15 mentions the burning of widows in Hindustan; devotees wounding themselves with knives, and others prostrating themselves to be crushed under the car of a huge idol.

In the Malayan Archipelago, Maundeville mentions cannibals, and an isle where the people "make marks on their faces with a hot iron" (*Papuans*). Houses built of large reeds (*bamboo*): and people having "thin and long beards" seldom of more than "fifty hairs" (*Malayans*). He also mentions in another country, men letting the nails of their fingers grow, as a sign of nobility, while the women "bind their feet so tight that they may not grow half as nature would" (*Chinese*).

Maundeville 18 maintains, That the Earth is "of a round form;" and "that if a man found passages by ships, he might go by ship all round the world above and beneath," and always "find men, lands, and isles."

"1347 A. D." (Nicol.), a synod at Constantinople. The patriarch Joannes of Apri was deposed.

"The same year" (art de verif.), Zeyneddin succeeded by Hassan seventeenth Memluk sultan of Egypt. A gold coin issued by Hassan, is figured in Marcel p. 174. The large mosque and tomb built by him, is "the finest edifice" in Cairo (Wilk. theb. and eg.).

"The same year" (Rafn, and Major), a voyage from Greenland to Markland: — the account, written "nine" years afterwards, speaks of Markland as still known and visited; the latest notice of the country in the Icelandic records.

"In this year (= 748 A. H." of Ferisht., Elph.), revolt in the Deccan and the insurgent chiefs shut up in the fortress of Dowlatabad. Before reducing the place, Mohammed Toghlak was called away by fighting in Guzerat; when the people of the Deccan rose behind him, and their revolt in the end proved successful, their leader Hasan Gangu becoming head of the new dynasty of Bahmani; — that reigned "one hundred and seventy-one years."

"1348 A. D." (Alst., and Blair), *pestilence* throughout Europe, carrying off nearly "a fourth part of its inhabitants:" extending to Denmark and Norway (Relat. du Groenl. 210): beginning in England "May 31st" — (Skeat ed. Piers Pl.) and ending "Sept. 29th, 1349;" called the *black death* and "occasioned" Boccaccio's Decamerone.

"1349 A. D. (= 2009th of Synmu," art de verif.), accession of Sjukouo, now dairo of Japan.*

The "Book of Nature," an encyclopædic work of Conrad of Meygenberg, a priest in this year at Regensburg (Humb. cosm.).

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* *Camellia drupifera* of Anam. Apparently the "Camellia" from whose seeds "a very fine oil is extracted," and "either flavored or unflavored is used" in Japan "for the hair or for pomades" — (Jap. centen. comm. 57). C. drupifera was observed by Loureiro in Anam, the oil from its seeds fragrant, and used for various purposes by the natives (Pers.).

Perilla ocymoides of Japan. A Labiate plant yielding an oil that, "chiefly on account of its drying qualities, is used either alone or with other pigments, for painting, coating, or varnishing; its applications are numerous and most important, — such as, for instance, for umbrellas, water-proof cloth and coats, made of paper, for paper imitations of leather, for mixing with lacquer, and for many other purposes" (Jap. centen. comm. 57). Transported to Europe, P. ocymoides is described by Arduino ii. pl. 13, and Linnæus (Pers.).

"Apr. 23d" (Blair), the "Order of the garter" instituted as a mark of distinction by Edward III. of England.

"In this year" (Major edit. Zen. p. lxv and 53), Ivar Bardsen, a Greenlander and procurator of Garda, one of those sent by the governor to expel the Skrellings (Esquimaux) from the West Bygd, separated from the Eastern portion of the colony by an uninhabited tract of "twelve nautical miles." They "found no man either Christian or heathen, but only some cattle and sheep running wild."

Fruits large as certain "eble" apples and of excellent flavour according to Ivar Bardsen grow on the mountains and plains of Greenland — (*Oxycoccus palustris*). The other wild fruits known to grow in Greenland are *Vaccinium uliginosum*, *V. vitis-Idaea*, and *Cornus Succica*.

"Middle of the Fourteenth century" (Bataillard), *Gypsies* already in Wallachia, and held there as slaves. — Spreading from Moldavia into Hungary, they received the protection of king Sigismund "in 1417," and became known in Europe. In Wallachia (Paspati in Amer. Orient. soc. vii.), the Gypsies continued in the state of slavery until 1837; and in Moldavia, until 1844.

"1350 A. D." (Pallegoix, and Mason iii. 68), beginning of the chronicles of the Siamese; who separating from Cambodia, now become an independent nation.*

"In this year" (Klapr. note to San-kokf), A-y succeeded by Zai-to, of the Sio or Chang family, and now king of the Loo Choo Islands; † the "ninth" of the Tame-tomo dynasty. — His family continues reigning to the present day.

"The same year" (Crawfurd vii. 11), the king of Ternate instructed by an Arab adventurer in the Arabic language and in ship-building.

From early times (De Morga 205, and 285 to 342), small vessels from Borneo in the Southwest monsoon visiting Luzon, bringing among other articles "*fine camphor* which is produced in that island" (Dryobalanops), "sago," and "*tibors* and large and small jars, glazed black, very fine, of much durability and use." "Amongst the natives" on Luzon are to be found "large jars of very ancient earthenware, of a dark colour" and unknown origin, but having "marks and seals;" these jars are sold at a high price to the Japanese, who have found out that tea "does not keep or last except in these jars:" "old earthen-ware, of unknown origin, imported from Manilla or Siam, etc., was highly valued" in Japan — (Jap. centen. comm. 108). Boyle 93 found among the Dyaks of Borneo the best quality of tibor jars called "gusih" valued at "fifteen hundred to three thousand dollars, the second kind four hundred dollars" (note to Stanley edit. De Morga 285).

The city of Manila probably therefore in existence.‡

As early possibly as this date (see addit. art de verif.), by the Inca Pachacutec, conquest of the

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* *Blumea grandis* of the Siamese countries. "An impure *camphor*" made by the people of Tavoy from the "pung-ma-theing" weed, as early perhaps as this date: — Mason v. p. 483 further states, that the weed "grows six to eight feet high," and abounds throughout Burmah, springing up wherever the forest is removed; is described by Wallich; but "O'Riley was the first" to refine the product, and manufacture an article pronounced by competent judges identical in all its properties with Chinese camphor.

† *Rhus succedanea* of the Loo Choo Islands. The *wax tree*, called in China "niu-tching" (Camp.), originally imported from the Loo Choo Islands — (according to Jap. centen. comm. 56), but at present cultivated all over Japan, as well as in China (Campion addit. Stan. Jul.): "the art of *candle-making* is said to have been introduced from Loo Choo" into Japan "towards the end of the Sixteenth century:" R. succedanea was observed in Japan by Thunberg. Transported to Europe, is termed "toxicodendrum altissimum" by Miller.

The *wax insect* (. . . .) became known in China and was first placed on R. succedanea under the Youen dynasty (Nong-tching-tsiouen-chou, Li-chi-tchin, Siu-kouang-ki, and Campion add. Stan. Jul. industr. chin.).

Ligustrum ibota of Japan. A *wax insect* feeding on it "very much like or perhaps identical with the Chinese pela," — secreting "lumps of a slightly transparent white wax of a crystalline construction, and a very high melting point," but "of little industrial importance, not being abundant" (Jap. centen. comm. 57).

Cinnamomum pedunculatum of Japan. A tree "yielding a kind of vegetable tallow," — but at present "seldom cultivated," on account of its evergreen foliage casting "too much shadow" on "plants cultivated underneath" (Jap. centen. comm. 56): observed in Japan by Thunberg 177 (Pers.).

‡ *Ixora manila* of the Philippines. A shrub or small tree, growing among the mangroves, and called in Tagalo "nilar" or "nilad" (Blanco); and giving its name to the new city, "manilad" signifying a place where this tree abounds: — observed by Blanco.

valleys of Pachacamac, Rimac so named from a speaking statue, Chancay, and Huaman; all under the rule of Cuysmancu, who submitted to the conditions of peace.*

Among other objects of worship was "the *fox*, which they respected for his cunning and sagacity".—(G. de la Vega vi. 30).

"1351 A. D." (Gaubil, and Pauth. p. 373), by Chun-ti-III., extensive works undertaken to change the course of Hoang-ho river.

"In this year" (Major pr. H. 34), the "Isola de la Legname" (Madeira), "Porto Santo," "Isole deserte," and the Azores, on a map made by a Genoese,—and now in Florence.

"March 20th (= 752 A. H. Moharram 21" of Ferishtah, as. res. vii. 175, and Elph.), Mohammed Toghlak succeeded by Firuz Toghlak now sixteenth sultan of Delhi.—In "1356," he received embassies from Bengal and the Deccan, thus acknowledging their independence.

"About five hundred years ago" (Campbell, and Royle fibr.), the art of making *paper* introduced from China into Nepal: †—"many of the books in Nepal written on this paper are of considerable age" (Drur.).

"1352 A. D. (= 2012th of Synmu," art de verif.), Siukouo succeeded by Kouo-gen II. or Go-Kouo-gen, now dairo of Japan.

"The same year" (Pauth. 374), in China, remarkable *earthquake* at a city of Chen-si, continuing a "hundred days:" discovery of "five hundred *bows*, nine to ten feet long," and of a pattern unknown to antiquity. And in the same year, beginning of the rebellion of Tai-tsou against Chun-ti III.

"The same year" (Alst. p. 307, and Blair), the Turks entering Macedonia in numbers and disturbing the country, first establish themselves in Europe.

"Dec. 18th" (Alst., and Nicol.), Clemens VI. succeeded by cardinal Stephen Aubert, now Innocentius VI., forty-third pope. Charles IV. ruling Germany and Italy; and John II., France.

"The same year," Ebn Batuta journeying from Sigilmasa South across the Sahara. At Abu Latin, the first district of Sudan, the sister's son is the heir; a custom witnessed by him "only among the infidel Hindus of Malabar." Thence, after "ten days," he reached the village of Zaghari, "large and inhabited by black merchants" (*Barabra*), together with "a number of Whites of the Ibazia sect of heretics;" and next, the town of Karsanju on the "great river" (Niger). Thence the river flows to Kabara; Zaga (Sego), the inhabitants of which were the first to embrace Islamism; Tambactu, and Kawkaw, both of which places he visited; Muli, "the extreme district of Mali; and Yuwi, "the greatest district of Sudan," where white persons are killed if they attempt to enter. At Mali (Melli of Leo Africanus, and Denham), high trees and rain water were abundant.—Returning Northward, Ebn Batuta visited Bardama, Nakda, the *copper* mines, the territories of Hakar where the inhabitants are Berbers, and next reached Sigilmasa.

1354 A. D. (= "3d year of Kouo-gen II.," art de verif.), visit of the cubo Takaudsi to Kouo-gen II.

1355 A. D. (= "4th year of Kouo-gen II.," art de verif.), the cubo Takaudsi sent by Kouo-gen II. to quiet disturbances.

"The same year" (Alst. p. 397), at Rome, Charles IV. crowned emperor by two legates from the pope: after having promised to depart immediately afterwards from Rome and Italy.

"In this year" (Spreng.), Jacobus de Dondis, according to his own account, writing.

Cnidium apioides of central Europe. The SILER MONTANUM of Jacobus de Dondis—is referred here by Sprengel: C. apioides is described by Tilli hort. pis. pl. 39; is termed "laserpitium silaifolium" by Murray (Steud.); was observed by Villars in Dauphiné; and is known to grow in rough stony places in Carniolia and Austria (Jacq. austr. app. pl. 44).

"1356, May 16th to 24th" (Nicol.), a synod in London. "A tenth of the revenues of the clergy" granted to the king for one year.

"Sept. 19th" (Blair), the French defeated at Poitiers and their king John taken prisoner, by Edward the Black prince.

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* *Salix Humboldtiana* of Western Peru. The *Peruvian willow*, a tree with ascending branches, in the distance readily mistaken for Populus fastigiata: the great fortress built by the Incas in the Guarco valley contains "willow beams"—according to Markham edit. Ciez. p. 259: S. Humboldtiana was observed by myself everywhere planted for ornament in Lower Peru. From transported specimens, is described by Willdenow (Steud.).

† *Daphne papyracea* of the Himalayan mountains. The "setburosa" or *Nepal paper-shrub* may have been at once used:—it is termed "d. cannabina" by Wallich, "d. odora" by Don fl. Nep. 68; is known to grow in Khasia, Silhet, and Nepal, in oak forests and on the most exposed parts of the most snow-covered mountains throughout the province of Kumaon, and the paper prepared from it is in great request for records in the country around, being "almost as durable as leather" (Campb., Murray in as. res., and Drur.).

Rosa multiflora of Japan and China. Climbing with diminutive flowers; and the "eglantine" described by English writers of the Fourteenth century as a trellis shrub, — termed "eglatere" by Chaucer fl. and l. 3, and according to Gerarde and other early herbalists having white flowers (Prior), may be compared: R. multiflora is described by Duhamel, Poiret, and Curtis bot. mag. pl. 1059. Eastward, was observed by Lush under cultivation at Dapooree near Bombay (Graham); by Thunberg, in Japan. By European colonists was carried to Northeast America, where it continues in gardens.

"1357 A. D." (Alst. p. 226), Orchan succeeded by his son Murad or Amurath, third Turkish sultan.

1359 A. D. (= 1355 + "4 years," art de verif.), Takaudsi succeeded by his son Josisaki, now cubo of Japan; to whom the title of dai-seogun was confirmed by Kouo-gen II., — and subsequently, to his successor Joosimitz.

"In or about this year" (Nicholaus Brigan coll., and Way appen. pr. pm.), the Campus Florum vocabulary * compiled at Miram vallem; a place much frequented by devout monks.

Carex arenaria of Northern Europe and Asia. Called in Britain with other rigid species *stare* or *starr*, in Denmark "stär" or "stär-gräs" (Prior), in Iceland a rigid kind "stör" (Ihre, and Way), in which we recognize the "stare" or "cegge" identified by Galfridus pr. pm. with the CALIX of the C. F. vocabulary — (Way): C. arenaria is described by Micheli pl. 33. f. 4; is known to grow in drifting sand from the Mediterranean and the Atlantic shore of France as far as Sweden (Pers., and Wats.); was observed on Iceland by Hooker.

Carex paludosa of Northern Europe and Asia. — The "segge" or "star of the fen" of Galfridus pr. pm., may be compared: C. paludosa is described by Goodenough; is termed "c. rigens" by Thuillier; and is known to grow in marshes throughout middle Europe (Curt. lond. iv. pl. 61, and Pers.). Eastward, was observed by Sibthorp in marshes around Constantinople.

Tremella nostoc of Europe and Northern Asia. Called in Britain *star-shot* or *star-jelly*, and the ASSUB of the C. F. vocabulary, — identified by Galfridus pr. pm. with "sterre slyme," is referred here by Way: T. nostoc is termed "t. terrestris sinuosa pinguis et fugax" by Dillenius musc. pl. 10; and is known to make its appearance after rain throughout Western Europe (Engl. bot. pl. 460). Eastward, was observed by Sibthorp in Greece, on the island of Zacynthus.

"The same year" (De Wailly pl. ix. 4), the colon (:) used in manuscripts of this date.

"1360 A. D." (Hakl., and Churchill coll.), Nicholas of Linn, a friar and astronomer, sailing to "the most Northern islands of the world; where leaving his company he travelled alone, and made draughts of all those northern parts, which at his return he presented to king Edward III." — Four other voyages were made "into those parts" by Nicholas of Linn.

"1361 A. D." (art de verif.), Hassan succeeded by Mohammed El-Mansur, eighteenth Memluk sultan of Egypt. A gold coin issued at Cairo by Mohammed El-Mansur, is figured in Marcel p. 174.

"The same year" (Siguenz., Cavig. giving 1353), Acamapitzin elected king by the Aztecs: the beginning of the Mexican empire. †

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* *Saxifraga aizoides* of Arctic and Subarctic climates. With other species called in Britain *saxifrage* (Prior), and perhaps included in the SAXIFRAGIUM or SAXIFRAGIA of the C. F. vocabulary, — identified by Galfridus pr. pm. with the "saxifrage herbe:" S. aizoides is described by Linnæus; is known to grow on the Pyrenees and mountains of Switzerland and middle Europe, and from Scotland and Ireland throughout Northern Europe to Lapland, Spitzbergen, and Iceland (Smith brit. i. p. 432, Pers., Hook., Dec, and Wats.). Farther West, was observed by Parry on Igloolik in the Arctic Sea; is known to grow at Lat. 64° in central North America, and farther South on the Rocky mountains (Hook.), in Labrador and Newfoundland (Pursh), in Northern Michigan and on Willoughby mountain in Vermont, ceasing at about 43° 30′ "near Oneida Lake" (A. Gray).

Alnus incana of Subarctic climates. Called in Britain *hoary alder* or in the North *eller* (Way), and the "oryelle tre" identified by Galfridus pr. pm. with the ALNUS of the C. F. vocabulary, — may be compared: A. incana is termed "a. folio incano" by Parkinson p. 1409; and is known to grow from France throughout Northern Europe (Pers.). Eastward, was observed by Chamisso in Kamtchatka and on the opposite American coast at Kotzebue's Sound, by Mertens at Norfolk Sound; farther East, is known to grow from Wisconsin to New England and on the Alleghanies in Pennsylvania (Pursh, A. F. Mx., Nutt., and A. Gray); has been observed by myself from Lat. 48° on the Lower St. Lawrence along the Atlantic ceasing at about Lat. 41° 30′ beyond Boston.

† *Piqueria trinervia* of Mexico. A small Ageratum-like herb called in Mexican "xoxonitztal" or "yoloxilitic" (Lindl.), and from early times used as a remedy in intermittent fevers: — observed by Moçino and Sessé on rocks near Santa Rosa de la Sierra, Xalapa, and many other parts; and according to Steudel was known to Ruiz in Peru. Transported to Europe, is described by Jacquin ecl. i. pl. 48, and Cavanilles iii. pl. 235 (Pers.).

"1362 A. D." (Blair), by Edward III. in his fiftieth year, as a favour to his people, law-pleadings changed from French to English.

"September" (Alst., and Nicol.), Innocentius VI. succeeded by William de Grimoard de Beauvoir abbot and lord, now Urbanus V., forty-fourth pope.

"In or about this year" (Way ed. pr. pm. 318), the Vision of Piers Plowman composed. — A revision was made by the author "in 1377," and a second revision "between 1380 and 1390," (Skeat ed.).

"1363 A. D." (Alst. p. 307), Joannes V. made tributary to the Turkish sultan; whose consent from this time became indispensable to the inauguration of Byzantine emperors.

"The same year" (art de verif.), Mohammed El-Mansur succeeded by Schaban-Aschraf, nineteenth Memluk sultan of Egypt. A coin issued by Schaban-Aschraf, is figured in Marçel p. 175.

"1364 A. D." (Alst. p. 234 and 375), in the presence of the cardinals and pope, an oration by Nicolaus Orem, Against the corruptions of the priesthood. In France, John succeeded as king by Charles V.: who wrote against the tyranny and rapacity of the popes, and caused the scriptures to be translated into French.

One hundred and seventieth generation. Sept. 1st, 1367, onward mostly beyond youth: the Persian writers, Aly Ben Hussen of Bokhara wr. 1368, Abd al Cuvvy Ben Shedad wr. 1376 (Ainsl.): the Arab writer El-Demiri d. 1405 (Pouchet): the Greek writer Catacuzenus d. 1375: Joannes Taulerus, Joannes Rusbrochius; Matthew of Westminster; Froissart; Nicholas Flamel: the scholastic theologians, Henricus de Hassia, and Marsilius ab Ingen: the Italian poets, Petrarch, and Boccaccio: the naturalists, Gaston Phoebus d. 1391, Corbichon (Pouch.): the botanists, Conradus de Megenberg, John Bray, John Ardern: the painter Stefanone d. 1390.

"In this year" (Humb. cosm. ii.), the Azores Islands, previously discovered by the Normans, represented on Picignano's map of the world.

"The same year (= ann. Saca 1290," C. Mackenzie as. res. ix. p. 270), date of a Jain inscription at Belligola, under the reign of Bucca-raya.

"1368 A. D. = 'houng-wou,' 1st year of" Tchou-youan-tchang, now "Tai-tsou IV., head of the new dynasty of the Ming" (Chinese chron. table). The power of the *Lamas* now disappeared from China.

"1369 A. D." (Maunder), at Paris, the Bastile, a fortress and prison, commenced by Charles V. — The structure was completed in "1383."

"In this year (= 2d of the houng-wou," geogr. Chin. transl. Klapr. p. 37), tribute and his submission sent by Tchhang king of Corea to the Chinese emperor; who confirmed him in his title of king.

"In the first years of his reign" (Pauth. 388, and 398), Tai-tsou IV. received ambassadors from "forty" different foreign kingdoms; including besides Corea, Japan, the island of Formosa, "iles de l'Australie," Sien-lo or Siang, bringing a letter written in golden characters; and from another country, bringing a *lion*, said to be the first one seen in China.

"1370 A. D." (Alst. p. 375, and others), John Wiclef, translator of the bible into English, now writing openly against the pope. The papal authority from this time began to be directed against individual members of the church.

In this year (= "3d year houng-wou of Tai-tsou," Remus. mel. iii. 89), arrival in China of Kouotching, ambassador from Cambodia.

"In this year" (Velasco, and Markh.), Duchicala succeeded by Atauchi Duchicala, now thirteenth scyri of Quito.

"Dec. 30th" (Nicol.), Urbanus V. succeeded by cardinal Peter Roger the younger or Gregorius XI., forty-fifth pope.

Interments in the cave of Gruta das mumias, about twenty miles from Juiz de Fora in Southern Brazil (Hartt in am. nat. 1875), as early perhaps as this date.*

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* *Gossypium Brasiliense* of Tropical America. One of the bodies wrapped in a hammock of coarse *cotton* threads, united "at intervals of a foot or more by transverse threads:" — the hammocks "ini" or "inni" seen by Lerius "in 1556" in Brazil were made of cotton thread, sometimes like a net, sometimes woven into a close cloth; the same name for hammock is given by Stade, but could not be found by Hartt in the Tupi, Maués, nor Mundrucu vocabularies; G. Brasiliense was observed by Macfadyen i. 72 on Jamaica, both wild and cultivated (A. Dec.).

Cecropia sp. of Southern Brazil. The burial urns covered outside with a sort of basket-work of the bast of "embauba tinga" — (Glaziou and Hartt).

Astrocaryum tucum of Southern Brazil. A palm, and one of the bodies wrapped in a hammock made of its fibres — (Glaziou, and Hartt), a material perhaps no longer used for this purpose.

Geonoma pinnatifrons of Eastern Equatorial America. A palm, and fragments of its pinnules found around one of the bodies — (Glaziou, and Hartt): G. pinnatifrons is known to grow as far as Caraccas (Pers.). From transported specimens, is described by Willdenow.

"1371 A. D. (= 4th year houng-wou of Tai-tsou," Remus. mel. iii. 89), a letter and tribute sent to China by Hou-eul-na, king of Cambodia.

"In this year" (Vincent's ed. Haydn), David II. son of Robert Bruce succeeded by Robert II., of the Stuart family, and now king of Scotland.

Carduus nutans of Europe and the adjoining portion of Asia. Called in Greece "gaitharagkathō" (Sibth.), in Britain *musk thistle* or *Scotch thistle*, and usually regarded as the badge of Scotland in the national arms (Prior); the "thistle," the badge of the Stewart clan * — (Vincent's ed. Haydn), is first mentioned as the badge of Scotland in a poem by Dunbar in 1503 (Pinkert.): C. nutans is described by Tournefort inst. 440; and is known to grow in France and throughout middle Europe as far as Denmark (fl. Dan. pl. 675, and Pers.). Eastward, was observed by Sibthorp, and Chaubard, in fallow ground in the Peloponnesus. By European colonists, was carried to Northeast America, where it has been found by Porter in "fields near Harrisburg, Penn." (A. Gray).

Onopordum acanthium of Europe. Called in Germany "eselsdistel," in Italy "scardiccione" (Lenz), in Britain on the Eastern Border *Scotch thistle* (G. Johnston, and Prior), and an allied species in Greece "gaitharagkathō" (Sibth.): possibly therefore the "thistle" in question: — O. acanthium is described by Tragus f. 324, and Dodoens 721 (Spreng.); is termed "carduus tomentosus acanthi folio vulgaris" by Tournefort inst. 441; was observed by Scopoli in Carniolia (Steud.); and is known to grow in Italy and throughout middle Europe as far as Denmark (flor. Dan. pl. 909, and Pers.). Eastward, was observed by Sibthorp in waste ground in Greece, but extremely rare. By European colonists, was carried to Northeast America, where it continues along roadsides and to all appearance naturalized on the seashore of New England.

"1372 A. D." (Blair), the English defeated in *naval combat* by the Spanish admiral Boccanegra.

"The same year" (ann. Jap., and art de verif.), Kouo-gen II. succeeded by his kinsman Jensu II. or Go-Jensu or Go-yen-yo, now one hundredth dairo of Japan.

"1373 A. D." (Pauth. 395), in China, edict of Tai-tsou IV., prohibiting women from becoming "kou-tseu" or bonzesses before the age of "forty."

"In this year (= 6th year houng-wou of Tai-tsou," Remus. mel. iii. 92), tribute sent to China from Cambodia.

"1374 A. D." (Humb. cosm. v.), the Catalonian map, containing the mountain lake of Issikul on the Northern slope of the Thian-shan: — a lake lately for the first time visited by Russian travellers.

As early perhaps as this year, a fortified temple built by the Calmuk prince Ablaï on the Upper Irtich. — The ruins, situated South of the Russian frontier, were visited by Sokolof, who found among them human figures with "ten faces and seven arms" (Braminical), and remnants of Mongol and Tangout writings on paper and birch bark.

Calamagrostis arundinacea of Northern Europe and Asia. A grass called in Sweden "pip-hwen" (Linn.), and from early times woven by the Calmuks into mats for covering their dwellings — (Gmel.): termed "gramen avenaceum montanum panicula angusta e dilutissimo fusco albicante et papposa" by Scheuchzer hist. 507 (Linn.); observed by Linnæus in Lapland and Sweden; by Roth i. 33 in Germany; and by Gmelin in Siberia.

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* *Rubus chamæmorus* of Subarctic climates. Called in Britain *knot-berry* or *cloud-berry* (Prior), and the "cloud-berry bush" enumerated as the badge of the M'Farlane clan — (Vincent's ed. Haydn) may be compared: R. chamæmorus is described by Gerarde p. 1368; is known to grow from the mountains of Scotland, Bohemia, and Silesia, throughout Northern Europe as far as Lapland and Iceland (Lightf. pl. 13, Pers., Hook., and Wats.). Eastward, is known to grow on the Ural mountains and throughout Siberia as far as Kamtchatka (Gmel., and Pall.). Farther East, on Unalascha and from Bering's Straits along the shore of the Arctic Sea, and Southward to Lat. 52° at Lake Winnipeg (Hook., and Drumm.), Hudson Bay (Mx.), Newfoundland (Lapyl.), the Lower St. Lawrence (observed by myself), the mountains of New England (Pursh, and A. Gray), and along the Atlantic ceasing at about Lat. 44° (Josselyn).

Scirpus cæspitosus of Arctic climates. Called in Britain *deer's hair* (Prior): the "deer-grass" enumerated as the badge of the M'Kenzie clan — (Vincent's ed. Haydn) may be compared: S. cæspitosus is described by Linnæus; and is known to grow on the Pyrenees, Alps of Switzerland, and mountains of Northern Europe as far as Lapland and Iceland (Pers., and Dec.). Eastward, is known to grow in Northern Asia (Wats.). Farther East, in British America and Greenland (Wats.), also on the alpine summits of the Adirondacks and mountains of Maine (A. Gray), and observed by myself on the White mountains.

Lycopodium dendroides of Northern Europe and Asia. Called in Britain *fir-moss* (Prior), and the "fir-clubmoss" enumerated as the badge of the M'Rae clan — (Vincent's ed. Haydn): L. dendroides is described by Linnæus; and is known to grow throughout Northern Europe.

Glycyrrhiza asperrima of the Uralian plains. Growing in the most arid parts of the Desert towards the South, and from early times its leaves used by Calmuks as a substitute for tea — (Pall. trav. i. 513 to 767).

Phlomis tuberosa of the Uralian plains. Called by the Calmuks "bodmon sok" (Pall.), and from early times its root cooked and eaten by the Calmuks; — observed by Buxbaum cent. i. pl. 6, and Pallas i. 235 to 513 as far West as the Lower Volga. Probably by European colonists carried to Northeast America, observed by Hadley and Dewey on the "shore of Lake Ontario near Rochester" (A. Gray).

Saxifraga crassifolia of the Altaian mountains. Called "badan," and from early times its leaves used by the Mongols and Bouriates as a substitute for tea — (Klapr., and Ainsl. mat. ind. i. 1. 228); according to Pallas iii. 271, used especially for this purpose when commerce with China was interrupted for some years, and called throughout Siberia "Tschargirskoï-tchai" from the source of commercial supply: S. crassifolia was observed by Gmelin pl. 66, and Pallas, on the Altaian mountains.

Hedysarum fruticosum of the Mongolian plains. A clustered shrub from early times valued as affording feed for horses: — observed by Gmelin iv. pl. 22 in Siberia; by Pallas iv. 367 to 717, frequent on sandy hills on the Upper Selenga and at Chailassutu in Daouria.

Caragana pygmea of the Mongolian plains. Called on the Upper Selenga "zolotarnik," known from early times, — observed by Pallas iv. 370.

Caragana spinosa of the Mongolian plains. A thorny bush called by the Mongols "altaganah" (Pall.), and known from early times: — observed by Laxman on the Upper Yenisei; by Pallas iv. 397 to 716, on the Selenga, said to abound around Pekin, and suitable for hedges.

Campanula lilifolia of the Mongolian plains. Called by the Saigak Tartars "sondjælass" (Pall.), and its root eaten from early times: — observed by Gmelin iii. pl. 26 in Tartary and Siberia; by Pallas iv. 502, on the Upper Yenisei.

Cirsium serratuloides of Siberia. Called in Greece "agriōzōhōs" (Forsk.), by the Saigak Tartars "epschoek" (Pall.), and its root eaten from early times: — observed by Gmelin ii. pl. 22 and 23 in Siberia; by Pallas iv. pl. 502, on the Upper Yenisei. Westward, is termed "cirsium angustifolium non laciniatum" by Tournefort inst. 447; was observed by Forskal, and Sibthorp, near Belgrad in the environs of Constantinople; and is known to occur as far as Switzerland and Montpellier (Jacq. austr. pl. 127, and Pers.).

Potentilla rupestris of Europe and Northern Asia. Called by the Mongols and Bouriates "khaltalsa," and from early times used as a substitute for tea — (Klapr., and Ainsl. mat. ind. i. 1. 228); also in Siberia, where it is called "polevoï-tchaï" prairie tea, and was observed by Pallas iii. 395. Westward, is termed "quinquefolium fragiferum" by C. Bauhin pin. 326, "fragaria rupestris" by Scopoli, and is known to grow as far as France and Britain (Jacq. austr. pl. 114, Lam. fl. fr., and Smith fl. brit.).

Artemisia tanacetifolia of the Uralian plains. Called by the Katschintzi Tartars "irven," and from early times employed in perfuming and consecrating annually a black stallion to "Tous" or the Evil one, — observed by Pallas iii. 433 on barren mountains on the Upper Obi; by Allioni pl. 10, and Villars iii. 248, as far West as the mountains of Piedmont and Dauphiny (Pers.).

Leonurus lanatus of the Mongolian plains. Called on the Upper Yenisei "gremiiasscha" (Pall.), and used medicinally from early times: — observed by Gmelin iii. pl. 54 in Siberia; by Pallas iii. 441, near Abakansk on the Upper Yenisei.

Caragana arborescens of the Mongolian plains. A bush called by the Mongols "altaganah," and known from early times, — observed by Pallas iv. 145 frequent on the Selenga.

Stipa capillata of the Mongolian and Uralian plains. A grass called by the Mongols "chilgona," and from early times valued as feed for cattle, — observed by Pallas iv. 144 in a plain bearing its name on the Selenga. Westward, by Sibthorp around Constantinople, and is known to occur as far as Germany and France (Scheuchz. gram. pl. 3, and Lam. fl. fr.).

Iris dichotoma of Daouria. Called by the Mongols "chaïtschi," and its root used from early times against toothache, — observed by Messerschmid (Amm. 103 n. 135), and Pallas iv. 333 to 685, in Daouria.

Rhamnus erythroxylum of East Siberia. Called by the Mongols "iaschihl," and from early times its wood used for niches for their divinities, — observed by Pallas iv. 367 on the Selenga.

Lilium pomponium of Eastern Asia. Called by the Saigak Tartars "akschep," and the month of June "aktschep-ai" by the Beltires from being the season when the root is chiefly collected for food, — observed by Pallas iii. 431 and iv. 274 to 501 from the Upper Yenisei to Daouria; by Cleyer ii. 9. 76. f. 20, in China or Japan (Spreng.). Westward, is described by Clusius (Spreng.), Miller pl. 65, and Knorr del. i. pl. 4.

"1375 A. D." (Nicol.), the Turkish sultan Murad menacing Italy; a synod at Winuwski, To extend aid to the pope.

As early as 1376 A. D. (= "twenty-six years ago" in lett. Anton. Zen.), four fishing-boats driven by a storm "more than a thousand miles Westward from Frislanda" (the Faeroe Islands) to an island called Estotiland (Iceland?), the inhabitants very intelligent and "possess all the arts like ourselves," derived it is believed from former intercourse with our people, for "he saw Latin books" which they of the present generation do not understand, but "have their own language and letters:" their "foreign intercourse is with Greenland, whence they import *furs*, *brimstone*, and *pitch*." — The fisherman and his companions brought knowledge of the *compass*, and after a stay of "five years" were sent "with twelve boats to the southwards to a country which they called Drogio:" here most of the party were massacred, the remainder saving themselves through knowledge "of taking fish with nets;" * but the report spreading excited jealousy, and they were passed from tribe to tribe during "thirteen years" through the hands of "more than five and twenty chiefs, for they were continually fighting amongst themselves" (compare the uniformity of stitch in the fish-nets of Europeans and the American and Polynesian tribes). The fisherman describes the country as very great "and as it were a new world; the people are very rude and uncultivated, for they all go naked and suffer cruelly from the cold, nor have they the sense to clothe themselves with the skins of the animals which they take in hunting: they have no kind of metal: they live by hunting, and carry lances of wood sharpened at the point: they have bows, the strings of which are made of beasts' skins: they are very fierce, and have deadly fights amongst each other, and eat one another's flesh: they have chieftains and certain laws among themselves, but differing in the different tribes: the farther you go south-westwards, however, the more refinement you meet with, because the climate is more temperate," and "in those parts they have some knowledge and use of gold and silver" (copper?). Leaving his companions, who were unwilling to make the attempt, the fisherman escaped "through the woods," and "passing from one chief to another," his former acquaintances, "after a long time" reached "Drogio, where he spent three years." At length boats arrived from Estotiland; in which he took passage, and trading in company became rich enough to fit "out a vessel of his own," and "returned to Frislanda."

"In the reign of Edward III." (Major pr. H. 55, and Galvan.), an Englishman named Robert Machim having run away with a woman and embarked for Spain, the ship was driven by a storm to an unknown island (Madeira); and Machim with others landing, were abandoned. The woman dying,

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* *Apocynum cannabinum* of Northeast America. Called by the colonists *Indian hemp*, by the natives on the Lower Mississippi "enequen" (Alvarad.): probably the material used by the fishermen in teaching the natives how to make fish-nets: — natives wearing a covering of Tillandsia moss interwoven with cords of "canape silvestra" were seen by Verrazanus at 34° on the Atlantic: "cannabis" growing wild, by Hariot on the Roanoke (De Bry i. 8): "hemp," by Newport on James river: fishing-nets of "chanure" growing in their own country, by Jacques Cartier in the Bay of St. Lawrence, in the possession of natives from the South: and fish-lines "of their owne hempe" and strong sturgeon-nets, according to W. Wood ii. 16, were made by the natives near Plymouth: A. cannabinum was observed by Oakes from Lat. 42° 30′ along the Atlantic; by myself, frequent in peninsular New Jersey, upright, three feet or more high, and the flowers greenish; by Baldwin, as far as Matanzas in Florida; by Chapman, in "dry or damp soil, Florida, and northward;" by Beck, near the mouth of the Missouri. Transported to Europe, is described by Morison xv. pl. 3 (Pers.).

Apocynum hypericifolium of Northeast America. An allied species with small pearly-white flowers, — observed by myself at 44° on the Pemigewasset, in two forms, upright three feet high, and the other form depressed; known to grow throughout Canada as far as 54° on the Saskatchewan (Drumm., and Hook.). Transported to Europe, is described by Aiton, and Jacquin hort. iii. pl. 66 (Pers.).

Apocynum androsæmifolium of Northeast America. The *American dogbane*, known to the natives from early times: — of the "two kinds of herbes" growing around Salem and said to be "good to make cordage," the "very sweet" flowers observed by Higgeson (hist. coll. i. 121) clearly belong to this species: A. androsæmifolium is known to grow from Hudson's Bay and 54° on the Saskatchewan throughout Canada (Hook., and Drumm.); has been observed by myself along the Atlantic to 38°; by Pursh, from Canada to Carolina (Ell.); by Chapman, in "rich soil, North Carolina, and northward."

Asclepias incarnata of Northeast America. Also called by the colonists *Indian hemp*, and said to have been used by the natives for bow-strings, — "the fibres of the bark are strong and capable of being wrought into a fine soft thread, but it is very difficult to separate the bark" (Cutl. p. 424): A. incarnata was observed by myself frequent on the marshy borders of streams from 43° to 38° along the Atlantic; by Schweinitz, at 36° in Upper Carolina; by Chapman, in Upper Georgia; by Michaux, in Illinois; by Beck, on the Mississippi at St. Louis; and by E. James, on the Platte.

a chapel was erected for her tomb, bearing an inscription; — and Machim and his companions having made "a boate all of a tree, the trees being there of a great compasse about," went to sea and were drifted upon the African coast "without saile or oar." The Moors "tooke it for a miracle, and presented him" to their king; who in turn "sent him and his companie unto the king of Castile," Henry III. of Spain reigning "in 1393." The news brought by Machim, and by "the ship wherein he went" to the island, "moued many of France and of Castile to goe and discouer it."

Laurus Indica of Madeira. Probably the tree "of great compasse about" whose trunk was made into a boat: — Cadamosto found fine timber on Madeira, and elegant tables exported by the Portuguese: L. Indica was observed by myself, a large tree in the Madeira forest. Transported to Europe, is described by Plukenet alm. pl. 304, and Seba ii. pl. 84.

"1377, Jan. 17th" (Alst., and Blair), the Italians exhibiting signs of defection, the seat of the papacy removed from Avignon back to Rome by Gregorius XI.

"Feb." (Skeat ed. Piers Plowm.), jubilee in England, Edward III. having "attained the fiftieth year of his reign." He died "June 21st," and was succeeded by Richard II.

"The same year" (art de verif.), Schaban-Aschraf succeeded by Ali El-Mansur, twentieth Memluk sultan of Egypt.

"The same year" (Crawfurd vii. 11), among the kings of the Moluccas the first rank acquired by the king of Ternate Kamala Pulu, — who after a long and prosperous reign established the succession in his own direct line.*

"1378, Apr. 9th" (Nicol.), Gregorius XI. succeeded by archbishop Bartholemew Prignano, now Urbanus VI., forty-sixth pope. Richard II. ruling England; Robert II., Scotland; and in this year (Alst.), Carolus IV. succeeded by his son Wenceslaus, as emperor of Germany and Italy.

"In this year" (Humb. cosm. i. 1), a *comet* recorded in the Chinese table. — (Halley's comet, see A. D. 1456).

"1379 A. D. (= 12th year houng-wou of Tai-tsou," Remus. mel. iii. 92), an ambassador and tribute sent to China by Thsan-tha-kan-wou-tche-the-tha-tchi, king of Cambodia.

"1380 A. D." (Skeat ed. P. Plow., quart. rev. for 1870), the translation of the New Testament into English by John de Wycliffe completed. Assisted by his friend Nicholas of Hereford, he continued the work, — and finished the translation of the Old Testament before his death "in 1384."

"In this year (= 13th year houng-wou of Tai-tsou," Remus. iii. 92), tribute sent to China from Cambodia.

"In or about this year." (Markham edit. Ciez. p. 269), after the conquest of the Huanca nation by Capac Yupanqui, brother of the Inca Pachacutec, the inhabitants of the district of Caxamarca induced partly by conquest and partly by conciliation to come under the rule of the Incas.

"1381, June" (Blair, and Skeat), insurrection in England, led by Watt Tyler.

"The same year" (art de verif.), Ali El-Mansur succeeded by Hadgi Saleh, twenty-first Memluk sultan of Egypt.

"1382, May" (Nicol.), a synod in London; and "Nov. 18th," one at Oxford. Against the Wicleffites or Lollards.

"In this year" (Bontier 40, and Major edit. Bethenc.), Francisco Lopez in sailing from Seville to Gallicia driven by a storm to the Great Canary Island, where he and twelve companions were amicably received, — but at the end of "seven years," were put to death from mistrust of the information they had sent to the Land of the Christians.

"The same year" (art de verif.), Hadgi Saleh deposed; and succeeded by Barkook. — Some years later, Hadgi Saleh was recalled to the throne, and soon afterwards put to death. In him, the Bahrite dynasty became extinct.

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* *Cinnamomum culilawan* of the Moluccas. A tree furnishing the genuine *culilawan bark*, from early times employed medicinally by the natives — (the so-called "culilawan bark" of commerce being a mixture of Indian barks): C. culilawan is known to grow on Amboyna, but not beyond on the Papuan islands, nor Westward as far as Java (Blume rum. pl. 9 and 10, and Lindl.). From transported specimens, is described by Linnæus sp. 530.

Cinnamomum rubrum of the Moluccas. A middle-sized tree growing with the preceding, — and its bark similar and hardly inferior (Blume rum. pl. 11, and Lindl.).

Cinnamomum xanthoneuron of the Moluccas and Papuan islands. A tree furnishing clove-scented bark — of great fragrance, extremely like and confounded with Massoy bark, but losing its quality by time (Blume rum. pl. 13, and Lindl.).

Cinnamomum sintoc of the mountains of Southern Hindustan and Java. A tree eighty feet high, its aromatic bark known from early times: — C. sintoc was observed by Blume rumph. xxx. pl. 12 on the higher mountains of Java, its bark according to Lindley very like "the true culilawan" but less agreeable, having "a strong odour of nutmegs" and "not so purely that of cloves."

Barkook, head of the Borgite Memluk dynasty, introduced some changes in the administration of government. Besides a college built by Barkook; the canal Bahr Scherkieh leading through the middle of the Labyrinth, (according to Lepsius eg. and sin. 94) is also attributed to him.

A mosque and tomb were built by Barkook: from this date (Wilk. theb. and eg. 307), — the tombs of the Borgite Memluk kings are outside and Eastward from Cairo, being the mosque-like buildings so conspicuous in the Desert.

"1383 A. D." (ann. Jap., and art de verif.), Jensu II. succeeded by his eldest son Gokomatz, now one hundred and first dairo of Japan.

"In this year (= 16th year houng-wou of Tai-tsou," Remus. mel. iii. 92), officials sent to Cambodia, authorized to confer titles on the king, and examine the passports of Chinese travellers.

"Not earlier than this date" (Tyrwhitt, and Way ed. pr. pm., Skeat gives "about 1387"), Chaucer writing his Canterbury Tales.

Dianthus plumarius of Switzerland and the region around. The piggesnie of Chaucer c. t. 3268, — referred by Prior to one or more species of *pink*, may be compared: D. plumarius has been long cultivated in Britain, and since the time of Ray, and Dillenius, has been found growing spontaneously in the South (Wats., and Bab.). Except in the cultivated state, is unknown in France and Westward, occurring however in Italy and Austria (Hall. helvet. 897, Koch, and A. Dec.).

"1384 A. D. = 17th year of the 'houng-wou' of Tai-tsou IV." (Chinese chron. table), beginning of the Sixty-eighth cycle.

"The same year" (Alst.), Joannes V. succeeded by Andronicus IV.; by consent of the Turks, sixty-fifth Byzantine emperor.

"1385 A. D." (Lubke and Lutrow), victory gained by king Juan of Portugal at Aljaruta. In commemoration, he built the church of Batalha near Lisbon.

"In this year" (J. R. Hind, and Humb. cosm. i. 1), a *comet* whose *orbit* is known from Chinese observations.

"In this year" (Spreng. hist. med. vii. 7), Joannes de Dondis, a son of Jacobus, writing the Herbolario, a botanical work. — He died in "1395."

"1386 A. D." (Lubke and Lutrow), the cathedral at Milan commenced: — finished "in 1807."

"In the time of the Inca Pachacutec" (Markham edit. Ciez. p. 242), Chimu-chanchu ruling the Yuncas in the valley of Chimu. After a long war with the Inca's son Yupanqui, Chimu-chanchu consented to abandon his own idols, "figures of fish and other animals," and "worship the sun." The remains of the city of Chimu — between Truxillo and the sea, "cover a space of three-quarters of a league, exclusive of the great squares," and among the ruins is a palace built of stone and adobes "fifty yards high" (Rivero antiq. Peruv.).

"In this year (= 19th year houng-wou of Tai-tsou," Remus. mel. iii. 93), Lieou-min, Thang-king, and other Chinese officials sent to Cambodia with porcelain vases for the king as a recompense.

"1387 A. D." (Klapr. mem. i. 351), the Pheng hou Islands or Pescadores, between China and Formosa, ravaged and their inhabitants removed by the Chinese.

"The same year (= 20th houng-wou of Tai-tsou," Remus. mel. iii. 93), on the return of Thang-king and his companions, an ambassador with tribute, consisting of "fifty-nine" elephants and "sixty thousand pounds" of perfumes, sent to China by Thsan-liei-phao-pi-sie-kan-phou-tche, king of Cambodia.

"Nov. 16th" (Markham p. xxxvii), after the submission of Ispahan, a tumult excited by an inconsiderate youth: Timour in consequence ordered a general massacre of the inhabitants. He next marched to Shiraz, and had there a complimentary interview with the poet Hafiz, — who died "two years afterwards."

"In this year" (Alst.), Andronicus IV. succeeded by Manuel II.; by consent of the Turks, sixty-sixth Byzantine emperor.

"The same year" (Alst. p. 216), marriage of Sigismund son of the emperor Carolus IV., leading to his becoming king of Hungary.

"The same year" (Nicol.), a synod at Mayence. Thirty-six heretics were condemned to be burned.

"1388 A. D." (Alst. p. 226), Murad succeeded by Bajazet, fourth Turkish sultan.

"Oct. 23d (= 790 A. H. Ramzan 3" of Ferishtah, as. res. vii. 175, and Elph.), Firuz Toghlak succeeded by Gheias-u-din Toghlak II., now seventeenth sultan of Delhi.

"Nov. 10th" (Nicol.), a synod at Palermo. "For the reformation of the clergy."

In this year (= "1313 an. jav.," Raffles), Mulana Ibrahim an Arab missionary having established himself with other Mohammedans at Leran in Java, arrival there of his cousin the raja of Chermen in Sabrang bringing a daughter whom he proposed to present in marriage to king Angka Wijaya. After founding a mosque the raja made a visit to Majapahit, and returning to Leran his daughter with other relatives within a few days sickened and died and he hastily left the island. Mulana Ibrahim

remained in charge of the tombs, and the Mohammedans acquired foothold. — The tombs of the princess and three of her relatives continue to be pointed out.

In this year (= "21st year houng-wou of Tai-tsou," Remus. iii. 94) tribute of perfumes and "twenty-eight" elephants with their attendants sent to China from Cambodia.

"1389, Feb. (= 792 A. H., Zi Haj" of Ferisht., Elph.), Gheias-u-din Toghlak II. succeeded by Abubekr Toghlak, now eighteenth sultan of Delhi.

"In this year" (Relation du Groenl. 211), queen Margaret having united Norway and Denmark, and Henry bishop of Garde assisting in the assembly of the states in Denmark: certain merchants, accused of going to Greenland without leave and taking the queen's taxes, escaped punishment by making oath that they were driven there by a storm and brought away only purchased merchandise. — The affair however tended greatly to discourage intercourse with Greenland. Sweden was also united with Norway and Denmark by queen Margaret.

"Nov. 2d" (Alst., and Nicol.), Urbanus VI. succeeded by cardinal Peter Tomacelli, now Bonifacius IX., forty-seventh pope. Charles V. ruling France.

"In this year (= 22d year houng-wou of Tai-tsou," Remus. iii. 94), tribute thrice sent to China from Cambodia.

"The same year" (Clavig, and Humb. atl. pict.), Acamapitzin succeeded by Huitzilihuatl, second Mexican emperor.*

Hibiscus sabdariffa of Mexico. The *roselle* is a large annual, called in Mexican "quauhxocolt" — (Hern.): was observed by Descourtilz growing naturally in the West Indies, but by Swartz, and Macfadyen, only under cultivation. Transported to Europe is termed "sabdariffa" (the Turkish name according to Drury) by Lobel hist., "alcea americana" by Clusius rar. iv. 14. Said to grow also naturally in Guinea (Desc.): observed by Grant on the Upper Nile, cultivated in Unyoro 2° N. and Ugani 3° for its seeds, bark, and leaves, its seeds roasted and eaten by the Wagani, its bark making beautiful but short cordage, and its leaves eaten as "spinage in the Land of the Moon, called there 'tocos'was.'". Farther East, is clearly an introduced plant in Hindustan, is called in Malabar "polechee," in Bengalee "mesta" (Drur.); was observed by Wight, and Graham, under cultivation, "jellies, tarts, etc. are made of the calyxes and capsules freed from the seeds," and according to Drury is planted for its fibre in Rajahmundry; by Mason, "exotic" in Burmah but "very widely diffused" and called "them-bau-khyen-boung," its "sour calyx" making "a fine flavoured jelly, and preserve, which is a good substitute for cranberries."

"In this year" (geogr. Chin. transl. Klapr. 37), Tchhang king of Corea dethroned by one of his guards Li-tchhing-kouei, and succeeded by Yao of the Wang family.†

"1390, August (= 793 A. H. Ramzan" of Ferisht., Elph.), Abubekr Toghlak succeeded by Nasir-u-din Toghlak, now nineteenth sultan of Delhi.

"In this year (= 23d year houng-wou of Tai-tsou," Remus. iii. 94), tribute sent to China from Cambodia.

"In or about this year (Tourn. trav. ii. 386), at the demand of Bajazet, cadis established at Constantinople, to adjudicate in cases arising between the Greeks and Turks.

"1391 A. D." (Giles six engl. chron.), a license to visit Rome obtained by Ricardus of Cirencester, after forty-one years service as a monk in the Benedictine monastery of St. Peter, Westminster.

"1392 A. D." (geogr. Chin. transl. Klapr. p. 37), Yao dethroned by Li-tchhing-kouei, who under the name of Tan now established himself king of Corea. He sent an embassy to the emperor of China, who restored the title Tchao-sian, which Corea bore when ruled by the Wang dynasty. "At this time" (Dallet p. xiii), the use of the Chinese calendar and Chronology was imposed on the

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* *Hoitzia coccinea* of Mexico. With other species called "huitzitziltzin" (Pers.), and from early times: — known to grow here and there in Mexico, and frequent near Guanajuato (Cav. vi. pl. 365, and Lam. ill.).

Helonias frigida of the alpine summits of the mountains of Mexico. Called "savoeja," and from early times known to be poisonous: — growing on the alpine portion of Orizaba; "horses that eat it become stupified" (Schlecht. in Linn. vi. 46, and Lindl.).

† *Ginkgo biloba* of Japan. In Corea, besides the grave of Khi-tsu, a grove according to the traditionary account planted by Khi-tsu, consisting of trees having the trunk of the fir with elm-like leaves that are eaten in times of scarcity. G. biloba was observed by Thunberg in Japan, and is enumerated by him among the plants furnishing oil for eating and burning. Westward, a large tree, referred to the Juan dynasty, was seen by Bunge near the temple of Tan-dshe-ssy in Northern China (acad. petersb. 1835). Transported to Northeast America, a tree has continued in flourishing condition in Boston more than forty years.

Coreans: Tan or Li-tan removed the Seat of government to Han-iang or Seoul, — and his dynasty, called Tsi-tsien, continues to the present day.

"In this year" (Moomin, and Royle antiq. hind. med.), the Ikhtiarat Buddee, the earliest Persian work on medicines or Materia Medica, completed.

"June 17th" (Nicol.), a synod at Prague. Secular judges were "forbidden to hinder criminals condemned to death from receiving the Eucharist, if they wished it."

"1393 A. D." (Alst. p. 307, see also Talvi ii. 3), Macedonia, Thessaly, Thrace, and the principal part of Bulgaria and Mysia, conquered by the Turks under Bajazet.

"In or about this year" (Skeat ed. Piers Plowm.), Gower writing his Confessio Amantis.

Gentiana campestris of Europe and the adjoining portion of Asia. Included perhaps in the medicinal balderemoyn of Gower, — identified by Galfridus pr. pm. with the "genciana," and the latter described as an "herbe" in Roy. ms. 18. a. vi (Way): C. campestris is described by Linnæus; is known to grow in Italy ("g. c. neapolitana" of Froel.), and throughout middle Europe as far as Denmark (All., Roth fl. g., Pers., Engl. bot. pl. 237, and fl. Dan. pl. 367); and according to Lindley is "a substitute for the officinal Gentian."

"1394 A. D. (= 796 A. H. of Ferisht.," Elph.), Nasir-u-din Toghlak succeeded by his son Humayun, and after "forty-five days" by a younger son Mahmud, a minor now twenty-first sultan of Delhi, — and as it proved the last

"In this year" (Pauth 398 and 405), a map of the Chinese empire completed and presented to Tai-tsou IV. By a census, the population of China found to consist of "60,545,000 persons."

In or about this year, and in "July" (Major edit. Zen. p. xliii and 12), voyage of Nicolo Zeno from the Shetland Islands to Greenland. He describes the canoes of the Esquimaux, and the hot spring utilized by the monks for heating and culinary purposes, and for watering small gardens covered over in winter wherein were raised the "flowers and fruits and herbs" of more southern climates. — "Not being accustomed to such severe cold," Nicolo "fell ill, and a little while after returned to Frislanda" (the Faeroe Islands), "where he died." His brother Antonio had been with him in Frislanda "four years," remained there "ten years" longer, returned to Venice, and was dead "in 1406" (Marco Barbaro, and Zurla).

1395 A. D. = "1320 an. jav." (Raffles x.) inscribed at Majapahit on the tomb of Dara Wati princess of Champa, the date perhaps of her arrival in Java to become the wife of king Angka Wijaya. — The site of her tomb proves that she died before the destruction of the city.

"Feb. 4th" (Nicol.), assembling at Paris of the First national synod of France. "On the means of ending the schism in the church."

"The same year" (Blair), Sigismund king of Hungary defeated at Nicopolis by the Turks under Bajazet.

"In this year" (Klapr. mem. ii. 159), first embassy from the Loo Choo Islands to China. Sent by king Tchoung-chan, who received in return hereditary titles.

"1397 A. D. = 30th year of Tai-tsou IV." (Pauth. 399), publication of the Ta-ming-lin, a "general *code of the laws* of the Chinese empire under the Ta-ming dynasty."

"When Pachacutec was very old" (Salcam. edit. Markh. 97), news came to Cuzco "that a ship had been seen on the sea:" — and "after another year, a youth entered the city with a great book, which he gave to the old Inca and then disappeared."

"1398 A. D. = 1st year of Kian-wen-ti III., of the Ming" dynasty, "the restorer of the literati" — (Chinese chron. table).

"May 22d" (Nicol.), assembling at Paris of the Second national synod of France. And in a second session "July," those present resolved to withdraw their obedience from the anti-pope Benedictus at Avignon.

"Dec. 17th" (Elph.), Delhi captured and destroyed by the Mogul Tartars under Timur or Tamerlane, who was now publicly proclaimed emperor of India. — He quitted India "about the 10th of March 1399."

"1399 A. D." (art de verif.), Barkook succeeded by Faradj, twenty-third Memluk sultan of Egypt.

"The same year" (Desvergers, and Marcel), Egypt threatened by the Tartars under Tamerlane: who proceeded to overrun Syria and Asia Minor, and defeated the Turks; thus indirectly saving the Greek or Byzantine empire.

"The same year" (Alst. p. 397), the pope rendering himself sole and absolute master of the city of Rome and changing the form of administration.

"1400 A. D." (Garc. de la Vega), Pachacutec succeeded by his son Yupanqui, tenth Inca of Peru. Who commenced the great fortress at Cuzco, after a plan left by his father.

"In the time of the Incas" (G. de la Veg. ii. 24), herbalists very famous, and among the plants employed by them were probably "chacasoconche" bark (. . . .), "chenchelcoma" (*Salvia oppositiflora*), "chinapaya" (. . . .), "chucumpa" (*Justicia sericea*), "huarituru" (*Valeriana coarctata*),

"llamap-ñaui" (*Negretia inflexa*), "masca" (. . . .); "matecllu" a water plant with leaves used for sore eyes, described by G. de la Vega ii. 25 as a foot long with one round leaf at the end, eaten raw and having a pleasant taste (. . . .); "chilca" for rheumatism *Baccharis scandens*, "moho-moho" seed? of a plant (. . . .), "parhataquia" (*Molina prostrata*), "panqui" (*Gunnera scabra*), and "tasta" the buds used for wounds (*Stereoxylon patens*), — all contained in the wallet of a modern chirihuano or herb-doctor (Markh. note to ii. 24).

Krameria triandra of the Peruvian Andes. Called in Quichua "ractania" (Markh.), its astringent root from early times used to strengthen and clean the teeth — (G. de la Vega ii. 25), also contained in the wallet of the above-mentioned chirihuano: K. triandra was observed by Ruiz and Pavon i. pl. 93 in sandy situations on the declivities of the Andes. Its imported root, called *ratanhy root*, is used for medicinal purposes besides tooth-powder (Lindl.).

From the "taruca" (*Cervus Antisiensis* of high forests skirting the Andes) and other quadrupeds, *bezoars* obtained by the Peruvians in early times, — but not within the memory of G. de la Vega viii. 17.

Yupanqui "established the twelve months of the year, giving a name to each, and ordaining the ceremonies that were to be observed in each;" the first month called "hauca" and "Llusque" commencing "in the middle of May, a few days more or less, on the first day of the moon." He also built "the houses and temple * of Quisuar-cancha" at Cuzco — (C. de Molina edit. Markh. p. 11).

Tumebamba, in about 2° 20′ S., became the favourite residence of Yupanqui, the remarkable temples † there were commenced by him, — and according to the natives were continued or completed by his successors Tupac, and Huayna Capac. The last-named Inca was residing here when news came of the arrival of Pizarro and his "thirteen companions" on the coast (Ciez. xliv).

Apparently as far back as the end of the Fourteenth century, "chinampas" or floating gardens first constructed on the lake surrounding the city of Mexico (Humb. iii. 8).

One hundred and seventy-first generation. Jan. 1st, 1401, onward mostly beyond youth: the Jewish writers, Rabbi Lipmann, Jacob Levi: the Arab writers, Khalil Dhaheri, Makrizi d. 1442, El-Schebi (Pouchet): the Greek writers, Manuel Chrysoloras d. 1415, Joannes Cananus d. 1422: Paulus Bergensis; John of Tornamira, Vincentius Ferrerius: the medical writers, Manfredus de Monte Imperiali, Saladin d'Asculo: the scholastic theologians, Joannes Capreolus, Thomas Valdensis, Joannes Gerson, and Augustinus de Roma: the botanist Christoph. de Honestis.

"The same year" (Lubke and Lutrow), in Spain, the cathedral at Seville commenced. — It was "finished within a century."

In the days of the Flemish painters Hubert and John van Eyck (Bryan dict. paint.), Bruges the most commercial and flourishing city of Europe.

"About the beginning of the fifteenth century" (Cogolludo, and Gayangos edit. 5th lett. Cortes p. 50), Mayapan the capital city of Yucatan captured and destroyed, the reigning dynasty overthrown, and the Itzaes from the South taking possession of the territories adjoining the lake.

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* *Buddleia incana* of the Peruvian Andes. A small tree called "quisuar" (Markh.), furnishing the name of the above-mentioned temple: — B. incana was observed by Ruiz and Pavon i. pl. 80 along the banks of streams in Peru (Pers.).

Erythroxylon coca of the Peruvian Andes. The *coca* shrub wild to all appearance "near Cuchero and on the summit of Cerro de San Cristobal" (Poeppig), but cultivated from early times and its leaves used as a masticatory: llamas young and old were sacrificed and baskets of "coca" offered in the first month — (C. de Mol.): coca leaves were found by Hieronymus Benzoni "1542 to 1556" (Spreng.) constantly in the mouths of the Peruvians; also by J. Acosta; "in 1583," a revenue of "500,000 pesos duros" was derived from them by the government of Potosi (Lindl.); "cachos growing only on the mountains of Peru" was known to Monardes; the abundant production of coca "in the province of Jungas" is described by J. Jussieu (Lam., and A. Dec.); its cultivation, by Weddell; and its use was witnessed by myself, principally in the mining districts on the Andes.

Cantua uniflora of the Western slope of the Peruvian Andes. Called "cantut," and a portion of Cuzco called "Cantut pata" as early perhaps as this date; the beautiful flowers also woven in the garlands of novices or young knights — (G. de la Veg. vii. 1): C. uniflora was observed by Ruiz and Pavon in "sepibus" enclosures in Peru.

A second flower, the "chihuayhua," yellow and pink-like, intermingled in the garlands of the young knights.

A leaf of the "uiñay huayna" always young, also interwoven — (G. de la Veg. vi. 27).

† *Stipa ychu* of the Peruvian Andes. A grass furnishing the remarkable enduring thatched roofs of these temples (Ciez.), and that of the circular building called "sondor-huasi" at Azangaro; — examined by Markham edit. p. 166: S. ychu was observed by Humboldt and Bonpland on the Peruvian Andes, and is described by Kunth.

"1402 A. D." (Abyss. chron., and M. Russel 250), Theodorus succeeded by Isaac, now king of Abyssinia. — During his reign of fifteen years, the great reservoir supplying every house in Axum with water, constructed by the abuna Samuel.

"May 1st" (Bont. 1, and Major edit. Bethenc.), Jean de Bethencour, a Norman knight, having conceived the project of converting and conquering the Canary Islands, frequented for the purpose of carrying away the inhabitants as slaves, and taking with him his two chaplains Jean le Verrier and Pierre Bontier, sailing from Rochelle. After visiting Spain, where he was brought before the king's Council on a charge of piracy but was released, he sailed from Cadiz; and arriving at Lancerote "in July," was allowed to build a fort, which he named Rubicon. Passing over to the neighbouring island of Fuerteventura, he left his associate Gadifer de la Salle in general charge and returned to Spain. — He here offered homage to Henry III. for the government of the Canary Islands; the king, although he had never heard of them, granted the desired supplies, and even the privilege of coining money. Bethencourt returned to the islands in the autumn, and on "Thursday, Feb. 20th, 1404," the pagan king of Lancerote begged and received baptism, together with the name of Louis. "June 25th," an unsuccessful attack was made on the island of Grand Canary. "January, 1405," with the aid of converted natives and after much fighting, the two kings of Fuerteventura at their own request received baptism. Bethencourt now proceeded to France, and brought back a large number of emigrants; was again defeated on Grand Canary; but removed the inhabitants of the island of Ferro, and settled French in their place, and took final leave "Dec. 15th," Palma and the two largest and most populous islands, Grand Canary and Teneriffe, remaining unsubdued.

Euphorbia Canariensis of the Canary Islands and neighbouring portion of Africa, as far as the mountains of Yemen. A large cactiform *spurge* called in Yemen "kassas" or "kassar" (Forsk.); and the beautiful tree observed by Bontier 70 frequent on Fuerteventura, having branches as large as a man's arm full of milk of great medicinal value "en maniere de baulme,"—is referred here by Major edit. p. 134: E. Canariensis is known to grow on the Canary Islands (Linn., Pers., and Lindl.). Eastward, was observed by Forskal from Djobla to Taæes on the mountains of Yemen, its milky juice taken as a purgative. Transported to Europe, the plant is described by Commelyn hort. ii. pl. 104, and Blackwell pl. 340.

Euphorbia piséatoria of the Canary Islands. A shrubby species of *spurge* called on Palma "higerilla" (Von Buch); used probably by the "fishermen" of Grand Canary; the brushwood useful for fuel and kind of wood called "hyguerres" seen by Bontier 69 to 71 on Lancerote, — may also be compared. The juice of E. piscatoria is used on the Canaries for capturing fish, by poisoning the water (Major edit. Bethenc. p. 131). The plant, transported to Europe, is described by Aiton ii. 137.

"1403 A. D. = 'young-lo,' 1st year of Tching-tsou-wen-ti" or Tching-tsou, "of the Ming" or Twenty-third dynasty — (Chinese chron. table, and Pauth.).

"In the 1st year young-lo" (topog. Cant.). the king of the Si-yang-koue or Nation of the Western Ocean (Orissa?) sent an ambassador; — and three years afterwards, another with tribute. In return, the emperor wrote, appointing him king of Kou-li, and sending a seal of silver. In the fifth year, the emperor ordered one of his eunuchs to send silk for his officers.

"In this year (= 1st year young-lo," Remus. iii. 94), Tsian-pin-hing, Wang-tchhou, and other Chinese officials sent to Cambodia to publish the investiture granted to the prince of that country: whose dominion extended over certain districts where the people were entirely naked and ridiculed persons wearing clothes.

"The same year" (Alst. p. 226), after an interval of "six years," Bajazet succeeded by his son Suliman, fifth Turkish sultan.

"The same year" (Blas Valera, in G. de la Vega ii. 6), the initial point from which "the years of the last sun were reckoned" by "the people of Mexico and Peru." "All the gods that were worshipped, when the Spaniards first arrived in that land, were made and set up after the renewing of the sun in the last age: and according to Gomara, each sun of these people contains eight hundred and sixty years, though according to the account of the Mexicans themselves it was much less."

Of *musical instruments* in use among the ancient Peruvians, the "pincullu" (flute), "chhilchiles" and chanares (timbrels and bells), huancar (a drum), tinya (a guitar of five or six chords), queppa (a trumpet), ccuyvi (a whistle), huayllaca (a flageolet), and chayna (another kind of coarse flute) — are enumerated by Rivero (Markh. edit. G. de la Vega i. p. 192).

"1404, May 31st" (edit. Markham 82), Ruy Gonzalez de Clavijo, ambassador from Henry III. of Spain, passing mount Ararat on his way to the court of Timour. He reached Samarcand on "Monday Sept. 8th, "was received with honour, but Timour falling dangerously ill, was dismissed by the attendants "Nov. 18th," and set out on his return on the "21st." On "Thursday, the 25th of December, being Christmas day, which ended the year of our Lord 1405," he left the great city of Baubartel in Khorassan, — on "Saturday Feb. 21st" slept at Sanga, and on "Saturday the last day of February" reached Tabreez.

Triticum villosum of the East Mediterranean and Tauro-Caspian countries. Called in Greece "agriōsĕkali" (Sibth.), and the "great quantities of rye" seen by Clavijo among ruins at the base of Ararat, growing "as if it had been sown by man, but it was useless and did not come to grain,"—may be compared: T. villosum is termed "gramen spicatum secalinum glumis villosis in aristas longissimas desinentibus" by Tournefort inst. 518, "secale villosum" by Linnæus; is known to grow along the Taurian mountains (Bieb.); was observed by Sibthorp, and Chaubard, on Crete and the Peloponnesus; by Schleicher, as far as Switzerland (Pers., and Steud.).

"Oct. 17th" (Alst., and Nicol.), Bonifacius IX. succeeded by cardinal Cosmo de Migliori, now Innocentius VII., forty-eighth pope. Rupertus Palatinus ruling Germany and Italy; Henry IV., England; and Robert III., Scotland.

"Oct. 21st" (Nicol.), a synod at Paris. Eight articles were "made, For the conservation of the privileges of the church during the Schism."

"In this year (= 2d year young-lo," Remus. iii. 95), An ambassador with tribute sent to China by Thsan-liei-pho-pi-ya, king of Cambodia; also three of his own subjects, in exchange for three Chinese deserters who could not be found. The men were sent back to Cambodia by the Chinese emperor.

"1405 A. D. (= 3d year young-lo," Remus. iii. 95), Chinese officials sent to Cambodia to attend the obsequies of the king, and instal his eldest son Thsan-liei-tchaŏ-phing-ya as successor.

"Feb. 17th" (Markham p. 1, and 187), death of Timour. His son Shah Rokh, governor of Khorassan,—became sultan at Samarcand "in 1408," and continued to rule in peace and order until his own death "in 1446."

"1406, on the feast of St. Martin" (Nicol.), a synod at Paris of all the clergy of France, "For the termination of the Schism." Obedience was withdrawn from the antipope Benedictus.

"Nov. 30th" (Nicol.), Innocentius VII. succeeded by cardinal Angelo Corrario, now Gregorius XII., unanimously elected forty-ninth pope. James ruling Scotland.

"In or about this year" (Danish chron., and Relat. du Groenl. 212), bishop Andrew sent from Drontheim to Greenland for tidings of bishop Henry, or to succeed him if he were not living:—but neither of the two bishops were afterwards heard of.

The provinces of Caxas and Huancabamba, South of Loxa, conquered by the Inca Yuqanqui. A fortress, temple, and other extensive buildings were erected,—remains of which were seen by Cieza de Leon lviii.

"1408, Apr. 28th" (Nicol.), a synod at Rheims. "On the means of remedying the disorders caused by the Schism, and on discipline."

"Aug. 11th to Nov. 5th" (Nicol.), Third national synod of France: in session at Paris. The bearers of a Bull from the antipope Benedictus were ignominiously punished, and deputies were named for a general synod at Pisa.

"In this year (= 6th year young-lo," Remus. iii. 96), tribute sent to China from Cambodia.

1409 A. D. = "1334 an. jav., Rabiulawal 12th, Monday" (Raffles x.), death of the Arab missionary Mulana Ibrahim. (The date probably taken from his tomb at Gresik in Java.)

"Jan. 14th" (Nicol.), a synod at Oxford. Rules were made "for the preachers and professors of the universities, on account of the new opinions of" Wiclef.

"March 25th to Aug. 7th" (Alst., and Nicol.), a general synod at Pisa: convened by the cardinals. The two rival popes not making their appearance, were declared deposed; and on the "15th or 26th of June," cardinal Peter of Candia or Alexander V. was elected their successor by the cardinals of both parties. The proceedings however were not recognized by the two popes in office, and before the close of the session, Gregorius XII. in a synod near Udine pronounced the election "null and sacrilegious."

Translating the Scriptures into the languages of the people, condemned by pope Alexander V.; who further in a special edict forbade explaining them in English (Alst. p. 397).

"The same year" (Way pref. pr. pm. xxxv), among the books of Charles V. of France, his prayer-book contains the dot over the letter i—(Silvestre), the latest important improvement in Typography.

"The same year (= 1331 Saca," Colebrooke as. res. ix. 438), date of an inscription on copper, apparently a grant of land from Bucca Raja II., third in succession from the first king of that name.

"In this year" (Finn Magnussen, and Major edit. Zen. p. lxv), Andreas, last bishop of Greenland, officiating in the cathedral at Gardar.

"1410 A. D." (Alst.), Suliman succeeded by his brother Muse Gilibi, sixth Turkish sultan.

"May 17th" (Alst., and Nicol.), Alexander V. succeeded by cardinal Balthasar Cossa or Joannes XXIII., fifty-first pope. In opposition to Gregorius XII.

The "Imago mundi," an encyclopædic work by Petrus de Alliaco, in this year bishop of Cambray (Humb. cosm.).

"The same year" (Clavig., and Humb. atl. pict.), Huitzilihuitl succeeded by Chimalpopoca, third Mexican emperor.*

"1411 A. D." (voyag. Belg.), from Riga journeying through Courland, Guillebert de Lannoy met with Christians who retained the practice of *burning the dead*, with accompanying superstitious observances. At Novogorod, women were sold in the market. In Lithuania, through the efforts of the Teutonic military Order of monks, the people had already adopted Christianity; Witholt being duke. — Returning after ten years absence, he found Witholt leagued with the followers of Huss, in opposition to the church of Rome.

"1412 A. D. (= 815 A. H." of Ferisht., Elph.), Mozaffer Shah succeeded by Ahmed Shah, now second Muslim king of Guzerat (remarkable among the States of Hindustan for being a naval power).

"In this year" (art de verif.), Faradj succeeded by Shekh Mahmoudi; who partly through the interference of the spiritual khalif Mostain, now became twenty-fourth Memluk sultan. Shekh Mahmoudi (according to Wilkinson theb. and eg. p. 555) coined the moaiudee as a substitute for the para.

The mosque Moaiud, one of the principal ones in Cairo, was built by Shekh Mahmoudi (Wilk. theb. and eg.).

Melilotus Indica of the plains of Hindustan. Brought to Egypt as early probably as this date: — observed there by Forskal, and Delile, growing around Cairo, Alexandria, and Rosetta, and called "rekrak" or "nafal." Farther North, observed by D'Urville, and Bory, on the Greek islands and in the Peloponnesus; and Westward, described by Plukenet alm. pl. 45; was observed by Sibthorp in Sicily; by Desfontaines, and Schousboe, in Algeria and Morocco; and is known to grow spontaneously in Southern France, and even in Britain (All., Dec. fl. fr., Pers., and Wats.). Eastward from Egypt, was observed by Roxburgh, and Wight, in Hindustan, and according to Graham "on pasture grounds etc. appears in the cold season." From Europe, was carried by colonists to Northeast America, where it has been found growing spontaneously (Torr., and A. Dec.). "M. parviflora, sulcata," and "Mauritanica," are regarded as probably not distinct.

Melilotus Italica, regarded as distinct, — is described by Commelyn hort. pl. 29; is termed "m. italica folliculis rotundis" by Tournefort inst. 407; was observed in Italy by Tenore, and by Desfontaines ii. 192 in Barbary. Eastward, was observed by Sibthorp, Chaubard, and Fraas, in the Peloponnesus and the environs of Athens; and by Bieberstein, along the Taurian mountains.

"From the end of the year to June 18th" following (Nicol.), a synod in Rome. Against the writings of Wiclef.

"1413 A. D." (Alst), Muse Gilibi succeeded by his brother Mohammed, seventh Turkish sultan.

"The same year (= 2073d of Synmu," art de verif.), Gokomatz succeeded by his son Seokouo, now dairo of Japan.†

"1414, Nov. 16th" (Alst., and Nicol.), "Seventeenth general ecclesiastical Council. Convened at Constance. "Deputies and lay doctors" were allowed a deliberative voice: — and in a second session, "March 3d" following, the pope solemnly published his act of cession; "May 29th," Joannes XXIII. was deposed; and "July 4th," Gregorius XII. abdicated. "July 6th," a decree, "That faith is not to be kept with heretics," and John Huss condemned to be burned. "July 26th, 1417," Benedictus was declared deposed, but refused to submit to the authority of the Council; and "Nov. 11th" in the "forty-first" session, a new pope was elected; the Council ending "Apr. 22d, 1418."

In this year (= "12th year young-lo," Remus iii. 96), tribute sent to China from Cambodia. Complaint was made of invasions by the Anamese, repeatedly interrupting communication, and a Chinese official returned with the envoys bearing an order to the king of Anam to cease hostilities.

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* *Cissampelos pareira* of "the West India Islands and Spanish Main." The "pareira brava" or *velvet-leaf* is a twining Menispermoid plant; its root from early times used medicinally, — being "a well-known tonic, and diuretic" (Lindl.): C. pareira was observed in the West Indies by Alcedo, Plumier pl. 93, Swartz pl. 10, and Descourtilz. By European colonists was carried across the Pacific to the Philippines, continues according to Blanco hardly known but is called in Ylocano "cuscusipa," at Agoo "calaad," at Batangas "calacalamayan," and on Cebu "batangbatang;" to Hindustan, where it is called in Hindustanee "dukh-nirbisee" (Drur.), and has become "common in hedges" from Bombay to Rajmahal and Nepaul (Roxb., Royle, and Graham).

† *Celastrus alatus* of Japan. A shrub well-known there, and from early times offers of marriage made by affixing a branch to the house of the damsel's parents — (Jap. mann. 179): C. alatus was observed in Japan by Thunberg 98 (Pers.).

1415 A. D. (Markham p. liii), Ibrahim Meerza, son of Shah Rokh, appointed governor of Shiraz in Persia. He encouraged Literature, caused Ali of Yezd to write the life of Timour, — built a famous "medrassa" or college, and after a reign of "twenty years" died "in 1435."

"In this year" (Bethune edit. Galvan.), Ceuta in Morocco captured by John, king of Portugal, assisted (according to Walsingham) by the English. — The captured city "was afterwards annexed to Spain."

"1416 A.D." (Alst. p. 375), archdeacon Nicolaus Clemangis writing, on the corrupt state of the church. Jerome of Prague burned alive at Constance.

"1417 A. D." (Alst.), Manuel succeeded by his brother Joannes VII., by consent of the Turks sixty-seventh Byzantine emperor.

"The same year" (Churchill coll.), under instructions from prince Henry of Portugal, two small vessels pass cape Nao, "N. Lat. 28° 15′," on the African coast. "Sixty leagues" beyond, at cape Bojador, difficulties were experienced, and the vessels returned to Portugal.

"Nov. 11th" (Alst., and Nicol.), Joannes XXIII. succeeded by cardinal Otho Colonna or Martinus III., in the Council at Constance elected fifty-second pope. Sigismund ruling Hungary, Germany, and Italy; and Henry V., England.

"In this year (= 15th year young-lo," Remus. iii. 97), tribute sent to China from Cambodia.

"1418 A. D." (Galvan., and Churchill coll.), John Gonzalez Zarco and Tristam Vaz Teixeyra in a vessel sent by prince Henry of Portugal, driven out of their course Westward as far as a small island previously unknown, which they called "Porto Santo."

"In or about this year (= about thirty years before 1448" in lett. of pope Nicholas V., Major edit. Zen. p. lxvi), "some heathens from the neighbouring coasts came upon" the Greenland settlements "with a fleet, and laid waste the country and its holy buildings with fire and sword, sparing nothing but the small distant parishes, which they were prevented from reaching by the intervening mountains and precipices. The inhabitants of both sexes they carried away into slavery."

The Dighton inscription and other sculptures and stone relics of the aboriginals of New England, as old or older than this date. — The earliest copy of this inscription, so far as known, is by Rev. Samuel Danforth.

Acer rubrum of Northeast America. The *red maple* in Eastern New England known from early times to the natives,* — "the rottenest maple-wood" according to Josselyn rar. 47 "burnt to ashes,"

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* *Vitis labrusca* of Northeast America. The *fox grape* known to the natives from early times: — of two kinds of "vitis" seen by Hariot on the Roanoke, one bore acerb grapes large as the English (De Bry i. 9): vines twisting "their curling branches about" the "broad-spread arms" of the "horne bound tree" (Nyssa biflora) and bearing "great store of grapes," were seen by W. Wood in Eastern Massachusetts; "vines," by Higgeson, growing "up and downe in the woods" around Salem; and grapes growing "in swamps and low wet grounds" and having "a taste of gunpowder," by Josselyn as far as 43° 30′: V. labrusca is described by Plumier sp pl. 259 (Pers.); has been observed by myself from 43° near Monadnock to 39°, often within the margin of swamps; by A. Gray, "common" in Central New York; by Michaux, from Pennsylvania to Florida; by Elliot, in South Carolina; by Baldwin, as far as 30° in Florida; by Chapman, in "river-swamps, Mississippi to North Carolina;" and by Short, in Kentucky. According to A. Gray, "improved by cultivation it has given rise to the *Isabella grape*."

Viola pubescens of Northeast America. A *yellow violet*, its bruised leaves from early times applied by the natives "to boils and painful swellings for the purpose of easing the pain and producing suppuration" — (Cutl. p. 485): V. pubescens was received by Hooker from the Rocky mountains throughout Canada; was observed by myself from 46° on the St. Lawrence to 40° on the Delaware; by Schweinitz at 36° in Upper Carolina; by E. James at Council Bluffs on the Missouri; by Nuttall, on the Arkansas.

Vitis æstivalis of Northeast America. The *summer grape* or *chicken grape* known to the natives from early times: — a "smaller kinde of grape, which groweth on the islands, which is sooner ripe," is enumerated by W. Wood i. 5: V. æstivalis has been observed by myself along the Atlantic from 42° 30′ to 39°; by Eaton, at 42° on the Hudson; by A. Gray, "common" in Central New York, the "berries pleasant;" by Michaux, from Virginia to Carolina; by Elliot, in South Carolina; and by Beck, near St. Louis on the Mississippi. Under cultivation, clearly the origin of the *Elsinborough* and other small delicately-flavoured varieties.

Impatiens biflora of Northeast America. The *snap-weed* or *touch-me-not* known to the natives from early times: — used according to Josselyn pl. 43 by the New England natives "for aches, being bruised between two stones, and laid to, cold:" was received by Hooker from Bear Lake Lat. 66°; was observed by Lapylaie at 49° in Newfoundland; by myself, along the Atlantic from 45° to 39°;

making "a strong lye" wherein to "boyl their white-oak acorns until the oyl swim on the top:" the "knottie maple" was seen around Massachusetts Bay by W. Wood i. 5: A. rubrum, by F. A. Michaux from 48° to 30° and throughout our Western States to the Lower Mississippi; by myself,

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by Walter, and Elliot, in South Carolina; by Chapman, in "shady swamps, Florida and northward;" by Short, in Kentucky. Transported to Europe before "1822," has become naturalized along the Thames (J. S. Mill, Newm., Wats., Eng. bot. suppl. pl. 2794, and A. Dec.).

Rhus typhina of Northeast America. The *staghorn sumach*, so named from its stout velvety twigs, is a large shrub known to the natives from early times: — "sumach" according to Josselyn far. 60 was boiled by the New England natives and the drink taken "for colds:" the "diars shumach" was seen by W. Wood i. 5 in Plymouth colony; "sumacke trees, they are good for dying and tanning of leather," were found by Higgeson frequent around Salem (hist. coll. i. 119); and "rhus coriaria" was seen by Hariot on the Roanoke (De Bry i): R. typhina was observed on Long's Expedition at the Lake of the Woods Lat. 49°; was received by Hooker from 47° on the Lower St. Lawrence; was observed by Michaux from Canada to Pennsylvania; by myself, along the Atlantic from 45° to 39°; by Chapman, "Mississippi to North Carolina, and northward;" by Riddel, in Kentucky (Short); and by Nuttall, on the Arkansas.

Rhus radicans of North America. A shrub climbing by rootlets, called by the colonists *poison ivy*, and its juice said to have been used in prior times by the natives "in staining the hardest substances a deep and permanent black," — in the days of Cutler p. 423–8 employed by "country people" in making ink: R. radicans is known to grow throughout Canada to the Saskatchewan and Northwest America (Hook.); has been observed by myself from 45° to 38° along the Atlantic; by Elliot, in South Carolina; by Baldwin, on Bermuda; by Croom, as far as 30° 30′ in Florida; by Chapman, "Florida to Mississippi, and northward;" by Nuttall, and Pitcher, on the Arkansas; and by E. James, on the Rocky mountains at its source. Transported to Europe, is termed "edera trifolia Canadensis" by Cornuti pl. 97, is described also by Barrelier pl. 228, and has become naturalized in two localities in France.

Nemopanthes Canadensis of Northeast America. A Celastroid deciduous shrub, its berries from early times eaten by the natives: "figues" called "absconda" — were seen by Cartier in the canoes of natives who had come from a distance to Chaleur Bay to catch mackerel, subsequently also on his voyage up the St. Lawrence: "a small shrub which is very common, growing sometimes to the height of elder, bearing a berry like in shape to the fruit of the white thorn, of a pale yellow colour at first, then red, when it is ripe of a deep purple, of a delicate aromatical tast, somewhat stiptick," was seen by Josselyn 2d voy. 72 in New England: N. Canadensis was observed by Lapylaie from 51° in Newfoundland; by Michaux, from Hudson Bay throughout Canada; by myself, from 48° on the Lower St. Lawrence to 42° along the Atlantic; by Nuttall, to 40° in New Jersey; and according to A. Gray, grows on the Alleghanies of Virginia and as far as Wisconsin.

Amelanchier botryapium of North America. The *shad bush* or *june berry*, its fruit called in Canada "poires," in Maine *sweet pears* (C. P.), and from early times its berries dried and eaten by the natives: — doubtless the "poires" seen by Cartier in Chaleur Bay, in the canoes of a distant tribe of natives: "a small pleasant fruite called a peare," was seen by John Mason in Newfoundland: A. botryapium is known to grow on Newfoundland, and throughout Canada to at least 61° on the Mackenzie river, also on the Rocky mountains and along the Columbia river (Hook.); was observed by myself from 48° on the Lower St. Lawrence to 38° along the Atlantic; by Pursh, from Canada to Carolina; by Elliot, rare in the Low country of South Carolina; by Chapman, "Florida to Mississippi, and northward;" by Nuttall, along the Arkansas; by Drummond, to 54° on the Saskatchewan; by myself, at Fort Okanagan on the Columbia, the berries highly prized by the inmates; and according to R. Brown jun., they are dried and stored by the natives of Northwest America.

Amelanchier oligocarpa of Northeast America. Possibly distinct, having narrow leaves, broad petals, and its two to four-flowered racemes often only axillary: — termed "mespilus canadensis oligocarpa" by Michaux; growing according to A. Gray in "cold and deep mountain swamps, northward;" observed by myself on the subalpine portion of the White mountains; but found by Collins in New Jersey.

Adenorachis arbutifolia of Northeast America. The *choke-berry*: clearly the huckleberries "attitaash of a binding nature" of the New England natives. — mentioned by R. Williams: Strachey met with a "small tree like mirtle at James Towne," its fruit having "a taste with the mirtle but much more bynding:" A. arbutifolia is known to grow on Newfoundland and throughout Canada to the Saskatchewan (Hook.); was observed by Michaux from Hudson Bay to Virginia and the mountains of Carolina; by myself, from 47° to 41° along the Atlantic; by Elliot, on the mountains of Carolina; and by Short, in Kentucky. The variety or species with reddish and more austere fruit, seems more

along the Atlantic from 45° to 38°, growing on the moist upland as well as in swamps; by Elliot, in South Carolina; by Baldwin, Croom, and Chapman, as far as 30° in Florida; by Darby, on Pearl river; by Nuttall, on the Arkansas and Upper Missouri; by Long's Expedition, to 49° on Red river

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Southern in its range, was observed by Michaux in Virginia and Carolina, by Schweinitz at 36°, by Nuttall in Georgia, by N. A. Ware in Florida, by Baldwin as far as 31°; and this or both by Chapman in "swamps, Florida to Mississippi, and northward."

Cerasus Virginiana of North America. The *choke cherry*, an arborescent shrub called by the New England natives "quussuckomineanug" (R. Williams), and known from early times: — "red" cherries "which grow on clusters like grapes," are "much smaller than our English cherry," and "so furre the mouth that the tongue will cleave to the roof," were seen by W. Wood i. 5 near Plymouth: C. Virginiana is known to grow on Newfoundland and throughout Canada to 62°, the Rocky mountains, and beyond (Hook.); has been observed by myself from 46° on the St. Lawrence to nearly 41° on the Atlantic; by Elliot, on the mountains of South Carolina; by Chapman, in "light sandy soil, Georgia and northward." Transported "from Virginia" to Europe, is described by Linnæus, and is termed "p. rubra" by Aiton (Pers.).

Prunus Americana of Northeast America. The *Canada plum* from early times planted by the New England natives, and doubtless the dried "prunes" called "honesta" — seen by Cartier in Chaleur Bay, in the canoes of a distant tribe of natives; "plumbs," "black and yellow, about the bigness of damsons, of a reasonable good taste," were seen by W. Wood in Eastern Massachusetts: P. Americana is termed "p. hyemalis" by Michaux, its fruit being edible in winter (Pers.); was observed by Pursh along the Chaudiere and on the Alleghanies of Virginia and Carolina; by myself, only under cultivation in New England; but by A. Gray, on "river-banks, common" in Central New York, its fruit "yellow, orange, or red," and "pleasant-tasted, but with a tough and acerb skin;" by Darlington, in Southern Pennsylvania; by Elliot, in Carolina; and by Chapman, in "woods, Florida to Mississippi, and northward."

Prunus maritima of Northeast America. The *beach plum*, included perhaps in the dried "prunes" — seen by Cartier in the canoes of a distant tribe of natives; probably the "prune" seen by Varrazzanus in approaching the Latitude of "41° 40′;" and clearly the "black" plums seen by W. Wood in Eastern Massachusetts: P. maritima has been observed by myself on the seashore from 43° to 39°; by Michaux, on the seashore from New England to Virginia (Pers.); by Pursh, on the seashore from New Jersey to Carolina.

Rubus strigosus of North America. The *American raspberry*, its fruit from early times eaten by the natives; — clearly the "franboysses" seen by Cartier around Chaleur Bay, and the "aboundance of rasberries" seen by John Mason on Newfoundland: R. strigosus was observed by Michaux in Canada and on the mountains of Pennsylvania (Pers.); by Pursh, as far as the Alleghanies of Virginia; by myself, from 47° on the Lower St. Lawrence to 39° along the Atlantic; by Nuttall, along the Lakes of the St. Lawrence; and according to Hooker, grows on Newfoundland and throughout Canada to the Saskatchewan and the Columbia river.

Rubus Occidentalis of North America. The *thimbleberry* or *black raspberry*, its fruit from early times eaten by the natives: — R. Occidentalis was observed by Michaux in Canada and on the Alleghanies to Carolina; by myself, from 45° to 40° along the Atlantic; by Schweinitz, at 36° in Upper Carolina; by Chapman, "along the mountains, Georgia and northward;" by Short, in Kentucky; by Nuttall, on the Arkansas; and according to Hooker, grows from Quebec to the Rocky mountains and the shores of the Pacific. Transported to Europe, is described by Dillenius elth. pl. 287, and Linnæus.

Hamamelis Virginica of North America. A large shrub called by the colonists *witch hazel*, and from early times its bark applied by the natives "to painful tumors and external inflammations" — (Cutl. p. 412): H. Virginica was received by Hooker from the river-isle of Orleans at 47°; was observed by myself from 43° to 38° along the Atlantic; by Catesby app. 2, in Virginia; by Elliot, in South Carolina; by Baldwin, and N. A. Ware, in Florida; by Chapman, "Florida to Mississippi;" by Short, in Kentucky; and was received from "Mississippi" by Muhlenberg.

Aralia racemosa of Northeast America. A large straggling woodland herb, aromatic and called by the colonists *spikenard* (A. Gray), "said to have been much used" by the natives in former times "for medical purposes" — (Cutl. p. 432): was observed by Michaux in Canada and on the Alleghanies; by myself, from 43° along the Atlantic; by Conrad, and Darlington, at 40°; by Elliot, on the Alleghanies of Carolina; by Chapman, on those of Georgia; by Short, in Kentucky; by E. James, along the base of the Rocky mountains; and was received by Hooker from the Saskatchewan. Transported to Europe, is termed "racemosa Canadensis" by Cornuti pl. 75, is described also by Morison i. pl. 2. f. 9.

Aralia nudicaulis of Northeast America. A woodland herb called by the colonists *sarsaparilla*,

of Lake Winnipeg; and according to Hooker, grows as far as the sources of the Columbia on the Rocky mountains. Transported to Europe, is described by Hermann par. 1 (Spreng.), and Miller. Its ornamental wood has become well known in commerce.

Oxycoccus macrocarpon of Northeast America. The *American cranberry* called by the Narragansetts "sasemineash," — known to R. Williams as "another sharp cooling fruit, growing in fresh waters all the winter, excellent in conserve against fevers:" * O. macrocarpon is also distinctly

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and on the roots it is said that in former times the natives would subsist "for a long time in their war and hunting excursions" — (Cutl. p. 432): A. nudicaulis was received by Hooker from the Rocky mountains and 64° throughout Canada; was observed by E. James along the base of the Rocky mountains; by Lapylaie, on Newfoundland; by myself, as far as 42° along the Atlantic; by Darlington, at 40°; by Pursh, on the Alleghanies of North Carolina (El., and Chapm.). Transported to Europe, is described by Plukenet alm. pl. 138. f. 5.

Vaccinium corymbosum of Northeast America. The *tall blueberry*, its fruit doubtless included among the "sky-coloured bill-berries" dried by the New England natives, — enumerated by Josselyn rar. 60: V. corymbosum has been observed by myself along the Atlantic from 44° to 38°; by Pursh, from Canada to Virginia; by Elliot, in South Carolina; by Chapman, on "margins of ponds and swamps, Florida, and northward;" by Croom, as far as 30° 30′; by Baldwin to 30°; and by Short, in Kentucky. From transported specimens, described by Linnæus.

Vaccinium fuscatum, possibly a distinct species; its leaves more pubescent and fruit black, though similar in flavour, has been observed by myself accompanying the preceding as far at least as 39°.

Vaccinium vacillans of Northeast America. The *green-bark blueberry*, only a foot or two high, its fruit inferior, but doubtless included among the "sky-coloured bill-berries" dried by the New England natives — (Joss. rar. 60): observed by myself along the Atlantic from 44° to 38°; by Schweinitz, at 36°; by Pursh, from Virginia to Carolina (Ell.). From transported specimens, described by Solander (A. Gray).

Vaccinium Pennsylvanicum of Northeast America. The *dwarf* or *low blueberry*, its fruit doubtless included among the dried "sky-coloured bill-berries" — (Joss. rar. 60): V. Pennsylvanicum is known to grow in Labrador (Pers.); was observed by Lapylaie in Newfoundland; by myself, along the Atlantic to nearly 41°; by Pursh, from New England to Virginia; by Michaux, in Georgia (Ell.). From transported specimens, described by Lamarck.

Vaccinium (Gaylussacia) frondosa of Northeast America. The *dangleberry* or *blue huckleberry*, doubtless included among the "sky-coloured bill-berries" dried by the New England natives — (Joss. rar. 60): G. frondosa has been observed by myself along the Atlantic from 43° to 38°; by Schweinitz, at 36°; by Pursh, from New Jersey to Carolina; by Elliot, in South Carolina; by Baldwin, as far as 31°; by Chapman, in "low ground, Florida to Mississippi, and northward;" by Short, in Kentucky. From transported specimens, described by Linnæus.

Vaccinium (Gaylussacia) resinosa of Northeast America. The *huckleberry*, known from early times: the "attitaash" of the Narragansetts consisted of "whortleberries" of "diverse sorts," some "sweet like currants," and these when dried called "sautauash," beat to powder and mingled "with their parched meal" made "a delicate dish" (R. Will.): the "sa'té" of the Abnaki on the Penobscot "frais sans être secs, lorsq'ils s't secs, sikisa'tar," — are enumerated by Rasle dict.: "hurtleberyes" were seen by Newport on James river, and "hurts" by Strachey: G. resinosa has been observed by myself along the Atlantic from Lat. 44° to 38°; by Schweinitz, at 36°; by Pursh, from Canada to Carolina; by Elliot, on the mountains of Carolina and Georgia; and by Short, in Kentucky. Transported to Europe, is described by Wangenheim amer. pl. 30, and Aiton ii. 12 (Pers.).

* *Viburnum oxycoccus* of Canada. The *tree-cranberry* brought from the Northward and planted, may prove the "wuchipoquameneash" of the Narragansetts, — described by R. Williams as "a kind of sharp fruit like a barberry in taste:" V. oxycoccus is termed "v. trilobum" by Marshall, "v. opulus pimina" by Michaux (Steud.); was observed by Pursh from Canada to the mountains of New York and New Jersey; by myself, from 47° 30′ on the Lower St. Lawrence to about 45° in Northern New England; by Long's Expedition, from Lake Superior to Pembina; by Drummond, to Fort Cumberland, 54°; and according to Hooker, grows as far as the Arctic Circle, Rocky mountains, and the Columbia river. Continues to be sometimes cultivated for its acid edible fruit. Transported to Europe, is termed "v. opulus Americanum" by Aiton (Steud.).

Specularia perfoliata of North America. Brought perhaps by the natives to New England, — as it often occurs as a weed in cultivated ground: observed by myself from 43° to 40° along the Atlantic, and introduced with cultivation at the mission-station on the Kooskoosky in Oregon; by Beck, at St. Louis on the Mississippi; by Michaux i. 108, in cultivated ground (Pers.); by Elliot, in "cultivated ground" in South Carolina; by Baldwin, and Croom, as far as "Fort George" in Florida;

described by Josselyn, its berries being much used both by natives and colonists: was observed by Lapylaie in Newfoundland, ceasing at 49°; by myself, in bogs and marshes from 47° on the Lower St. Lawrence to beyond 42°; by Pursh, from Canada to the mountains of Virginia; by Chapman, in

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by Chapman, in "fields, Florida to Mississippi;" was received by Kunth from Xalapa 750 and the mountains of Mexico; and according to Nuttall has been found in Peru. Transported to Europe, is described by Morison 5. pl. 2 f. 23 (Pers.).

Rumex altissimus of Northeast America. A species of *water dock*, its root from early times used by the natives "with great success in cleansing foul ulcers," — further observed by Cutler p. 436 "in muddy bottom brooks, not common;" by myself on the marshy borders of streams from 48° on the Lower St Lawrence to 42° along the Atlantic; by Mead, at Peekskill N. Y.; and according to A. Gray, grows as far as "Illinois and westward."

Cornus sericea of North America. A large shrub called by the natives in Maine by a name signifying "squaw-bush" (Williamson i. 125), in Central New York "kinnikinnik" (A. Gray); and from early times, fish-nets made of its twigs, and its inner bark approved as a substitute for tobacco, as far even as the Columbia river — (R. Brown jun., and Tuckerm. in archæol. Am. iv. 191): observed by Pursh from Canada to Carolina; by myself, around Monadnock and on the margin of Wenham swamp, the berries blue; by A. Gray, in "wet places, common" in Central New York; by Schweinitz, at 36° in Upper Carolina; by Elliot, on the Alleghanies of South Carolina; by Chapman, in "low woods, Florida to Mississippi, and northward;" by Darby 205, in Opelousas; by Pitcher, on the Arkansas; by Beck, at 40° in Illinois; and by Douglas, on the Columbia river (Hook.). Medicinal properties are attributed to this shrub in the American edition of Rees cycl.

Juglans cinerea of Northeast America. The *butternut*, called by the Narragansetts "wussoquat," and from early times, "excellent oil, good for many uses but especially for the anointing of their heads," procured from "these walnuts" (R. Will. key 16), for seasoning their aliments (according to F. A. Michaux): "noyers" called "quaheya" and "noix" called "daheya," — were seen by Cartier around Chaleur Bay and along the St. Lawrence: J. cinerea, according to Kalm, ceases not far North of Quebec; has been observed by myself from 47° 30′ to 42° along the Atlantic; by others, as far as 40°; by A. Gray, "common" in Central New York; by Pursh, as far as Virginia; by Schweinitz at 36° in Upper Carolina; by F. A. Michaux, in Kentucky; by Long's Expedition ii. 114 to 235, not North of 48° beyond Lake Superior; by Baldwin, at 39° on the Missouri; by Nuttall, along the Arkansas; by Darby, a single tree at 31° in Opelousas. Sometimes planted for ornament. "Of the chips" according to R. Williams, "the bark taken off, some English in the country make excellent beer, both for taste, strength, colour, and inoffensive opening operation."

Alnus glauca of Northeast America. The *speckled alder*: "alder-bark chewed fasting" applied to wounds by the New England natives, — and by the first colonists to wounds, bruises, and burns (Joss. 49): A. glauca has been observed by myself from 47° on the Lower St. Lawrence to 41° 30′; by Nuttall, at Cambridge near Boston; by Pursh, in New England and on the mountains of Pennsylvania; by F. A. Michaux, not uncommon in New Hampshire, Vermont, and Massachusetts, rare in the Middle States, and wanting in the Southern; according to A. Gray, is "the common alder northward from New England to Wisconsin."

Alnus undulata of Canada. A shrub somewhat lower than the preceding, possibly included in the chewed "alder-bark" applied to wounds by the natives — (Joss. 49): observed by Lapylaie at 52° on Newfoundland; by Michaux, in Canada (Steud.); by myself, from 47° 30′ on the Lower St. Lawrence to 44° on the White mountains. Transported to Europe, is termed "b. crispa" by Aiton (Pers.).

Alnus serrulata of Northeast America. The *smooth alder*, probably included in the "alder-bark chewed fasting" applied to wounds by the New England natives — (Joss. 49): "alnis" were seen by W. Morell near Plymouth; the "alder" on the Hudson, by the remonstrants against Stuyvesant; A. serrulata, by myself from 42° 30′ near Boston to 38° in the Delaware peninsula; by Schweinitz, at 36°; by Elliot, in South Carolina; by Chapman, on "banks of streams, Florida, and northward;" by F. A. Michaux, in the Northern, Middle, and Western States; and according to A. Gray, is "the common alder from Southern New England to Wisconsin, Kentucky, and southward."

Betula lenta of Northeast America. "Birch white and black: the bark of birch" used by the New England natives for bruises and wounds, "boyled very tender and stampt betwixt two stones to a plaister, and the decoction thereof poured into the wound" — (Joss. rar. 51): B. lenta, called *black birch* or *cherry birch*, was observed by Lapylaie in Newfoundland only in the South; by F. A. Michaux, from Nova Scotia and Maine to Maryland, and on the Alleghanies to Georgia, but not seen in Kentucky nor Tennessee; by myself along the Atlantic to 42°, and by others as far as 40°; by Schweinitz at 36° in Upper Carolina; and according to A. Gray, grows from "New England to Ohio and north-

"cold mossy swamps, North Carolina, and northward;" by Darby 153, on the Mermentou river in Louisiana; and according to A. Gray, grows from "Pennsylvania to Wisconsin, and northward." Under cultivation, has extended beyond its natural limits, and has become a well-known article of commerce; is now cultivated to some extent in Britain (A. Dec. 674 and 730).

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ward," its "twigs and foliage spicy-aromatic, timber rose-coloured, fine-grained, valuable for cabinet work." Transported to Europe, is termed "b. nigra" by Duroi (Steud.).

Betula populifolia of Northeast America. The *poplar-leaved birch*, a small tapering tree with tremulous foliage and white-skinned bark, possibly the "white" birch included with the preceding — by Josselyn rar. 51: B. populifolia was observed by myself along the Atlantic from 45° to 40°; by Pursh, from Canada to Pennsylvania; by F. A. Michaux, not South of Virginia; by Nuttall, in Arkansas. Transported to Europe, is described by Aiton, Duroi, Ehrhart, and Wangenheim pl. 29 (Pers., and Steud.).

Polyporus sp. of North America. A large and hard fungus projecting from the bark of trees: "*spunck*, an excrescence growing out of black birch," used by the New England natives "for touchwood," and to "help the sciatica or gout of the hip, or any great ach, burning the patient with it in two or three places upon the thigh and upon certain veins" — (Joss. rar. 52: compare the moxa of the Chinese). The dried fungus continues to be employed in striking fire by woodmen and hunters.

Asarum Canadense of Northeast America. The *wild ginger* (so named from similarity in flavour) employed against toothache by the Narragansetts, — in the words of R. Williams key 7, "a certain root dried, not much unlike our ginger:" A. Canadense was received by myself from Lat. 47° on the Lower St. Lawrence, and observed in 43° in the mountain woods of New England; was observed by Michaux in Canada (Pers.); by Pursh, from Canada to Carolina; by Schweinitz, at 36°; by Elliot, in South Carolina; by Chapman, on the "mountains of North Carolina, and northward;" by Short, near Lexington in Kentucky; and by Nuttall, on the Arkansas. Transported to Europe, is described by Cornuti pl. 25.

Pinus rigida of Northeast America. The *pitch pine*, its wood "cloven in two little slices something thin" the only "candles" used by the New England natives, — and Higgeson found them adopted by the first colonists (hist. coll. 1. 122): the account is confirmed by W. Wood, and Josselyn voy. 66 and rar. 62, where the "firre-tree or pitch-tree" is also mentioned: P. rigida was observed by F. A. Michaux from 44° in New England to the Alleghanies, but not in the Western States, nor in the maritime portion of the Southern States; by A. Gray, as far as Western New York; by myself, along the Atlantic from 44° to 39°; by Pursh, to Virginia; by Schweinitz, at 36°; by Elliot, on the mountains of Carolina, rare in the low country.

Arum (*Arisæma*) *triphyllum* of Northeast America. A woodland plant called by the colonists *Indian turnip*, and "the shreded roots and berries" said to have been boiled by the natives "with their venison" — (Cutl. p. 487): "dragons, their leaves differ from all the kinds with us, they come up in June," were seen by Josselyn in New England: A. triphyllum according to Hooker is frequent in Canada; by myself, from 47° to 40° along the Atlantic; by Pursh, from Canada to Carolina; by Croom, near Newbern; by Elliot, in South Carolina; by Chapman, in "Florida, and northward;" by Baldwin, as far as 29°; by Short, in Kentucky; and by Nuttall, along the Arkansas. Transported to Europe, is described by the brothers Bauhin (Tuckerm. in arch. am. iv), and Plukenet alm. pl. 77.

Symplocarpus foetidus of Northeast America. From its large clustered leaves called by the colonists *skunk cabbage*, and its dried root said to have been employed by the natives against asthma — (Cutl. p. 209): S. foetidus is figured by Josselyn; is termed "pothos fœtidus" by Michaux (Chapm.); was observed by myself frequent in swamps from 43° to 40° along the Atlantic; by Catesby, in Virginia; by Schweinitz, as far as 36° in Upper Carolina; by A. Gray, "common" in Central New York; but was not seen by Nuttall West of the Alleghanies. Transported to Europe, is termed "dracontium foetidum" by Linnæus (Steud.).

Medeola Virginica of Northeast America. Called by the colonists *Indian cucumber*, and its roots "esculent and of an agreeable taste" from early times eaten by the natives — (Cutl. p. 437): M. Virginica was received by myself from Quebec, and observed as far as 40° along the Atlantic; by Clayton, in Virginia; by Schweinitz, at 36° in Upper Carolina; by Elliot, in South Carolina; by Chapman, in "Middle Florida;" by Short, in Kentucky; by Nuttall, "near Morgantown" in North Carolina, and on the Arkansas, and termed "gyromia." Transported to Europe, is described by Plukenet alm. pl. 328. f. 4.

Allium Canadense of North America. The *American garlic*, its root from early times eaten by the natives in Northwest America (R. Brown jun.), probably the "wild leekes" much eaten by the New England natives "with their fish" — (Joss. rar. 54): "allia" little differing from the English,

Strobus Americanus of North America. The *white pine*, the loftiest tree of New England, known to the natives from early times: "the bark of board-pine, first boyled tender and beat to a playster betwixt two stones," applied by them to burns and scalds (Joss. 61); and the "cowaw-esuck" of the Narragansetts — is translated "pine, young pine" by R. Williams: "tall firre" were seen by Capt. George Weymouth on the Kennebec in 1605 (and hence the name *Weymouth pine* given in England to the imported deals): "of these stately high-growne trees, ten miles together, close by the river-side," were seen by W. Wood i. 5. in Eastern Massachusetts: S. Americanus was observed by Lapylaie only on the Southern portion of Newfoundland; by F. A. Michaux, from 49° in Canada to Nova Scotia and Lat. 43°, and on the Alleghanies to their termination; by myself, from 48° on the Lower St. Lawrence to about 41° along the Atlantic; by Schweinitz, in Wilkes County in North Carolina; by Chapman, "on the mountains of Georgia and North Carolina;" by N. A. Ware, somewhat beyond the Southwestern termination of the Alleghanies; by Long's Expedition ii. 129, from 42° on Lake Michigan to 49° on Rainy Lake; by Drummond, on the Saskatchewan (Hook.) and as far as 53° on the West side of the Rocky mountains; and by myself, on the mount Rainier ridge. Its easily-worked timber and tall trunks for masts, are well known in commerce.

Abies nigra of Northeast America. The *black spruce* known to the natives from early times: — "abeti" were seen by Verrazzanus at the Northern termination of his voyage; "pruches," by Cartier around Chaleur Bay and along the St. Lawrence; "spruce," by Weymouth on the Kennebec; by Josselyn 63, farther South, "a goodly tree, of which they make masts for ships, and sail-yards:" A. nigra, according to Hooker, ceases with Betula papyracea at Lat. 65°; was observed by Drummond at 54° near the Rocky mountains; by E. James, on the Rocky mountains at the sources of the Arkansas; by F. A. Michaux, from Newfoundland and 53° in Canada to 44°, and scattered trees in swamps near New York and Philadelphia; by myself, from 48° to 42°; by Chapman, on "high mountains of North Carolina, and northward." Spruce spars have become well known in commerce.

Abies Canadensis of Northeast America. The *hemlock spruce* from early times known in New England; the natives after dropping "a strong decoction of alder-bark" on a burn, "playstered it with" bark of the "hemlock-tree, boyled soft and stampt betwixt two stones till it was as thin as brown paper" — (Joss. 62): "iffs" or "yfs" were seen by Cartier around Chaleur Bay and along

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were seen by Hariot on the Roanoke (De Bry i.); and "plotts of onions an acre or more in low marshes" along James river, by Strachey: A. Canadense was observed by Kalm trav. iii. 79 in Canada; by Pursh, from Canada to Carolina; by myself along the Atlantic from 43° to 40°; by Schweinitz, at 36° in Upper Carolina; by Baldwin, to 31°; by Chapman, on "banks of rivers, Florida, and northward;" by Short, in Kentucky; and by Nuttall, on the Arkansas.

Veratrum viride of North America. The *American false-hellebore*, clearly the "white hellibore" whose powdered root was applied by the New England natives to wounds and "aches," — an example followed by the colonists, and the plant further observed by Josselyn voy. 60 and rar. 43 growing "in deep black mould and wet, in such abundance that you may in a small compass gather whole cart-loads:" V. viride was observed by myself from 47° 30′ on the Lower St. Lawrence to 40° along the Atlantic; by Pursh, from Canada to the Alleghanies of Carolina; by Chapman, in "mountain meadows, Georgia, and northward;" by A. Gray, "common" in Central New York; by Drummond, to 53° on the Rocky mountains; and by Mertens, "v. album" around Norfolk Sound.

Eriophorum Virginicum of Northeast America. A tall *cotton-rush* with long grassy leaves, probably the "kind of silk grass" of which the New England natives sometimes made baskets — (Gookin coll. 3): E. Virginicum was observed by Michaux from Canada to Carolina; by Pursh, to Georgia; by myself, from 46° to 39° along the Atlantic; by Elliot, in South Carolina, rare along the seacoast; by Chapman, in "bogs and swamps, Florida, and northward;" by A. Gray, "common" in Central New York.

Cyperus filiculmis of Northeast America. The "vimine gramineo nux subterranea suavis" eaten by the New England natives — (Rev. Wm. Morrell), may be compared: C. filiculmis was received by Vahl from Carolina; by Muhlenberg, from New England and the upper district of Georgia; was observed by myself along the Atlantic from 43° to 38°; by A. Gray, in "dry sterile soil, common, especially southward," culms "from hard tuberiferous rootstocks;" by Elliot, as far as Beaufort; by Chapman, in "dry sandy soil, Florida, and northward." The root is not known to be esculent.

Cyperus phymatodes of Northeast America. Possibly the plant in question: — observed by Muhlenberg in Pennsylvania; by Baldwin, in Delaware and East Florida; by Schweinitz, near Salem in North Carolina; by Elliot, in South Carolina; by Chapman, in "sandy soil near the coast, Florida, and northward;" by Short, in Kentucky; and according to A. Gray, grows from "Vermont to Michigan, Illinois, and common southward," "tubers small, at the end of very slender rootstocks." These tubers are not known to be edible.

the St. Lawrence; and "ewe" trees, by Hudson in ascending the river that bears his name: A. Canadensis was observed by F. A. Michaux from Lat. 51° throughout New Brunswick and Nova Scotia, and on the Alleghanies of our Southern States; by myself, from 46° to 40° along the Atlantic; by Schweinitz, near Germanton in North Carolina; by Chapman, on "high mountains of North Carolina, and northward;". by Short, in Kentucky; by Long's Expedition ii. 81, as far as 50° on Lake Winnipeg; by E. James, at the sources of the Arkansas on the Rocky mountains; and by Drummond, to 53° on the West side of these mountains. The bark for tanning has become well known in commerce.

Larix Americana of Subarctic America. The *hackmatack* or *American larch*, its bark sometimes substituted in making plasters by the New England natives — (Joss. 62): the "lereckhout" is enumerated by J. Mason among the trees of Newfoundland: L. Americana was observed by Herzberg in Labrador as far as 57° (Meyer); by Richardson, at Point Lake; by F. A. Michaux, from Lake Mistassins to the Alleghanies in Virginia; by myself, from 47° to 42° along the Atlantic; by Torrey as far as 41° on the Hudson; by Pursh, in Pennsylvania; by Long's Expedition ii. 81, to 50° on Lake Winnipeg; by Drummond, to 54° near the Rocky mountains; by myself on the mount Ranier ridge; and by Georgi, along the Pacific opposite Kamtchatka. The timber is highly valued for ship-building, but is not plentiful.

Cupressus thuioides of Northeast America. The *white cedar* from early times known to the natives around Massachusetts Bay, their light canoes "made of birch rindes and sowed together with the rootes of white cedar-trees" — (Johns. wond. prov. 8): "cipressi" were seen by Varrazzanus after leaving the opening and before reaching 41° 40′; "cipres," by Higgeson near Salem (hist. coll. i. 117 to 125); and the "mournefull cypres tree" of Massachusetts Bay, is distinguished by W. Wood i. 5 from the "cedar" with red wood: C. thuioides has been observed by myself in bogs, forming "cedar-swamps" along the Atlantic from 43° to 38°; by Croom, as far as Newbern; by F. A. Michaux, not South of the Santee; by Chapman, in "swamps, Florida, and northward;" by Sheppard, in Canada; and according to A. Gray grows from "Eastern Massachusetts to Ohio;" according to Hooker, as far as Fort Cumberland, Lat. 54°. Its "light durable wood" well known in commerce.

Eragrostis capillaris of Northeast America. An annual autumnal grass, possibly introduced into New England by the aboriginal tribes: * — observed by myself in sunny situations in the environs of Salem, chiefly about cultivated ground; by Pursh, from Canada to Florida; by A. Gray, in "sandy dry soil and fields, common, especially southward;" by Chapman, in "dry uncultivated fields, Florida, and northward;" was received by Kunth from North America, Hayti, Jamaica, and Chili. Transported to Europe, is described by Morison viii pl. 6, is termed "gramen paniculatum virginianum locustis minimis" by Tournefort inst. 522, and observed by Sibthorp "in Bithynia" in Asia Minor.

"1419 A. D. (= 17th year young-lo," Remus. iii. 97), an epistle in letters of gold accompanying elephants and productions of the country sent to China by Thsan-liei-tchao-phing-ya, king of Cambodia.

"1420 A. D." (Alst.), Joannes VII. succeeded by Joannes VIII., by consent of the Turks, sixty-eighth Byzantine emperor.

"June" (Major pr. H. 58), returning to Porto Santo, Zarco discovered a dark line towards the South-west, and supposing it to be fog resting on forests, sailed in that direction and re-discovered the island of Madeira. He found the tomb and wooden cross left by Machin's party, but no signs of inhabitants. Continuing along the coast, he entered with his sloops "a little creek sheltered by a rock," and "disturbed the repose of a troop of sea wolves" (*seals*), "which fled into a cavern at the

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* *Eragrostis tenuis* of Northeast America. An autumnal grass distinguished from the preceding by more numerous florets and long hairs in the axils of branches of the panicle, but possibly also introduced into New England by the aboriginal tribes; — observed by myself in the same situations with the preceding in the environs of Salem, and as far as Philadelphia; by Curtis, in North Carolina; by Elliot, at Greenville in South Carolina; by Nuttall, on the Arkansas, and termed "poa trichodes;" and according to A. Gray, grows in "sandy soil, Illinois, Virginia? and southward." From transported specimens, is termed "e. Geyeri" by Steudel.

Juncus tenuis of Northeast America. A rush possibly also carried North of its natural limits by the aboriginal tribes: — termed "j. bicornis" by Michaux, as observed in Carolina and Georgia; observed by myself from 43° to 38° along the Atlantic, frequent in grass-grown clearings and especially along roadsides; by Elliot, in South Carolina; by Chapman, in "Florida, and northward;" by Short, in Kentucky; by Nuttall, and Pitcher, in Arkansas. Transported to Europe, is described by Rostk. pl. 1, has been found on Clova mountain (Wats.), and according to Hooker in other parts of Europe.

foot of the rock, which was their dwelling-place;" and which received the name of "Camara dos lobos:" — the Camara dos lobos visited by myself is clearly an artificial excavation, like a mill-sluice tunneled along the base of a precipice with windows at intervals.

"1421 A. D." (art de verif.), Shekh Mahmoudi succeeded by Ahmed El-Mozaffer; after some months, by Seifeddin Tattar; and before the close of the year, by Mohammed Saleh, twenty-seventh Memluk sultan of Egypt.

"The same year" (voyag. Belg.), by the kings of England, France, and the duke of Burgundy, Guillebert de Lannoy sent as "ambassador" for the purpose of ascertaining the condition of Syria and Egypt. Journeying by land, the king of Poland added letters of recommendation to the Turkish sultan, formerly an ally in warring against Hungary. Before reaching the frontier, the sultan's death induced Lannoy to turn Eastward, and under the protection of the duke of Lithuania, travel among the Tartars of the Lower Dnieper. He maintained throughout the character of "ambassador;" and from the Crimea, proceeded by sea. Ambassadors had previously been sent by European potentates only to Christian and friendly nations; and Lannoy's mission is therefore regarded as the beginning of *diplomacy*. — The political relation of Lannoy is further illustrated, by the duke of Burgundy sending him seven years afterwards to the king of Bohemia and the duke of Austria, To negotiate respecting the followers of Huss in Hungary.

"The same year" (Alst.), Mohammed succeeded by his son Murad II., eighth Turkish sultan.

Thlaspi arvense of Europe and Northern Asia. Called in Britain *Mithridate mustard*, being one of the seventy-two ingredients of a Mithridatic theriaca which gave rise to "the tales so popular in the middle ages of sorcerers eating poisons," — and "was used as a vermifuge, and retained" till about a hundred years ago in the London Pharmacopeia (Prior): T. arvense is described by Gerarde p. 206; is termed "t. arvense siliquis latis" by Tournefort inst. 212; is known to occur in Italy and throughout middle Europe (Pers., and A. Dec.), but is regarded by Watson as exotic in Britain and introduced. Eastward, was observed by Sibthorp at the base of mount Hæmus and around Constantinople; and is known to occur in the Tauro-Caspian countries (A. Dec.), and as far as Yeso in Northern Japan (Siebold). By European colonists, was carried to Northeast America, where it was observed by myself at Tadousac on the Lower St. Lawrence; is known to occur also within the limits of the United States (Beck., and Torrey).

Filago Gallica of Europe and the adjoining portion of Asia. With other species called in Britain *hoarwort*, and the "horworte" of ms. Bodley, or "horwort" of gloss. Arundel 42, — is referred here by Cockayne: F. Gallica is described by Morison vii. pl. 11; is termed "f. vulgaris tenuissimo folio erecta" by Tournefort inst. 454; and is known to grow in gravelly soil throughout middle Europe (Lam. fl. fr., and Pers.); but in Britain, where it was observed in cultivated ground by Ray p. 181, and has since made its appearance in other localities, is regarded by Watson as exotic (A. Dec.). Eastward, was observed by Sibthorp, and Chaubard, frequent from the Peloponnesus to the Greek islands.

"1422 A. D." (art de verif.), Mohammed Saleh succeeded by Barsebay El-Aschraf, twenty-eighth Memluk sultan of Egypt. The mosque bearing his name at Cairo, was built by Barsebay El-Aschraf: who also carried on war in the Mediterranean against the Franks or Europeans.

Celastrus edulis of Tropical Arabia. Prior to the introduction of coffee, the use of "cafta" or "kat" established in Yemen by Ali Schadheli ben Omar — (Fakhr-eddin Mekki, Abd-alkader, and De Sacy chrest.): C. edulis, a tree called "gat" or "kat," was observed by Forskal in Yemen, cultivated in the same gardens with coffee, and various virtues attributed to the leaves which are eaten with avidity by the Arabs: the use of "kat" as a masticatory was witnessed by myself at Mocha, fresh branches being brought every morning from the mountains.

"The same year." (voyag. Belg.), in Egypt, Lannoy found *circumcision* practised among the Jacobite Christians or the Copts. And at Cairo, met with merchants of Hindustan, and even a patriarch from that country.

"The same year (= 1460 of the era of Cæsar," Major pr. H. 66), the Christian era for "all public ordinances" adopted by king John of Portugal.

"The same year." (Clavig., and Humb. atl. pict.), end of the reign of Chimalpopoca. — He was succeeded in the following year by Itzcoatl, fourth Mexican emperor.

"In this year (= 825 A. H." of Ferisht., Elph.), Firuz succeeded by Ahmed, now ninth Bahmani king of the Deccan.

"1423 A. D." (Nicol.), a synod at Treves; and another, at Sienna. Against heretics.

"1425 A. D. = 'houng-hi,' 1st year of Jin-tsoung-tchang-ti" or Jin-tsoung III., "of the Ming" or twenty-third dynasty — (Chinese chron. table, and Pauth.).

As early perhaps as this date (G. de la Veg. vii), under the direction of the Inca Yupanqui, Chili conquered by the Peruvian general Chinchiruca; and the bounds of the empire extended Southward from Atacama to Copayapu eighty leagues, thence to Cuquimpu eighty, thence to Chili fifty-five,

thence about fifty to the river Maulli in "S. Lat. 34° 30′." According however to Molina, the limit was somewhat farther North at the river Rapel; where the remains of a Peruvian fortress are extant.

Wintera Chilensis of Chili. Arborescent, called in Chilian "boighe," and from early times held sacred by the Araucanians,* — who carry branches in religious ceremonies (Feuill., and Molin.): observed by myself in mountain-ravines back of Valparaiso, not exceeding the dimensions of a large shrub, and clearly distinct from the Fuegian species; may prove however the species known to grow on the mountains of Peru and New Grenada (Linn. f. suppl. 269, and Humb. and Bonpl. i. pl. 58). Doubtless furnishes a portion of the *Winter's bark* of druggists, imported into Brazil under the name of "casca d'anta" and much used against colic, known also in Europe "as an aromatic tonic," warm and pungent (Lindl.).

"1426 A. D. = 'hiouan-te,' 1st year of Hiouan-tsoung-tchang-ti," or Hiouan-tsoung II. or Siouan-tsoung II., "of the Ming" or Twenty-third dynasty — (Chinese chron. table, and Pauth.).

"In this year" (Burm. hist., and Mason 27), Mukka, son of Theha and king of Pegu, taking the title of Dhamma-raza. He made munificent offerings to the pagoda at Rangoon.

1427 A. D. (= "six years" before the visit of Brocquière), conquest of Servia by the Turks. — Brocquière found the Servians belonging to "the Greek church."

"1428 A. D." (Burm. hist., and Mason 65), the king of Toungoo, in alliance with the king of Pegu and Talaing forces, warring against the Burmese. They captured Prome at this time the capital of the Burman empire.

"Oct. 12th" (Blair), beginning of the siege of Orleans; the first blow to English power in France. Joan d'Arc having distinguished herself as a warrior in the defence of the city, — after two years was taken prisoner by an officer of the duke of Burgundy, was sold to the English, and burned (Brocq., and T. Wright).

"1429 A. D." (ann. Jap., & art de verif.), Seokouo or Seo-kwo succeeded by Gofunnazo, now "one hundred and third" (or omitting those who reigned twice, one hundred and first) dairo of Japan.†

"The same year" (Nicol.), a synod at Riga. Deputies were "sent to the pope, To complain of the oppression of that church."

The city of Sibir, at the junction of the Sibirka and Irtich, probably at this time in existence. — Muller and Gmelin on visiting the site, "twenty-three versts" from Tobolsk, found only an old ruined wall (Pall. trav. ii. 525).

Paeonia anomala of Siberia. Called on the Obi "mariin koren" (Pall.), and from early times employed medicinally: — observed by Gmelin fl. iv. pl 72 in Siberia; by Pallas trav. ii. 345 on the Vagran tributary of the Obi.

Ferula Siberica of the Uralian plains. Called by the Russians on the Upper Irtich "oukrop" (Pall.), and known from early times: — observed by Pallas ii. 545 near Jamyschewa, flowering in June; by Sokolof, in sands between the Volga and Yaik, ripe seeds on the dried stems in July.

Sedum spinosum of the Uralian plains. Called on the Irtich "repki," its leaves agreeably acid, and from early times eaten crude — (Pall.): observed by Gmelin iv. pl. 67 in Siberia; by Pallas i. to iii. 123 from the Lower Volga to and beyond Omsk.

Caragana halodendron of the Uralian plains. A thorny bush called by the Russians on the Upper Irtich "ternevnik" (Pall.), and known from early times: — observed by Gmelin iv. 15 n. 19 in Siberia; by Pallas iii. 153 to 489 in arid saline plains from the Ural mountains to the Upper Irtich near Jamyschewa.

Populus balsamifera of Siberia. A "superb tree" called by the Russians on the Irtich "kaiderevo" (Pall.), and known from early times: — observed by Pallas iii. 190 along the Irtich river-bank to the Altaian mountains. The *balm-of-Gilead*, termed "p. latifolia" by Moench, "p. candicans" by Aiton, known in America before Catesby i. pl. 34, and Marshall, and planted near dwellings from "N. New England to Wisconsin and Kentucky" (A. Gray), may be compared.

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* *Araucaria imbricata* of Southern Chili and Araucania. A lofty Coniferous tree, its large cones from early times supplying the natives with a great part of their food, a single tree sometimes producing enough to maintain eighteen persons for a year — (geogr. plant. lond. tract soc.): observed by Molina, and Pavon diss. bot. 9. Transported to Europe, is described by Lamarck pl. 328; and from Europe was carried to Northeast America, where it continues in greenhouses.

† *Taxus verticillata* of Japan. The "make" of the mythological history of Japan, — is referred here by Klaproth (introd. ann. Jap.): T. verticillata was observed in Japan by Thunberg.

Erianthus Japonicus of Japan. The "asi" of the mythological history of Japan, — is referred here by Klaproth (introd. ann. Jap.): E. Japonicus was observed by Thunberg, Houttuyn pl. 89, and Siebold in Japan, abundant, covering the mountains from "fifteen hundred to five thousand feet" and as far North as the island of Yeso. In Chinese, the grass is called "wei." (Klapr.).

Allium obliquum of Siberia. From early times cultivated on the Tobol as a substitute for garlic, — observed wild there by Pallas iii. 55; also in Siberia by Gmelin i. pl. 9.

Allium angulosum of Siberia. Called on the Upper Yenisei "mischei-tschesnok" mouse-garlic, and from early times collected and salted for winter use, — observed by Pallas iv. 426; and in Siberia by Gmelin i. pl. 14. Westward, is described by Bauhin hist. ii. pl. 564; and is known to occur in Germany (Jacq. austr. v. pl. 423, and Pers.).

Potentilla fruticosa of Northern climates. A shrub three feet high called in Siberia "Kourilskoï-tchaï" Kurile tea, and its leaves from early times used by the peasants and Tartars as a substitute for tea,* — observed by Pallas iii. 394 to . . . around Lake Baical; by Gmelin, throughout Siberia; by Bieberstein, on mount Alwar in Armenia; and known to grow from Sweden to Ireland and Switzerland (Engl. bot. pl. 88, and Wats.). Westward, was observed by Lapylaie in Newfoundland; by myself, along the Atlantic as far as 42°, abounding especially on the hills of Western Massachusetts; by Torrey, as far as 41° on the Hudson; by Pursh, from Canada to the mountains of New York and New Jersey; by Lewis and Clark, and E. James, on the Rocky mountains; and was received by Hooker from Bear Lake river and Kotzebue Sound.

"March 1st to April 23d" (Nicol.), a synod at Paris. Rules were made, On "the celebration of Sunday;" the expenses of banns of marriage; and prohibiting the "Feast of fools," an absurd ceremony "established in the church of Paris about the end of the Twelfth century."

"In this year (= 833 A. H." of Ferisht., Elph.), by Ahmed Shah of Guzerat, expedition by sea to recover the coast-islands of Bombay and Salsette, seized by the Bahmani king in attempting to subdue the Concan. The Bahmani king was driven out, but remained hostile.

1430 A. D. (= "1355 an. jav.," Raffles x.), birth of Raden Paku or Sunan Giri, son of the daughter of the chief of Balambangan by the Arab missionary Mulana Ishak also called Mulana Alul Islam. The child was conveyed to Gresik in Java and placed under the charge of Niai Gedi Pinateh, a woman of rank banished from Kamboja to whom refuge had been granted by the Javan king.

"In this year" (Velasco, and Markh.), Atauchi Duchicala succeeded by Hualcopo Duchicala, now fourteenth scyri of Quito.

"The same year" (Colebrooke as. res. vii. p. —), Vrihaspati surnamed Mucuta commenting on the Amera-cosha.

Strychnos colubrina of Southern Hindustan. Called in Telinga "naga musadi," in Bengalee "koochila-luta" (Lindl.), and included perhaps by the commentator on the Amara-cosha. — (see W. Jones as. res. iv. p. 128): S. colubrina is described by Rumphius ii. pl. 37; was observed in Hindustan by Rheede viii. pl. 24; and Roxburgh; by Graham, "a large scandent shrub by means of tendrils" found by Nimmo in the Southern Concan: the wood of its root is considered an infallible remedy for the bite of the naga or cobra de capella and of every other venomous snake, is therefore the most esteemed kind of *lignum colubrinum*, and brings such high prices among the natives as rarely to find its way to Europe (Roxb., and Lindl.).

"1431, March 3d to 6th" (Alst., and Nicol.), Martinus III. succeeded by cardinal Gabriel Condulmier, now Eugenius IV., fifty-third pope. Charles VII. . . . ruling France; and Henry VI., England.

"July 23d" (Nicol.), "Eighteenth general ecclesiastical Council." Convened at Basle. The kinsmen of the pope and cardinals were excluded from the cardinalship. The festival of the Conception and Visitation was ordained. And the Council continued in session "eleven years, nine months, and seventeen days" (Alst.).

"In this year" (see Galvan.), Spain and Portugal disputing the possession of the Canary Islands, the controversy was decided by pope Eugenius IV. in favour of Spain.

"The same year" (Martin Behaim in voyag. Belg., and Major pr. H. 131), under instructions from prince Henry of Portugal, Gonzalo Velho Cabral re-discovering Formigas, and as the birds there made no attempts to escape, named it the "Hawks" or Azores — (a condition of things witnessed by myself on uninhabited islands). In "1432" a second island was re-discovered and named Santa Maria: and "in 1449" (Galvan.), Alfonso V. gave license to his uncle prince Henry to people the Azores, "which were long before discouered."

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* *Pyrola uniflora* of Northern climates. Called around Lake Baical "killereka," and from early times used medicinally and as a substitute for tea — (Pall. iv. 409): observed by Gmelin throughout Siberia; by Pallas, in woods around Lake Baical; by Chamisso, in East Siberia. Westward, is described by C. Bauhin pin. 191; is known to grow on the Pyrenees and mountains of Switzerland, and from Flanders (Dec.) to Lapland (Engl. bot. pl. 146, fl. Dan. pl. 8, and Wats.). Farther West, in Greenland (Wats.); was observed by Lapylaie on Newfoundland; by myself, in deep shade from 48° on the Lower St. Lawrence to 42° along the Atlantic; by Pursh, from Canada to New York State; was received by A. Gray from Pennsylvania and Lake Superior; and was observed by Mertens at Norfolk Sound.

1432 A. D. (see T. Wright), near Damascus, Brocquière fell in with a "Moor who had ridden a camel from Cairo in eight days," bringing an order for the arrest of all Catalonians and Genoese in Damascus and throughout Syria; a ship having been captured by the prince of Tarentum. At the close of the year, returning through Asia Minor, — Brocquière found the Byzantine dominions confined to Constantinople, a castle three leagues North, and a small city in Greece called Salubria; the emperor paying tribute to the Turks, and under obligations to return fugitive slaves. While the Turkish sultan drew from Greece "thirty thousand men" annually; being "two fifths," or according to other estimates "three fourths" of his whole army.

"1433 A. D." (Brocq, and T. Wright), through a stratagem, Albania regained by Scanderbeg. — Who for several years maintained himself, defeating the Turkish armies sent against him.

"August" (Galvan.), John succeeded by his son Duarte or Edward, now king of Portugal.

"1434 A. D." (Blair), Cosmo de Medici duke of Florence, recalled from banishment. The beginning of the rise of the Medici family.

One hundred and seventy-second generation. May 1st, 1434, onward mostly beyond youth: the Greek writers, Michael Ducas nepos d. 1462, Gemistus d. about 1441, Georgius Codinus, Gennadius Georgius Scholarius d. 1459: Quintus Aemilianus, Flavius Blondus, Johannes Aventinus, Laurentius Valla, Laurentius Justinianus patriarcha Venetum, Leonard Aretin; Poggio; Antonio Cermisone, Bernhardus Senensis, Alphonsus Tostatus, Antoninus Florentinus; Anton. Guainerius (Spreng.): the scholastic theologians, Joannes de Capistrano, Joannes Bassolius, Joannes de Turrecremata, and Nicolaus de Cusa: the botanist, Ortolfus de Bavaria Heydenberger: the painters, Fra. Giovanni called Angelico d. 1445, Masaccio d. 1443.

"The same year" (Galvan., Churchill coll., and Major pr. H. 69), under instructions from prince Henry of Portugal to disregard the statements of seamen who "have no knowledge of the *needle* or the *sailing chart*," Gil Eannes doubled Cape Bojador; and landing beyond, found no signs of inhabitants, but brought back "some plants that he had gathered, which were such as were called in Portugal St. Mary's roses" (*Rosmarinus officinalis*).

"1435 A. D." (Galvan., and Major pr. H. 69), Gil Eannes again sent out "in his barque," together with Affonso Gonsalves Baldaya in a "varinel, or vessel with oars:" fifty leagues beyond Cape Bojador, they entered a bay which they called "Angra do Ruivos" bay of gurnards, from the numbers of those fish; and on landing, found "traces of men and camels." — On reporting to prince Henry, Baldaya was sent back, taking two horses in his varinel, and "a hundred and twenty leagues" beyond Cape Bojador entered an estuary (afterwards called "Rio d'Ouro"): two lads "of about seventeen" were sent along the shore on the horses, and after "seven leagues" came "upon a group of nineteen men" armed only with azagays, who retired to a heap of stones, and "fought till evening warned the" lads to return to the vessel; in the morning, Baldaya visited the spot, but the natives "had decamped, leaving the greater portion of their poor property behind:" *seals* were seen to the number of some "five thousand," and the vessel was loaded with their skins. Continuing "fifty leagues" farther to a rocky galley-like headland, Baldaya was unable to capture a native, but procured some fishing-nets "made of the bark of a tree of such a texture" that "it could be woven excellently well" (*Adansonia*).

In or about 1435 A. D. (= "1360 an. jav.," Raffles x), arrival at Majapahit of ambassadors from Panjar Masin. In return, the king of Java sent one of his sons Chakra Nagara to be chief, accompanied by many vessels carrying followers and troops. Besides Burni (Borneo), other conquests by the Javan admiral Ratu Peng'ging are enumerated, as Makasar, Goa, Banda, Sembawa, Endé, Timor, Ternaté, Sulu, Siram (Ceram), and Manila. He was now sent to subdue Palembang.

In the Avadana Purana mention is made of the city of Surparaka ("Sippara" of Ptolemy or Sipeler on one of the mouths of the Krichna) precious stones of the Deccan (Golconda), silks, Budhist assemblies, diligence in reading, and Kasyapa is named as having lived in old times.

Santalum . . . . *sp.* of the Malayan archipelago. The "Gosircha tchandana," the grove held in the name of king Tchakravartin and reached by a sea-voyage, — is regarded by Burnouf as possibly from Sandalwood Island: santal of "Mekasiry" (Macassar) is mentioned by Abul Fazl (Gladw. ayeen akbery i. 92, and Burnouf introd. 255 to 619).

"In the years siouan-te and king-thai (= 1426 to 1435," Remus. iii. 97), ambassadors sent to China from Cambodia, — but afterwards they did not come regularly.

1436 A. D., the Javan admiral having subdued Palembang in Sumatra, Aria Damar son of king Angka Wijaya sent there as chief as early possibly as this date. He was accompanied by the Chinese princess; — and here in Palembang, her two sons Raden Patah and his half-brother Raden Husen were born.

"The same year = 'tching-toung,' 1st year of Yng-tsoung-joui-ti" or Yng-tsoung III., "of the Ming" or Twenty-third dynasty (Chinese chron. table, and Pauth.).

"Apr. 13th, Friday" (Blair), Paris re-captured by the French from English possession.

"In this year" (Humb. cosm. ii. and v.), map by Andrea Bianco, on which the *magnetic variation* is noted.

"The same year" (Clavig., and Humb. atl. pict.), Itzcoatl succeeded by Motezuma-Ilhuicamina or Montezuma, fifth Mexican emperor.

1437 A. D. = "1362 an. jav." (Raffles ix.), date of an inscription on a deghop among the ruins at Suku on Java.

"In this year" (Markham p. liii), Ulugh Beg, sultan of Samarcand, writing his Astronomical Tables. Among other instruments in his observatory was a *quadrant* whose radius equalled "the height of the dome of St. Sophia."

"1438, Jan. 10th" (Nicol.), a synod at Ferrara. In concert with the Council of Basle, which continued in session. Preliminary action was taken, For the re-union of the Greek and Latin churches (see Alst.).

"During Lent" (Nicol.), by the electors assembled at Frankfort, Albert II. of Austria chosen "king of the Romans;" succeeding Sigismund as emperor of Germany and Italy.

"July 7th" (Nicol.), in a numerous assembly or synod at Bourges, *Pragmatic sanction* composed. A celebrated rule, Making the authority of the general Councils "superior to that of the pope."

"The same year" (art de verif.), Barsebay El-Aschraf succeeded by Djemaleddin Yusuf; and before the close of the year, by Djakmak, thirtieth Memluk sultan of Egypt.

"In this year" (Stanley edit. Barb. 9 and 23), Josafa Barbaro at Tana on the river Tana (Don) witnessing the passage Westward of a horde or army of Tartars, led by Naurus and Chezimameth or Little Mahomet against Vlumahumeth Can or the Great Mahomet, at this time "in the champaignes towards Russia." On another occasion, Barbaro received a present of "eight sklaves of the nation of Rossia."

Laserpitium trilobum of the Uralian plains. Called on the Lower Volga "gladich" (Pall.); and the "baltracan" described by Barbaro 102 as having the smell of rather musty oranges, its stem single hollow thicker than one's finger and more than a "braccio" high, leaf like rape, seed like fennel but larger, pungent but pleasant taste and when in season broken as far as the soft part, can be eaten without salt, the water also in which the leaves are boiled drank as wine and very refreshing, the plant met with also between Albania and Croatia and at Terrarsa in Padovana, — may be compared: L. trilobum was observed by Pallas trav. i. 276 frequent on the Lower Volga, the young stems eaten crude; was observed also by Baumgarten in Transylvania, by Waldstein and Kitaibel in Hungary, and is termed "l. carniolicum" by Bernhardi (Steud.). From transported specimens, is described by Plukenet phyt. 223, and Linnæus (Pers.).

"The same year" (Rosse), the art of *printing*, though practised in China for some centuries, independently invented in Europe by Laurence Koster; who issued a printed tract entitled "Speculum humanæ salvationis." — Six years afterwards, the improvement of movable types was effected by Guttenberg and Faust. And after eight years more, a further improvement was made by Schœffer, in the casting of types in metal.

The same year = "1363 an. jav." (Raffles ix.), date of an inscription "in characters which appear to have some connection with the modern Javan," discovered at Kwali on Java.

"1439 A. D." (Garc. de la Vega), Yupanqui succeeded by his son Tupac Yupanqui, now eleventh Inca of Peru. He continued the great fortress at Cuzco, commenced by his father.

Tupac Yupanqui did not believe that the sun lives and "is the maker of all things," for "many things are made when the Sun is absent;" it "is like a tethered beast that always makes the same round," yet notwithstanding so many revolutions "is never tired;" whereas were it living and free, it "would visit other parts of the Heaven" — (Blas Valera, and G. de la Vega viii. 8).

He also said, That "ambition and avarice prevent a man from knowing how to moderate either his own actions or those of others."

The same year, Aria Damar having resided "about three years" at Palembang, arrival there of Raden Rachmat, son of an Arab priest and the elder sister of the princess of Champa. After "two months" stay, Rachmat proceeded on his voyage to Java, and on reaching Majapahit was kindly received by his relative the princess, and was permitted by king Angka Wijaya to form an establishment at Ampel with the free exercise of his religion.

"Feb. 29th" (Nicol.), a general synod or council convened at Florence; being a continuation of the synod of Ferrara. The re-union of the Greek and Latin churches consummated; the patriarch of Constantinople dying immediately after signing it. — But at the end of two years (Alst.), the Greeks returned to their religious dogmas and ceremonies.

"Nov. 17th" (Alst., and Nicol.), by the Council of Basle, continuing in session, pope Eugenius IV. declared deposed, and Felix elected his successor. Felix, being excluded from Rome, made Lausanne his residence.

"The same year" (Crawfurd vii. 11), in Java, Hindu temples constructed at Sukuh in the mountain of Lawuh.

Hardly later than this year (? . . .), after residing while a young man in Damascus, and proceeding thence to Hindustan, Ceylon, and Sumatra, Nicolo Conti, leaving on his right Andamania inhabited by cannibals, arriving at Ava. — He continued Eastward to Xeythona, and at a month's distance from the continent reached the Greater Java (Borneo). He describes *running a muck*, the prevalence of *cock-fighting*, and birds without feet whose skin and tail are "used as ornaments for the head" (*paradise birds* from New Guinea): fifteen days Eastward from the two Javas are two other islands, Sandai on which *nutmegs* grow, and Bandan which alone produces *cloves; parrots* of three kinds are also found on Bandan, "some with red feathers and a yellow beak, and some parti-coloured, which are called 'nori,' that is brilliant" (*lories*), and "some white" which are called "cachi" (*cockatoos*). Returning, he sailed "westward" to "Ciampa abounding in *aloes wood*," thence to Melibaria and Calicut, and after spending two months on Sechutera, yielding *Socotrine aloes* and "for the most part inhabited by Nestorian Christians," he proceeded up the Red Sea and reached Venice in 1444 after twenty-five years absence.

The *Galeopithecus* or flying-cat is described by Nicolo Conti.

Durio zibethinus of the Eastern Equatorial portion of the Malayan archipelago. The fetid but much celebrated *durien* is called in Burmah "du-yeen" (Mason); and is clearly the green fruit called "duriano," having five fruits within and in taste varying like that of cheese, seen by Nicolo Conti on Sumatra.* — D. zibethinus is described by Rumphius i. pl. 29; was observed by Navarrete growing on Borneo and Celebes, but not as far as Manilla; by Dampier, on Mindanao; by myself, on Sulu; by Mason v. 447, a cultivated "exotic" in Burmah. Westward, by Roxburgh iii. 399, in Hindustan: but has only recently been introduced into the environs of Bombay (Nimmo, and Graham), and into Zanzibar, observed by myself on the imaum's plantation. Accounts of this fruit had reached Europe as early as 1640, the "durion" being mentioned by Parkinson.

Santalum ka-ra-mai of Burmah. Probably included in the "*white sandal wood*" seen by Nicolo Conti at Panconia: — S. ka-ra-mai was observed in Burmah by Mason.

"1440, Aug. 26th to Sept. 11th" (Nicol.), another synod at Bourges. The bishops with Charles VII. of France refused to recognize the Council of Ferrara, or to abolish "Pragmatic sanction."

"In this year," Galfridus of Lynn, according to his own account, writing his Promptorium parvulorum, an English-Latin dictionary.

Galeobdolon luteum of Europe and the adjoining portion of Asia. Called in Britain *yellow dead-nettle* or *yellow archangel* (Prior), and probably included in the "archangel" or "dede nettyle" of Galfridus pr. pm., — and "archangelica" or "blind netele" of gloss: Harl. 3388 (Cockayne): G. luteum is described by Caesalpinus xi. 31 (Spreng.); is termed "g. sive urtica iners flore luteo" by Tournefort inst. 185, "cardiaca sylvatica" by Lamarck fl. fr.; and is known to grow in wooded mountainous situations throughout middle Europe as far as Britain (Hoffm. germ., Pers., and Engl. bot. pl. 787). Eastward, was observed by Sibthorp in woods on mount Haemus and around Constantinople.

"1441 A. D." (Galvan., Churchill coll., and Major pr. H. 89), under instructions from prince Henry, Antam Gonsalves at the above-mentioned estuary procuring the "skins and oil of seacalves" (*seals*). Having completed his cargo, "he took nine sailors inland and succeeded in capturing two natives:" but on the following day as he was about leaving, he was joined by Nuño Tristan in an armed caravel bringing a Moor to act as interpreter: a second incursion was planned, which resulted in the capture of "ten natives;" of whom the chief only "was able to converse with the interpreter,

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* *Castanea Martabanica* of the mountains of Burmah. A *chestnut tree* in common with the Juglans called "theet-kya" (Mason), and probably the "chesnuts" seen by Nicolo Conti at the city of Panconia: — C. Martabanica was observed in Burmah by Wallich; by Mason v. 398 to 456, "indigenous," growing "on the uplands" and sometimes "nearly down to the sea shore," the fruit "sold in bazar" but inferior in quality to the European chestnut.

Castanea tribuloides of the mountains of Burmah. Distinguished as the "wet-theet-khya" *hog-chestnut*. (Mason); and included perhaps in the "chesnuts" seen by Nicolo Conti at Panconia: — C. tribuloides was observed by Mason v. 463 "indigenous" and undescribed.

Pandanus hsat-thwa-gyee of Burmah. A stemmed palm-like *screw-pine*, affording perhaps the "pine-apples" seen by Nicolo Conti at Panconia: — P. hsat-thwa-gyee was observed by Mason v. 521 in Burmah, "very abundant" and "usually growing near the sea;" the sails of "many of the Burmese boats" made of its "large narrow leaves sewed together," and its fruit "used by the Karens to kackle their thread."

the rest spoke the language of the Azanegues or Tawny Moors" (Barabra Race); the interpreter going on shore "was detained prisoner, after having in vain tried to negotiate with the natives," and Gonsalves sailed for Portugal. Tristam, after repairing his vessel, continued beyond the Gallée rock to a cape which from its whiteness he called Cape Branco, and returned.

A concession was now obtained from the pope "in perpetuity to the crown of Portugal of whatever lands might be discovered beyond Cape Bojador to the Indies inclusive." The Bull issued was subsequently confirmed by the popes Nicholas V. and Sixtus IV.

"1442 A. D." (Churchill coll., Galvano giving "1443," see Major pr. H. 91), the captive chief, wishing to return and offering a ransom, was sent back under Gonsalves; and "handsomely dressed in clothes which the prince had given him," was set on shore: at the end of a week, "a Moor on a white camel appeared with full a hundred slaves," out of which "ten negroes of both sexes were given up in exchange for the two boys," besides "a great number of ostrich eggs," a leathern buckler, and "a small quantity of gold dust:" the estuary in consequence received the name of "Rio d'Ouro."

In this year, in Java, Raden Paku "twelve years of age" resigned by his nurse Niai Gedi Pinateh to the charge of Raden Rachmet. Who brought him up in the Mohammedan religion.

"The same year" (Webb in archæol. Brit. xxi, and R. H. Major in soc. Hakl.), Abd-er-Razzak, envoy from Shah Rokh, arriving at Ormuz; a great commercial city, where "merchants from the seven climates of the world" assemble, "from Egypt, Syria, Anatolia, etc.," men "of all religions, even infidels, who traffic in perfect liberty, and to whom justice is equally administered." He was detained in "May" at Kariat (near Muscat), and thence proceeded to Calicut, — and at the "end of April" in the following year reached the city of Vijanagar in Southern Hindustan. Returning, he reached Ormuz "April 22d, 1444," was sent on embassy into Ghilan "in 1446," and died at Herat "in 1482."

Rosa Indica of China. The *China rose* probably included among the "roses of all kinds" under cultivation seen by Abd-er-Razzak on approaching Vijanagar, sold in the bazaar sweet-smelling and in constant succession, and regarded by inhabitants "quite as necessary as food:" — R. Indica was observed by Graham in the environs of Bombay "common in every garden and in flower all the year;" by Roxburgh, in Bengal; by Mason, "exotic" in Burmah; and is known to be indigenous in China (Pers.). Transported to Europe, is termed "r. rubra Malabathrum" by Cornuti p. 121, who states that it grows more fragrant with age; is described also by Petiver pl. 35; and from Europe was carried to Northeast America, where it continues in greenhouses.

Rosa microphylla of China. Small-leaved with pale-red flowers; and possibly among the roses seen by Abd-er-Razzak: — observed by Graham "common in gardens" at Bombay, and known to be a "native of China." Transported to Europe, is described by Don ii. 581, and in bot. mag. pl. 3490 (Grah.).

Rosa Sinica of China. The *Bengal rose*, probably among those seen by Abd-er-Razzak: — observed by Lush in the Bombay district at Dapooree; by Mason, "exotic" in Burmah; and known to be indigenous in China (Linn.). Transported to Europe, is termed "r. Bengalensis" by Persoon, "r. semperflorens" by Curtis mag. pl. 284, the flowers red (Pers., and Steud.).

Rosa glandulifera of Hindustan. White-flowered and called in the environs of Bombay "shewatee goolab" (Graham); possibly among the roses seen by Abd-er-Razzak: — described by Roxburgh ii. 515; and observed by Law near Bombay, "common in gardens at Belgaum, where it is in flower all the year" (Graham).

"1443 A. D." (Churchill coll., and Major pr. H. 93), under instructions from prince Henry, Nuño Tristan passing Cape Branco: "twenty-five miles beyond," in the Bay of Arguin, a small island was discovered from which "twenty-five canoes put out," each containing three or four natives entirely naked and paddling with their feet; the canoes were pursued and "fifteen" of the natives captured, and after visiting another islet, resorted to by multitudes of herons and other birds for breeding, Tristan "returned the same year with his booty" to Portugal. — On the first-named islet, the fortress of Arguin was built "in 1448."

"In this year (= 847 A. H." of Ferisht., Elph.), Ahmed Shah succeeded by Mohammed Shah, now third Muslim king of Guzerat.

"In this year" (San-kokf transl. Klapr.), the Southern portion of Yesó conquered by the Japanese general Nobou-firo.* — His descendants have continued princes there to the present day, and the district is called Matsmaye.

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* *Euphorbia Sieboldiana* of Yesó and the neighbouring countries. Called "ikatsuka," or by the Japanese "kansui," — and enumerated by Siebold as medicinal.

Lonicera brachypoda of Yeso and the neighbouring countries. Called "sui kadsura" by the Japanese, — and enumerated by Siebold as medicinal.

Lapathum sp. of Yeso and the neighbouring countries. Called by the Japanese "ma daiwo," — and enumerated by Siebold as medicinal.

Rheum sp. of Yeso and the neighbouring countries. Called "sjunaba," or by the Japanese "stakamaro;" — enumerated by Siebold as medicinal.

The year of the Ainos of Yeso beginning not in the Japanese manner, but apparently in that of Europeans, — which according to Rinsifée (author of the San-kokf) would be an astonishing fact.

Among useful plants growing on Yeso, *Menyanthes trifoliata* called "midsugasiba" by the Japanese, medicinal; *Coptis trifolia* called "mitsuba woren" by the Japanese, medicinal; *Acorus calamus* called "sjob" by the Japanese, medicinal; and *Scirpus maritimus* called "kasasuge" by the Japanese, for straw hats.

"In this year" (Burm. hist., and Mason 51), the Chinese invading Ava repelled by king Bhuren-Narapadi, also called Dupeyoundayaka.

1444 A. D. (= "16th year of Gofunnazo," art de verif.), in Japan, the title "sei-seogun" conferred on Josijmassa by the dairo Gofunnazo.

The shiogun Yoshi-masa instituted the Cha-no-yu, small parties of friends for tea-drinking, "and framed certain rules concerning the etiquette to be observed on such occasions, in order to avoid all excitement, and to bring people into as intimate relations with one another as possible" — (Jap. c. c. 107).

"The same year = 9th year of the 'tching-toung' of Yng-tsoung III." (Chinese chron. table), beginning of the Sixty-ninth cycle.*

"The same year" (Alst. p. 216, and Blair), at Varna, Ladislaus king of Hungary defeated by the Turks.

"In this year" (Spreng. hist. med. vii. 8), Bartholom. Montagnana writing a portion of his Consultations. — He died in "1460."

"The same year" (Alst.), Joannes VIII. succeeded by his brother Constantinus XII., by consent of the Turks sixty-ninth Byzantine emperor; — and as it proved, the last.

In this year (Major ind. voy. p lx), on the return of Nicolo de' Conti, an account of his travel committed to writing by Poggio Bracciolini, secretary to pope Eugenius IV. "About the same time, some men came to the pope from Æthiopia upon matters regarding the faith" — (Major 34).

The wild animal hunted for food, described by the Abyssinian legates as having "horns three cubits in length and spiral from the top," — is regarded by Major as probably the koodoo antelope, *Strepsiceros kudu*.

Luffa pentandra of Eastern Equatorial Africa. Called in Burmah "tha-bwot" (Mason), in the environs of Bombay "gosalee tooraï" (Graham); and the vegetable resembling cucumbers, mentioned by the Abyssinian legates, — may be compared: L. pentandra is enumerated as seen by Grant in Equatorial Africa. Eastward, was observed by Rheede viii. pl. 8 in Malabar; by Graham, "cultivated" around Bombay, its fruit "one to three feet long;" by Roxburgh, Wight, and Stewart punj., in other parts of Hindustan (Drur.); by Mason, "exotic" in Burmah and considered by the natives "a delicious vegetable;" is described also by Rumphius v. pl. 147.

Musa? ensete of Abyssinia and Central Africa. A huge herbaceous plant called in Abyssinia "ensete" (Bruce); and the tree described by the legates as "of the height of a man, and in girth as much as a man can embrace with his arms, with many layers of bark" between which fruit like chestnuts is deposited, when pounded made into very sweet white bread, the leaves "one to two cubits in length," — may be compared: M.? ensete was observed by Bruce frequent in the moist warm parts of Abyssinia, large plantations in Maitsha and Goutto "almost exclusive of anything else" forming "the food of the Galla," its "stem" for "several feet in height" eaten "with milk and butter" is "the best of all food, wholesome, nourishing, and easily digested" (Grev.). Apparently the same plant was seen by Grant fruitless and wild outside a plantain-grove under the Equator, and smaller ones among rocks at "3° 15′ N." on the Nile, the leaves huge, and the seeds strung by the Waganda into necklaces, charms, and tiaras; no other uses known to his companions.

Poa Abyssinica of Abyssinia. A kind of grain called there "teff" (Bruce); and the "corn and wine" described by the legates as abundant, — may be compared: P. Abyssinica was observed by Bruce cultivated throughout and affording "the common bread of the country," from which fermented with water "is prepared a kind of *beer* in general request by the Abyssinians" (Grev.). Transported to Europe, P. Abyssinica is described by Aiton, and Jacquin rar. i. pl. 17.

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* *Scævola lobelia* of the coral-strand of the Indian and Pacific oceans. A shrub called in Tagalo and Bisaya "boto" or "bocaboc" or "panabolong" or "pangangtolon," in Zambales "linog," and its pith cut into "rice-paper" by the Bisayas and Chinese (Blanco) as early probably as this date. — Eastward, S. lobelia was observed by myself throughout the Pacific, chiefly on coral-reefs and islands; by J. D. Hooker, on the Galapagos Islands; and is known to grow in the West Indies (Jacq. amer.) as far as "South Florida" (Chapm.) and the Bahamas (Catesby i. pl. 79). Eastward from the Philippines, is described by Rumphius iv. pl. 54; was observed by Rheede iv. pl. 59, and Roxburgh, in Hindustan; by Graham, in "gardens Bombay;" and is known to grow on the seashore of Australia and "Afrique intertropicale" (A. Dec.).

"In this year" (Major pr. H. 131), the Azores Island seen by a runaway negro slave from the highest mountain on Santa Maria visited by Cabral and named St. Michael: — Terceira was discovered "before 1450," and from this island San Jorge and Graciosa are in sight: Fayal and Pica were discovered "before 1466."

"In this year" (Galvan., Churchill coll., and Major pr. H. 95), by permission of prince Henry, Lançarote "having fitted out six caravels" sailed to the Arguin islets, and chiefly there procured "about two hundred captives," of "every variety of colour from nearly white to the deepest black." Returning to Portugal, the captives "very soon became Christians, and were treated with great kindness by their" masters, and "some of the young girls were adopted by noble ladies."

"1445 A. D." (Major pr. H. 95), under instructions from prince Henry, Antam Gonsalves revisiting the Rio d'Ouro: "an old Moor returned voluntarily," "wishing to see prince Henry," and João Fernandes "by his own desire was left behind."

The people were found by Fernandes to be "shepherds, who wandered with their cattle wherever they could find pasture: the fodder was scanty, the land desert and sandy, with no trees except small ones, such as figueras do inferno" (*cactiform Euphorbia*), "thorn-trees" (*Balanites Aegyptiaca*), "and a few palms" (Hyphaene?); "there were very few flowers: all the water was from wells, except a very few running streams: the people were called Alarves, Azanegues, and Berbers; they were Mohammedans; their language, written and spoken, differed from those of other Moors; they waged war with the negroes, and took a great number prisoners;" "their camels were very numerous, and could travel fifty leagues in a day, and they had plenty of cattle in spite of the thinness of the pasture." At the invitation of two horsemen, who "mounted him on a camel," he journeyed Southward several days to the chief, Ahude Maymon, who with his family and "retinue were about one hundred and fifty in number," and was hospitably entertained: "their principal food was milk and sometimes a little meat with seeds of wild herbs gathered on the mountains; *wheat* was considered a luxury; for many months they and their horses and dogs lived entirely on milk; those on the seashore ate nothing but fish, mostly raw or dried;" their merchandise, besides slaves and "*gold* from the negro country, consisted of wool, butter, cheese, *dates* which they imported, amber, *civet*, gum anime, oil and skins of sea-wolves" (*seals*). At the end of "seven months," Fernandes was discovered on the shore South of Arguin Island and taken off by Antam Gonsalves.

"In this year" (Major pr. H. 96), Diniz Dias, furnished by prince Henry with a caravel and determined to sail farther than his predecessors, passing the mouth of the Senegal, "which separates the Azanegues or Tawny Moors" (Barabra) "from the Jaloffs, the first real Blacks" (negroes): coasting along, "the caravel caused great astonishment among the natives, till at length four" approached "in a canoe; but when they found it contained men," fled with such speed that they could not be overtaken: Dinis continued to (the termination of the Desert in) a remarkable headland which he called Cape Verde, and landing, set up a wooden cross (Galvan.).

"Aug. 10th" (Major pr. H. 102), sailing of a fleet of "six-and-twenty caravels," to punish a massacre by the natives of Tider (South of the Arguin islets): the village, about which were "a few cotton-trees" (*Gossypium*), was destroyed, the natives soon put to flight, and "fifty-seven" of them captured. The object of the Expedition accomplished, six caravels under Gomes Pires proceeded Southward, passing the "two palm-trees" (. . . . .) "twenty leagues" before reaching the Senegal, and continuing to Cape Verde; where the natives proved numerous and hostile, using arrows of reeds or charred wood, "with long iron heads" tipped "with vegetable poison."

Adansonia digitata of Equatorial Africa. On an island near were "many large *baobab* trees," one of them measuring "a hundred and eight palms" around the trunk — (Major); and subsequently, one was found by Cadamosto at the mouth of the Senegal "one hundred and twelve feet" around the trunk (Drur.); in ascending the Nile, the first baobab was found by Lepsius eg. and sin. 166 "beyond Kamlin;" in about 15°; the fruit brought down the river under the name of "habhab" is described by Alpinus pl. 67, Forskal p. xlix, and Delile, as used medicinally: at Zanzibar, the tree appeared to me introduced, the natives using the shell of the fruit for water-buckets, but young stocks were springing up spontaneously. Eastward, has long been introduced into Hindustan, though so far as observed by myself not attaining there unusual dimensions; its fruit used by the fishermen of Guzerat as floats for their nets, used also "medicinally by the natives, who like the Africans esteem it cooling, the leaves are eaten with their food, and are said to restrain excessive perspiration" (Bombay med. trans. i. 18, and Graham); a few trees were generally found by Gibson "at places where the Musselmen have been." The bark according to Drury "furnishes indestructible cordage, and a coarse thread used for cloth and ropes."

Cape Verde had already been passed by Alvaro Fernandes; five negroes came on board there, and were kindly treated; but when "they reached the shore they encouraged other natives to make an attack, and six boats put out with thirty-five or forty men in them prepared for fighting;" two negroes were captured. Alvaro Fernandes continued South to a cape where were many standing

dead trunks of palms, and therefore received the name of Cape of Masts; but he was again unable to open friendly intercourse with the natives.

Elais Guineensis of Western Equatorial Africa. Possibly the palm in question; — wine called "mignol," from a palm like to but differing from that which produces the date, was found by Cadamosto South of the Senegal, also a saffron-coloured oil whose origin he was unable to ascertain: the latter is referred by Major pr. H. 109-52 to *palm-oil*, which continues to be exported in large quantities for lubricating and the manufacture of soap and candles (lond. tract soc.). Through European colonists, E. Guineensis was carried across the Atlantic (Pers.), observed by Aublet 975 in Cayenne; by Descourtilz, under cultivation in the West Indies though having a Carib name "aouara." Transported to Europe, is termed "palma spinosa" by Miller (Willd.).

"In this year" (Burm. hist., and Mason 51), the Chinese invading Ava, again demanding the rendition of Thonganbua, Shan chief of Mogaung: the king was persuaded to surrender him.

"1446 A. D." (Major pr. H. 110), Nuño Tristan, passing the Cape of Masts as far as the mouth of a very large river (Gambia), where he anchored: ascending the river in "boats with two-and-twenty men," he with all but two of his party were killed by the poisoned arrows of the natives.

"In this year" (Major 112), Alvaro Fernandes on his Second voyage continuing beyond Cape Verde "a hundred and ten leagues" to "a point of sand in front of a great bay;" but from a previous wound in attempting to open communication with the natives, decided to return.

"In this year" (Major 114), nine caravels "sixty leagues beyond Cape Verde" entering the Rio Grande: Stevam Affonso, one of the commanders, landing and following some tracks found "plantations of cotton-trees" (*Gossypium*) "and *rice*, and other trees of various kinds;" but entering a wood, his party was attacked, "seven of the foremost" wounded, of whom "five fell dead," and Affonso with the remainder escaped with difficulty. The caravels on their way back procured "eight-and-forty natives" near Arguin.

* "To this year" (according to Azurara) "there had been fifty-one caravels to these parts," going "four hundred and fifty leagues beyond the Cape" (Bojador): the coast running "southward with many points, which the prince caused to be added to the sailing chart."

"The same year" (art de verif. contin.), by the emperor Motezuma Ilhuicamina, building of a dike nine miles long to protect the city of Mexico against inundation.

Tagetes erecta of Mexico. A garden-flower improperly called *African marigold*, having a Mexican name, — and observed in Mexico by Hernandez v. pl. 29. Transported to Europe, is termed "tanacetum peruvianum" by Valerius Cordus (Beckm.), is described also by Fuchsius pl. 57, Matthioli, Dodoens, and Cæsalpinus; was observed by Forskal in gardens at Constantinople; by him, and Delile, in the gardens of Egypt, called there "qatyfeh;" by Forskal, under cultivation in Yemen and called "randjes" or "naufar," but growing spontaneously around Hadie; by Roxburgh, and Graham, in Hindustan, its flowers "sold in the bazars, and worn by women in their hair," met with by myself among temple-offerings; by Blanco, in gardens on the Philippines, yellow-flowered, and called in Tagalo "amarillo." *T. patula* or the *French marigold*, also known to have come from Mexico (Pers., and Spreng.), is described by Tragus 923, is termed "t. flore fulvo maculato" by Dillenius elth. pl. 279; has become frequent in the gardens of Europe and Northeast America; was observed by Roxburgh in Hindustan, by Graham "common in every garden" and called "gool jafree," naturalized according to Law about Belgaum, its flowers sold for the same purposes in the bazaars; by Thunberg, under cultivation in Japan and called "korei kikf" or "tsjosen so" or "koo woo soo"

Lantana camara of Tropical America. A yellow-flowered Verbenaceous shrub called in Mexican "cayolizan" or "tepocan," — and observed in Mexico by Hernandez 66; by Descourtilz in the West Indies, but no Carib name given; and the "camara," by Marcgraf and Piso pl. 177 in Brazil. Transported to Europe, is described by Plukenet alm. pl. 114, Dillenius elth. pl. 56, and has become well known in greenhouses; was observed by Clot-Bey in the gardens of Egypt; by Lush, and Graham, in the environs of Bombay "introduced from Bengal."

Mirabilis Jalapa of Mexico. The garden-flower called *four o'clock*, and falsely *marvel of Peru*, long known in Mexico: * — is termed "mirabili mexican." by Hernandez v. 47, and was observed by

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* *Quamoclit pennata* of Mexico. The *cypress-vine* (resembling Taxodium distichum in its foliage) or the "quamochlit" — was observed on the Voyage of the Sulphur abounding and at least spontaneous in Mexico, along the Pacific (Benth. 133, and A. Dec.); is known to occur also seemingly wild around Para, at the mouth of the Amazons (Chois.), but in the West Indies no Carib name is given by Descourtilz: is cultivated for ornament in our Southern States, and was observed by Chapman "spontaneous near gardens." By European colonists, was carried Westward across the Pacific to the Philippines, where according to Blanco it is called in Tagalo "agoho" (the name of the Casu-

him, and Berlandier, growing wild; by Sloane, and Maycock, wild also on Jamaica and Barbadoes (A. Dec.). The plant appears to have at once arrested the attention of Catholics; was observed by myself in 1841, one of the few objects of cultivation at the Missions around the Bay of San Francisco. By European colonists, was carried Westward across the Pacific to the Philippines, is called in Tagalo "guilalas" or "oracion," its flowers being open at the time of Oracion and closing in the morning (Blanco); to Amboyna (Rumph. viii. 41), Timor (Span.), and Java (Blume); to Japan, called "keso" or "foosen" or "kinfokva," and a white cosmetic from its seeds used for the complexion by women (Kaempf., and Thunb.); to China and Anam (Lour.); to Burmah, called there "myae-zu" (Mason); to Ceylon, naturalized (Moon, and Gardn.); to Malabar, called there "andi maleri" (Rheede x. pl. 75); to other parts of Hindustan (Ainsl., Pidd., and Wall.), observed by Graham as far as Bombay, "common in every garden and in flower all the year," and called "gool bajee" or "gool abbass;" to Yemen, observed by Forskal both cultivated and springing up spontaneously, and called "uard el læjl" or "zahr el læjl;" to Egypt, observed by Hasselquist, Forskal, and Delile, its name "yimani" indicating the route of introduction. Transported across the Atlantic to Europe, is termed "magnæ admirationis herba peruviana" by Lobel; is described also by Tabernæmontanus, Clusius, and C. Bauhin; soon became a favourite flower, and was observed by Forskal in gardens at Constantinople: by European colonists also, was carried to Northeast America, where it continues in gardens; and to the Mauritius Islands, observed by Bojer becoming naturalized.

Mirabilis dichotoma of Mexico. Known from early times, — cultivated with and often confounded with the preceding: received from America by Choisy (Dec. prodr. xiii. 2 p. 428). Transported to Europe, is described by Clusius hist. ii. 90 (Pers.): and by European colonists was carried to Pulo-Penang in the Malayan archipelago, and Taheiti.

"1447, March 6th" (Alst., and Nicol.), Felix abdicating, Eugenius IV. succeeded by cardinal Thomas de Sarzana, now Nicolaus V., fifty-fourth pope. Fredericus III. ruling Germany and Italy; and James II., Scotland.

"1448 A. D." (Relat. du Groenl. 212), accession of the Oldenbourg family and of Christian as king of Denmark. He made a pilgrimage to Rome, and obtained permission to establish an Academy at Copenhagen.

"In this year" (Major edit. Bethenc. p. xxvii), under instructions from prince Henry of Portugal, Gomez Eannes de Azurara compiling an account of the conquest of Guinea. He describes four of the Canary Islands as remaining unsubdued: the people of Grand Canary were intelligent, "very active and powerful; their only weapons were a short club," and stones; "most of them went entirely naked, but some wore petticoats of palm leaves; they made no account of the precious metals, but set a high value on iron, which they worked with stones and made into fishing-hooks; they even used stones for shaving;" "they kindled fire by rubbing one stick against another;" "held it an abomination to kill animals, and employed Christian captives as butchers." The people of Gomera "had no clothing, no houses;" "spent their time chiefly in singing and dancing," and "made their sisters' sons their heirs." The people of Teneriffe "passed their lives in huts and caves; their chief occupation was war, and they fought with lances of pine-wood, made like great darts, very sharp, and hardened in the fire; there were eight or nine tribes, each" having a king, who when he died was kept unburied until the death of his successor. The people of Palma fought with spears "pointed with sharp horn," and "at the other end they also put another piece of horn, but not so sharp" (see Levit?); "they had no knowledge of God, nor any faith whatever."

"To the period of Azurara's completing his chronicle" (Major pr. H. 119), "nine hundred and twenty-seven souls had been taken" from the West African coast "to Portugal."

In or about this year (= 1648 — "200 yrs" of Flacourt præf. and i. 46), the art of writing brought to Madagascar by Zafe-Casimanbou, Arabs from the Red Sea, sent (according to their own account) by the "caliph of Mecca." These Arabs settled in the Southeastern portion of Madagascar, taught Arabic and the Koran, intermarried with the natives, and at length obtained the government of one or two provinces. The *language* of Madagascar is the same throughout the island; but in applying the Arabic alphabet, some of the letters are pronounced differently.

Amomum angustifolium of Madagascar. Called there "longouze" (Flac.), and affording the *Madagascar* or *great cardamoms* — or the "meleghetta" praised by Andrea Corsali (Yule cath. i. 89):

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arina); to other parts of the Malayan Archipelago (Rumph. v. pl. 155); to Burmah, observed by Mason "exotic" and called "myat-læ-nee;" to Hindustan, where it has acquired a Sanscrit name (Roxb., and Pidd.), was observed by Rheede xi. pl. 60 in Malabar, by Graham "common in gardens" as far as Bombay; and to the Mauritius Islands (Boj.). Transported to Europe, is termed "gelseminum rubrum" by Cæsalpinus 184; "quamoclit" or "quamochlit" or "jasminum americanum" by Clusius post. pl. 8; is described also by Camerarius hort. 135, Columna aq. pl. 72, and C. Bauhin.

observed by Flacourt i. 36. 26 extremely abundant on the Northern portion of the island, and identified by him with the "cardamomum maius" of European drug-shops; observed also on Madagascar by Sonnerat ii. pl. 137 (Pers.). By European colonists, was carried to the Mauritius Islands, observed under cultivation there by Bojer. The seeds according to J. E. Smith have none of the vehement hot acrid taste of grains-of-paradise (Lindl.).

Vahea gummifera of Madagascar. A woody Apocynous vine called "voua-héné," — observed by Bojer around Tamatave in the extensive forest along Ivoundrou river, yielding *caoutchouc* abundantly. By European colonists, the plant carried to the Mauritius Islands and cultivated there: and from transported specimens, described by Poiret enc. suppl v. 409 (Boj, and Lindl.).

"1449 A. D. (Churchill coll.), Gonsalo Vello visiting the Azores, found no inhabitants; but discovered the statue of a man on horseback, pointing with his right hand West, and some characters not understood carved on the rock beneath. — Since ascertained to be one of the islands presenting some general resemblance to such a statue (Humb.).

"The same year" (Alst.), end of the chronicle of Matthæus Palmerius.

"Towards the middle of the 15th century" (biogr. univ. and O. S. 148), Cuba at Salerno, where he had a greenhouse, writing the Ortus Sanitatis. — The edition of 1485 is enumerated by Sprengel as the "third."

Cassia sophera of Tropical Asia. Called in Egypt "soffeyr;" in which we recognize the "suffire" of the Ortus Sanitatis 334, — and "sophera" of Honorius Bellus (Spreng.): C. sophera was observed by Alpinus, Forskal, and Delile, in the gardens of Egypt; and farther South, by Browne in Darfour. Eastward, by Rheede ii. pl. 52 in Malabar; by Graham "common in uncultivated places during the rains" as far as Bombay; by Roxburgh, as far as Bengal; by Burmann pl. 98, in Ceylon; by Mason, indigenous in Burmah.

Veronica hederæfolia of Europe and the adjoining portion of Asia. Called in Britain *henbit* or *morgeline* from the French, in medieval Latin "mors gallinæ" (Prior): the "morsus gallinæ" is mentioned in the Ortus Sanitatis 301: — V. hederifolia is termed "v. cymbalariæ folio verna" by Tournefort inst. 145; and is known to occur in waste and cultivated ground throughout middle Europe. Eastward, was observed by Sibthorp from the Peloponnesus to Cyprus and Constantinople. By European colonists, was carried to Northeast America, where it continues in "shaded places, Long Island to Pennsylvania, scarce" (A. Gray).

Lamium amplexicaule of Europe and Northern Asia. Called in Britain *dead-nettle* (Prior), in Japan "mogura" or "irakusa" (Thunb.), and the "urtica mortua" of the Ortus Sanitatis — may be compared: L. amplexicaule is termed "l. folio caulem ambiente minus" by Tournefort inst. 184; and is known to grow in Barbary, the Canaries, and throughout middle Europe as far as Moscow and Sweden (Munby, Benth., and Fries). Eastward, was observed by Sibthorp, and Chaubard, in Southern Greece; by Delile, in cultivated ground at Damietta in Egypt; is known to grow around Caucasus, in Siberia as far as Lake Baikal, in Persia, Cabul, and throughout the whole range of the Himalaya mountains (Ledeb., and Benth.); was observed by Thunberg in Japan, frequent in cultivated ground. By European colonists was carried to Northeast America, where it continues to grow in waste places, and (according to Hooker, and A. Decandolle) from Canada to Louisiana.

"In this year" (Burm. hist., and Mason 51), Bhuren-Narapadi still reigning in Ava, unsuccessful attempt by the Chinese to capture Monhyin and Mogaung.

"1450 A. D. = 1st year of King-ti," acting Chinese emperor; his brother Yng-tsoung III. having been taken prisoner in Tartary.

"In this year" (Remus. trav. C. Zeno 5), Giausa or Jehan Shah, king of Persia, defeated and dethroned by Hassan Beg; who from this time was called Uzun Hassan (the tall king, transl. Grey).

"1451, Feb. 8th" (Nicol.), a synod at Saltzburg. On the reformation of the monasteries of that province.

"In this year" (ann. Jap. transl. Tits., and San-kokf transl. Klapr.), first arrival in Japan of people of the Loo Choo Islands. — They have continued to come to the present day for purposes of traffic.

"In this year (= 855 A. H." of Ferisht., Elph.), Mohammed Shah succeeded by Kutb Shah, now fourth Muslim king of Guzerat.

"1452 A. D." (Alst. p. 226 and 307), Murad II. succeeded by his son Mohammed II., ninth Turkish sultan. Who before the close of the year captured and laid waste Athens.

"On the day of Pentecost" (Nicol.), a synod at Magdeburg. "For the reformation of the canons regular."

"In this year (= 3d year king-thai," Remus. iii. 97 to 99), an ambassador with tribute sent to China from Cambodia.

"1453 A. D." (Blair), English power in France terminated by the battle at Castillon.

"The same year" (art de verif.), Djakmak succeeded by Othman El-Mansur; and before the close of the year, by Ynal, thirty-second Memluk sultan of Egypt.

"In this year" (Burm. hist., and Mason 27), Hattiraza with the title of Byanya reigning in Pegu.

"The same year" (Alst. p. 307), Constantinople captured by the Turks under Mohammed II. End of the Greek or Byzantine empire.

1454 A. D. (= "45 years after the death of Mulana Ibrahim," Raffles x.), in Java, death of Niai Gedi Pinateh of Kamboja. (The date probably taken from her tomb at Gresik.)

"1455, March 28th" (Major pr. H. 139 and edit. Bethenc. p. xxxiii), in a galley fitted out by prince Henry and Vicente Dias appointed sailing captain, Vicente Cadamosto arriving at Madeira: there were now four settlements on the island, including one at Camara dos lobos, eight hundred armed men, and sawmills at the mouths of the principal streams.

Continuing his voyage, Cadamosto touched at the Canary Islands and found Grand Canary, Teneriffe, and Palma as yet unsubdued: there "were plenty of men of arms to defend them, and the mountain heights were difficult of access." They "went naked, except some few who wore goats'-skins," and "painted their bodies with the juice of herbs, green, red, and yellow, producing beautiful devices;" "were wonderfully strong and active, could take enormous leaps, and throw with great strength and skill;" "had no fixed religion, but some worshipped the sun, some the moon, and others the planets;" and "when one of their chiefs came into possession of his estate," some self-devoted victim would offer "to die in honour of the festival," and would throw "himself from a great height into the valley."

After discovering the Cape Verde Islands and visiting the mouth of the Senegal, Cadamosto proceeded South to the "Gambra;" but the natives proving hostile, returned. — On a subsequent voyage, leaving in the "beginning of May," he went ten miles up the "Gambra," and found some of the natives professing the Mahommedan religion.

Psophocarpus tetragonolobus of Equatorial Africa. Kidney beans of the finest quality observed by Cadamosto in Senegal, big as our long hazel nuts, speckled with variegated colours, in shape broad low and of a lively red, some of them are white and beautiful (lond. coll. voy. 1789): the "botor" — is also described by Adanson (Steud.). Eastward, P. tetragonolobus was observed by Bojer naturalized along the margin of cultivated ground in the Mauritius Islands, and called "pois carrés:" by Graham, "commonly cultivated in gardens" at Bombay, and called "chandaree" or "charputtee," or in English *chevaux de frize bean;* observed also by Roxburgh, and Wight, in other parts of Hindustan. Farther East, enumerated by Mason v. p. 466 as "exotic" in Burmah, called "pai-myeet," and the young pods "eaten like French beans:" described by Rumphius v. pl. 133: observed by Blanco in the Philippines, called in Tagalo "calamismis," and the pods eaten both by natives and Europeans.

"Apr. 8th" (Alst., and Nicol.), Nicolaus V. succeeded by cardinal Alphonso Borgia, now Calixtus III., fifty-fifth pope.

"The same year" (Blair), in England, civil war. Henry VI. defeated and taken prisoner at St. Albans, in the first battle between the "Houses of York and Lancaster."

Helleborus viridis of the mountains of middle Europe. Called in Britain *green hellebore* (Prior), and introduced from the neighbouring continent as early perhaps as this date, — no instance of its spontaneous growth being known to Gerarde p. 825: a century later, localities are mentioned by Ray p. 271, and the plant has since become naturalized (Bromf., and Wats.): H. viridis is known to occur also in Normandy and Holland (Hard., and prodr. fl. Bat.), and wild on the mountains of Austria (Jacq. austr. pl. 106, and Pers.), as far according to A. Decandolle g. b. p. 759 as Greece. By European colonists, was carried to Northeast America, where it has escaped from cultivation on "Long Island" near New York (A. Gray). "Said by Stevenson and Churchill to be the best substitute for H. Orientalis, though less active," but according to Pereira "rarely or never employed" (Lindl.).

"1456 A. D." (J. R. Hind, and Humb. cosm. i. 1), the first *comet* whose *orbit* has been calculated solely from European observations. It is called "Halley's comet," and through its period of revolution = "74, 91 to 77, 58 yrs" is found to be identical with the comet of 1378 in the Chinese table, — making "nine" known returns down to 1835.

"In this year" (H. H. Wils. dram. hind. i. p. xxii), accession of Praud'ha or Pratapa Deva as king of Vijayanagar. — He reigned until "1477."

By his desire, Kallinatha wrote a comment on the Sangita-Ratnakara of Sarngi-Deva, a treatise on singing and dancing and dramatic literature — (H. H. Wils.).

"1457 A. D. = 'thian-chun,' the empire recovered by Yng-tsoung III." (Chinese chron. table).

In or about this year, arrival in Java of the two sons of the Chinese princess: Raden Patah "twenty" years old, and his half-brother Husen "eighteen." Raden Patah did not proceed to the court at Majapahit, but remained incognito at Ampel in communion with Raden Rachmat.

As early perhaps as this year (see addit. art de verif.), expedition of the Inca Tupac Yupanqui Northward against the provinces of Chinchasuyu.*

"1458 A. D." (Galvan.), the city of Alcaçer in Africa captured by Alfonso V. of Portugal.

"In this year" (Alst. p. 217), books from the sacking of Athens and Constantinople, purchased throughout the Turkish empire by the king of Hungary Matthias Hunniades Corvinus, and brought to Buda. — Sixty-eight years later, when Buda was captured by the Turks, the Library disappeared, and was said to have been "burned," but (according to the gazettes) has recently been discovered uninjured in Constantinople.

"About this time" (Spreng.), Joann. Jacob de Manliis writing.

Archangelica officinalis of Northern Europe. A large umbelliferous plant called in Britain *archangel*, in medieval Latin "archangelica" (Park., Nemn., and Prior), in Germany "angelick" or "brustwurtzel" (Tragus); described by J. J. de Manliis — (Spreng.), Tragus i. 140, and termed "a. sativa" by Miller: known to grow in "watery places" from Lapland throughout Northern Europe as far as France and Switzerland (fl. Dan. pl. 206, Pers., and A. Dec.): its large fleshy pungently aromatic root extolled by the Laplanders "not only as food but medicine," the stems "roasted in hot ashes" eaten in coughs and pectoral disorders, and the flowers boiled in milk to the consistence of an extract used also medicinally (Stev. and Church): its roots leaves and seeds "are certainly good aromatic tonics" (Lindl.).

Asperula tinctoria of Europe and the adjoining portion of Asia. The "spargula" or "rubea tinctorum minor" of J. J. de Manliis — may be compared: A. tinctoria is described by Tabernæmontanus pl. 433; is termed "a. rubeola" by Lamarck fl. Fr.; is known to grow from Sweden throughout middle Europe and in Siberia, the root red (Pers.); was observed by Scopoli in Carniolia; by Sibthorp, around Constantinople; by Pallas trav. i. 95, used in dyeing on the Volga.

Galium Anglicum of middle and Western Europe. The "purpurea" kind of "lappago" mentioned by J. J. de Manliis — (Trag. i. 167) may be compared: G. Anglicum is termed "g. parisiense tenuifolium flore atropurpureo?" by Tournefort, "g. rubrum" by Pollich; is described also by Ray iii. pl. 9, and Hudson; and is known to grow from Britain to Spain and Switzerland (Brot., Bertol., Lam., and Pers.).

Scabiosa succisa of middle and Western Europe. Called in Britain *devil's bit* (Prior), in Saxon "ffendis bitt" (gl. Bodl. 178, and Cockayne), in Germany "teüfels abbiss," in the Ortus Sanitatis 261 and by Braunsweig "morsus diaboli" and "jacea nigra" (Trag.), and figured by J. J. de Manliis p. 173 — (Spreng.): described also by Brunfels; and known to grow in moist situations throughout middle Europe as far as the Pyrenees (Curt. lond. pl. 10, Pers., Lapeyr., and A. Dec.).

Inula oculus-Christi of Europe and the adjoining portion of Asia. Called in Greece "agriŏskarphē" (Sibth.): and the "oculus Christi" of J. J. de Manliis — is referred here by Sprengel and others: I. oculus Christi is described by Clusius hist. ii. 20, is termed "aster pannonicus lanuginosus luteus" by Tournefort inst. 482, is known to grow in mountainous situations in France and Germany (Jacq. austr. pl. 223, and Pers.); was observed by Sibthorp in the Peloponnesus.

Melittis melissophyllum of Europe and the adjoining portion of Asia. Called in Germany "hertzkraut" or "pfaffenkraut" or "immenblatt" (Trag.); and the "ocymum citratum" of J. J. de Manliis — is referred here by Tragus i. pl. 3: M. melissophyllum is termed "melissa humilis latifolia maximo flore purpurascente" by Tournefort inst. 193; is known to grow from Britain throughout middle Europe (Engl. bot. pl. 557, Lam. fl. fr., and Jacq. austr. pl. 26); was observed by Sibthorp, and Chaubard, on mount Athos and the mountains of the Peloponnesus.

Hieracium auricula of Europe and the adjoining portion of Asia. Called in Germany "gros meüsor" or from the hairs "pilosella" (Trag.); and the PILOSELLA of J. J. de Manliis, eaten

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* *Persea gratissima* of Eastern Equatorial America. The *avocado* called "palta" (Velasq. dict.), in Carib "aouaca" (Desc.), in Mexican "ahuaca quavhitl" (Hern.); and Palta, one of the provinces in question, produced the delicious fruit of the same name — (addit. art de verif.): the "perales" is described by Oviedo nat. hyst. 72 as "a tree of Tierra Firme:" P. gratissima was observed by Hernandez 89 both cultivated and wild in Mexico; by Sloane ii. pl. 222, in the West Indies, introduced according to Jacquin obs. i. 38 from the neighbouring continent; and is known as a forest-tree in the wilds of Caripe in Cumana, and on the Lower Amazons (Nees 129). Transported to Spain, is described in 1601 by Clusius rar. i. 3: also by European colonists was carried in 1758 (Aubl.) to the Mauritius Islands, where it continues much cultivated, to the Malayan archipelago after the time of Rumphius (A. Dec.); and recently to the environs of Bombay (Graham).

crude, — may be compared: H. auricula was observed by Tragus i. pl. 92 in Germany, its distilled water employed medicinally; is termed "h. pilosellæ folio erectum minus" by Tournefort inst. 471; is known to grow from Denmark throughout middle Europe (fl. Dan. pl. 1044, Engl. bot. pl. 2368, and Pers.); was observed by Sibthorp near Constantinople and on the mountains of Greece.

Gratiola officinalis of Europe and the adjoining portion of Asia. A species of *water-hyssop* called in France "gratiole" (Nugent); described by J. J. de Manliis, — Baptista Sardus, and Anguillara 268 (Spreng.); termed "gratiola quibusdam gratia dei" by Matthioli, "digitalis minima gratiola dicta" by Tournefort inst. 165; seems unknown in Britain, though growing in moist situations from Denmark and 58° in Russia to the Pyrenees (fl. Dan. pl. 363, Fries, and A. Dec.) Sardinia (Moris) and Italy (Bertol.); was observed by Sibthorp, and Gittard, from the Peloponnesus to Asia Minor; by Grisebach, in Thrace; and is known to grow as far as Turcomania and the Altaian mountains (Ledeb.).

Equisetum hyemale of Northern climates. Called in Britain *scouring rush* or *shave-grass*, in Holland "schaaf-stroo" (Prior), in Germany "schaffthew" (Trag.), in France "préle" (Nugent); and the "cauda caballina" used by turners for polishing cups is mentioned by J. J. de Manliis: — E. hyemale is described by Tragus ii. pl. 46, Ruel iii. 97, and W. Coles (Eng. bot. pl. 915); is termed "e. foliis nudum non ramosum" by Tournefort inst. 533; is known to grow in watery places from Britain throughout middle Europe and the adjoining portion of Asia; was observed by Sibthorp on the Bithynian Olympus. Westward, has been observed by myself from 43° in New England; by A. Gray, "common" in Central New York and "especially northward;" by Nuttall, along the Ohio, Missouri, and Arkansas rivers.

Equisetum palustre of Europe and the adjoining portion of Asia. Called in Germany "klein schaffthew" (Trag.), and another "tornatila aliquando asprella aliquando troxia" is mentioned by J. J. de Manliis: — E. palustre was observed by Tragus ii. 47 in Germany, used also for scouring cooking utensils; is termed "e. palustre brevioribus setis" by Tournefort inst. 533; is known to grow from Britain throughout middle Europe (Engl. bot. pl. 2021); and was observed by Sibthorp, and Bory, from the Peloponnesus to Constantinople.

"Aug. 19th or 27th." (Alst., and Nicol.), Calixtus III. succeeded by cardinal Æneas Silvi Piccolomini, now Pius II., fifty-sixth pope. He had written against the errors of the papacy, maintaining the superiority of the general Councils; but on being himself made pope, claimed the reverse. Pius II. also wrote history.

"In this year" (Klapr. note to San Kokf), in Japan, the city of Yedo founded by Oo-da-do-kwan.

"1459 A. D. (= 863 A. H." of Ferisht., Elph.), Kutb Shah succeeded by Daud Shah, and after "one week" by Mahmud Shah Begarra, — who proved one of the greatest of the kings of Guzerat and reigned "fifty-two" years.

"1460 A. D." (Churchill coll.), Peter de Cintra and Suero de Costa sailed along the African coast as far as the place named by them "Serra Leona."

Pterocarpus erinaceus of Senegambia. A tree forty to fifty feet high in the woods of the Gambia and in Senegal and called "wegne," the branches when wounded yielding "a red juice" that hardens on exposure into "the real original gum *kino* of the shops" — (Lindl.). From transported specimens, the tree is described by Lamarck pl. 602.

Sterculia (*Southwellia*) *tragacantha* of Western Equatorial Africa. Yielding the African gum tragacanth; — and according to Lindley (bot. reg. pl. 1353, and flor. med.), "known at Sierra Leone as the *tragacanth tree*," from the similarity of the gum "copiously exuded by it when wounded." Eastward, other species of Southwellia occur in Burmah; where also, according to Mason v. p. 487, there are several trees of the Sterculia tribe that "produce an exudation similar to tragacanth" (see S. urens).

"In this year" (Velasco, and Markh.), the forces of Quito defeated by the Inca Tupac Yupanqui: who appointed new governors, and returned in triumph to Cuzco.

"1461 A. D." (Galvan.), by order of Alfonso V. of Portugal, the castle of Arguin built, and the government assigned to Soeiro Mendez.

"In this year" (art de verif.), Ynal succeeded by Achmed Abu'l-Fetah, whose name occurs on a coin figured in Marcel 185; and before the close of the year by Koschkadam, a Greek by birth, and now thirty-fourth sultan of Egypt.

"In this year" (Grey transl. C. Zeno 9), Trebizond, under David, the last of the Comneni, captured by the Turks: his niece, a Christian, was the wife of Hassan Beg, king of Persia.

"The same year" (Alst. p. 307), the Peloponnesus invaded by the Turks under Mohammed II. — Who returned three years afterwards, with a large army.

Dianthus barbatus of Eastern Europe. Called in France "oeillet," and hence in Britain *willie* or *william* or from its fragrance *sweet-william* (Prior), in Greece "ōussōuvia" (Forsk.); cultivated as early probably as this date: — the "ocellum" from its odour called "garyophyllum" is described

by Ruel ii. 149; D. barbatus is termed "lychnis monachorum hort." by Gesner 266 (Spreng.); is a well known garden-flower throughout Europe, and was observed by Forskal in gardens at Constantinople; is said to grow wild in Carniolia and Germany (Scop., and Pers.). By European colonists, was carried to Northeast America, where it continues a favourite in gardens. The "tol-me-neer" of Lyte ii. 7, or "tolmeiner" or "colmenier" of other English herbalists, is a variety (Prior).

Silene armeria of Europe and the adjoining portion of Asia. An annual called in Greece "luhnŏēithĕs" (Sibth.), and known from early times: — termed "lychnis viscosa purpurea latifolia lævis" by Tournefort inst. 335, and known to grow in sunny situations from Denmark throughout middle Europe (fl. Dan. pl. 559, Engl. bot. pl. 1398, and Lam. fl. fr.): observed by Sibthorp from the Peloponnesus to mount Athos. By European colonists was carried to Northeast America, observed by A. Gray "escaped from gardens to waste places, rare."

Lathyrus aphaca of middle Asia. Called in Greece "pnigia" or "mpayōulia" (Fraas) or "agriōvavōuli" or "agriōlathōuri" (Sibth.), and known there as early probably as this date: — observed by Sibthorp, Chaubard, and Fraas, frequent in grain-fields from the Peloponnesus throughout the Greek islands; by Delile, about Cairo; by S. Th. Gmelin trav., around the Caspian; and by Wallich, under cultivation in Hindustan (Wight and Arn.). Westward from Greece, is described by Dodoens p. 545, and Lobel ii. pl. 70; is termed "aphaca" by Tournefort inst. 399, "l. segetum" by Lamarck fl. fr.; was observed by Lenz in Italy, by Brotero in Portugal, and has become a common "field-plant" as far as Britain (Pers., and Lindl.). Its seeds according to Lindley "are served sometimes at table" while "young and tender," but "if eaten abundantly in the ripe state" are "narcotic, producing excessive headach."

Trifolium stellatum of the Mediterranean countries. Annual, called in Greece "alaphra" (Sibth.), and known from early times: — observed by Forskal, Sibthorp, and Chaubard, from Crete and the Peloponnesus to Cyprus and Constantinople. Westward, is described by Tournefort inst. 405; and is known to grow along fields and waysides in Carniolia, Italy, Sicily, and Southern France (Sturm, and Pers.). In Britain (Engl. bot. pl. 1545), is clearly exotic, but has established itself near ballast-heaps at Shoreham (Wats. cyb. i. 297, and A. Dec.).

Galium tricorne of the Tauro-Caspian countries. Called in Greece "kōlugitha" (Sibth.), and known from early times: — termed "aparine semine lævi" by Tournefort inst. 114, "galium spurium" by Hudson, "valantia triflora" by Lamarck fl. fr., "v. tricornis" by Roth, and Bieb. (Steud.); and known to occur in cultivated ground throughout middle and Southern Europe (Pers., and A. Dec.): was already in Britain in the days of Ray (Engl. bot. pl. 1641); was observed by Vaillant pl. 4 near Paris; by Gussone in Sicily; by Moris in Sardinia; but "in 1847" continued unknown in Algeria (Munby). Eastward, was observed by Sibthorp in cultivated ground on Zacynthus and in continental Greece; by Grisebach, in meads in Thrace; and is to all appearance wild at Baku and on the Talysch mountains (Hohen., and C. A. Mey.).

Valeriana (Centranthus) rubra of the Mediterranean countries. Called in Greece "analatōs" (Sibth.), and known from early times: — described by Morison vii. pl. 14, and Tournefort inst. 131, and known to grow on the Atlas mountains (Pers.); was observed by Sibthorp, and Chaubard, on the mountains of the Peloponnesus. In Britain, has been long cultivated, and Ray's silence may be from his considering it an outcast from gardens; "in 1805" the plant was found by J. E. Smith seemingly wild in chalk-pits in Kent, and is at present more or less naturalized in twenty to twenty-five counties (Wats., Bromf., and A. Dec.): probably naturalized also on the neighbouring portion of the continent, where according to Persoon it occurs in waste places.

Sherardia arvensis of Europe and the adjoining portion of Asia. Called in Sweden "sherard's ort" (Linn.), in Greece "prōbatōhōrtōn" or "spĕrōhōrtōn" (Sibth.), and known from early times: — observed by Sibthorp, and Chaubard, frequent in vineyards and cultivated ground from the Peloponnesus throughout the Greek islands. Westward, is termed "rubia parva flore cæruleo se spargens" by Bauhin hist. iii. 719, and is known to occur in cultivated ground throughout middle Europe (C. Bauhin pin. 334, Tourn. inst. 114, fl. Dan. pl. 439, Curt. lond. v. pl. 13, and Pers.).

Leontodon hispidum of Europe and the adjoining portion of Asia. Called in Greece "papathōula" (Sibth.), and known from early times: — termed "hieracium caule aphyllo hirsutum" by Bauhin hist. ii. 1037, "dens leonis foliis hirsutis et asperis" by Tournefort inst. 468, and known to grow in meads throughout middle Europe (C. Bauhin pin. 127, Vail act. 1721, Curt. lond. v. pl. 56, and Pers.): observed by Linnæus in Sweden, frequent as far as Scania; by Sibthorp, and Chaubard, from the Peloponnesus to mount Athos.

Conyza candida of the Mediterranean countries. Called on Crete "psullōhōrtŏn" (Sibth.), and known from early times: — described by Anguillara 286 (Spreng.), termed "c. verbasci foliis serratis" by Tournefort inst. 455, and known to grow on Crete and the islands of the Adriatic (Barr. rar. pl. 217, Wulfen, and Pers.): observed by Sibthorp, and Chaubard, in stony places from Crete to the Peloponnesus; by Boccone vi. pl. 31, in Sicily.

Carduus tenuiflorus of Europe and the adjoining portion of Asia. A *thistle* called in Greece "phithagkathōs" (Fraas), and known from early times: — observed by Sibthorp, and Fraas, frequent in Greece and on the Greek islands. Westward, is termed "c. acanthoides" by Tournefort inst. 440; and is known to occur along roadsides and in waste ground as far as Britain (Curt. lond. vi. pl. 55, and Pers.).

Specularia speculum of Europe and the adjoining portion of Asia. An annual called in Greece "agria gōulia" (Sibth.), and known from early times: — described by Dodoens pempt. 168 f., termed "c. arvensis erecta" by Tournefort inst. 112, and known to occur in cultivated ground throughout Europe (A. Dec. 523 and 759): observed by Forskal in meads near Marseilles; by Sibthorp, and Chaubard, frequent in vineyards and cultivated ground from the Peloponnesus to the Greek islands.

Euphorbia palustris of Europe and the adjoining portion of Asia. A spurge called in Greece "phlōmōs" (Sibth.), in Sweden "wargmiolk" (Linn.), and from early times employed medicinally: — termed "tithymalus palustris fruticosus" by C. Bauhin pin. 292, and Tournefort inst. 87, "t. maximus oelandicus" by Rudbeck hort. 109, and known to grow from Sweden to the Mediterranean (Bulliard fr. pl. 87, and Pers.): observed by Rudbeck, and Linnæus, in marshy meads in Sweden, its root sold in the drug-shops under the name of "esulæ rad."; by Sibthorp, growing in the marshes of Greece and the Greek islands.

Sternbergia lutea of the Mediterranean countries. Called in Greece "agriō krinō" or "agriō lalĕs" (Sibth.) as early probably as this date: — observed there and on the Greek islands by Sibthorp, and Chaubard, said to tint the mountains yellow late in the autumn: known to grow also in Thrace (Pers.). Westward, termed "colchicum luteum majus" by C. Bauhin pin. 60; "lilio-narcissus luteus autumnalis major" by Tournefort inst. 386; and known to grow in Italy and Spain (Pers.).

Ophrys apifera of Europe and the adjoining portion of Asia. Called in Britain *bee-flower* or *bee-orchis* (Prior), in Greece "sarkinōvōtani" (Sibth.), and known from early times: — described by Fuchsius 559 (Spreng.); termed "orchis fucum referens major foliolis superioribus candidis et purpurascentibus" by Tournefort inst. 433, and known to grow from Britain throughout middle Europe (Engl. bot. pl. 383, and Pers.): was observed by Tenore in Italy; by Sibthorp, and Chaubard, frequent in the Peloponnesus.

Ophrys tenthredinifera of the Mediterranean countries. Called on Cyprus "kōris" (Sibth.), and known from early times: — termed "orchis orientalis calyptra purpurea petalo inferiori atro-purpurascente scuto ferri equini forma" by Tournefort cor. 30; and observed by Sibthorp and Chaubard, from the Peloponnesus to Constantinople. Westward, was observed by Tenore in Italy; by Desfontaines ii. 320 in Barbary.

Allium rotundum of the Mediterranean countries. A kind of wild leek called on Cyprus "agriō prasōn" (Sibth.), and known from early times: — described by Clusius hist. i. pl. 195, termed "a. montanum capite rotundo" by Tournefort inst. 384, and known to grow in Southern Europe (Pers.): observed by Sibthorp on Cyprus.

Allium subhirsutum of the Mediterranean countries. Called in Greece "lukōrtha" or "agriō prasōn" (Sibth.), and known from early times: — termed "moly" by Montigiano (Targ.), mentioned also by Matthioli comm. 544 (Spreng.); observed by Sibthorp, and Chaubard, frequent in Greece from the Peloponnesus to Crete and Cyprus; by —— in Egypt. Westward, is termed "a. angustifolium umbellatum flore albo etiam flore carneo" by Tournefort inst. 385, and is known to grow in Italy and Spain (Pers.).

Allium chamae-moly of the Mediterranean countries. Called in Greece "kalamōlōghē" (Sibth.), and known from early times: — observed by Sibthorp on Zacynthus. Westward, described by Columna ecphr. pl. 326, termed "a. humilius folio gramineo" by Tournefort inst. 385, and known to grow in Spain (Pers.): was observed by Desfontaines i. 288 in Algeria, by Cavanilles iii. pl. 207 in Spain.

Lycoperdon bovista of Northern climates. Called in Britain *fuss-balls* or *fist-balls* or *bull-fist*, in France "vesse," in medieval Latin "bovista" — (Prior), in Greece "alēpōpourthi" (Sibth.): L. bovista is termed "l. vulgare" by Tournefort inst. 563; and is known to grow in Italy and throughout middle and Northern Europe (Bulliard herb. fr. pl. 447, and Lenz). Eastward, was observed by Sibthorp frequent in the Peloponnesus.

After continual eruptions for seven or eight years and "fourteen years before the invasion of Huayna Capac son of the Inca Tupac Yupanqui" (tradition among the natives of the highlands of Quito, Humb. cosm. v.), falling in of the dome of Capac-Urcu, a volcano previously higher than Chimborazo.

"1462 A. D." (G. de la Vega), the hill of Potosi examined for silver by the Inca Huayna Capac, but the search interrupted by subterranean noises (interpreted as prohibitory words).

"In this year" (Talvi ii. 1), by Ivan Vasilievitch III. often called Ivan I., the Russians delivered from the bondage of the Tartars. He also "united Novogorod with his own princedom of Moscow."

Carex vesicaria of Europe and Northern Asia. A large and conspicuous sedge called in Sweden "blase-starr" or "Lappsko-starr," in Lapland "kappmocksuini," and from early times the dried leaves placed by the Laplanders in their shoes against cold in winter and perspiration in summer — (Linn.): is termed "gramen cyperoides angustifolium spicis longis erectis" by C. Bauhin pin. 6 and theatr. 84, "g. c. majus præcox spicis turgidis teretibus flavescentibus" by Morison iii. 8. pl. 12; and is known to grow from Lapland to Ireland, Switzerland, Russia, and Siberia (fl. Dan. pl. 647, Leers pl. 16, Pers., and Wats.), also on Caucasus (Bieb.): was observed by Linnæus frequent in moist places in Lapland and Sweden; by Decandolle, in France; by Savi, in Etruria; and by Desfontaines, in Barbary. Westward, by Hooker in Iceland; and according to J. Carey, grows in "Northern New England? and northward."

Geranium sylvaticum of Europe and the adjoining portion of Asia. Called in Sweden "Abramsrot," in Lapland "gibber-gras" (Linn.), and known from early times: — termed "g. secunda batrachoides" by Clusius pann. pl. 418, "g. batrachoides folio aconiti" by C. Bauhin pin. 317, and Tournefort inst. 266, and known to grow from Lapland and Russia throughout middle Europe (Ray hist. 1062, Engl. bot. pl. 121, and Pers.), also in North Africa (Wats.): observed by Hooker in Iceland; by Linnæus, in Lapland and Sweden; by Sibthorp, in the environs of Constantinople; by Bieberstein, on Caucasus.*

"The same year" (Alst. p. 450), end of the historical work on the Turks by Laonicus Chalcondyles of Athens. — He died "about 1463."

"The same year" (Blair), a *printed volume* first issued in Europe; the Vulgate Bible.

Angelica sylvestris of Europe and the adjoining portion of Asia. Called in Britain as in medieval Latin *angelica* (Prior); and the Saxon "lingwort" — is referred here by Bailey (Cockayne): A. sylvestris is described by Brunswyck as a remedy against the plague; is named according to Fuchsius 126 from the sweet odour of its root and its great power over poisons; is described also by Ruel iii. 52, Tragus, and Dodoens pempt. pl. 315; is termed "imperatoria pratensis major" by Tournefort inst. 317; is known to grow in the environs of Naples (Guss., and A. Dec.), and throughout middle Europe as far as Britain (Crantz, Pers., and Engl. bot. pl. 1128). Eastward, was observed by Sibthorp, and Chaubard, from the Peloponnesus to mount Athos and the Bithynian Olympus; by Pallas trav. i. 276, on the Lower Volga, the young stem eaten crude by the natives. "Angelica" root was observed by Forskal mat. med. in the drug-shops of Egypt.

Lycopsis arvensis of Europe and the adjoining portion of Asia. The Saxon "oxtongue" — is referred here by Cockayne: L. arvensis is described by Parkinson, and Ray p. 224, and is regarded as introduced into Britain (A. Dec.); is known to occur also in Italy (Bertol.), and from the base of the Pyrenees chiefly in cultivated ground throughout middle and Northern Europe as far as Lapland (fl. Lapp. 77, fl. Dan. pl. 435, Pers., Noulet, and Laterr.). Eastward, was observed by Gittard in the Peloponnesus (Chaub.); and is known to occur throughout Russia, and as far as Caucasus (Bieb., and A. Dec.). By European colonists, was carried to Northeast America, where it continues to occur sparingly in waste and cultivated ground from New England to Virginia (A. Gray, and myself).

Hyacinthus (*Agraphis*) *nutans* of Europe and the adjoining portion of Asia. Called in Scotland *hare-bell*, in Britain *blue-bell* (Prior), and the Saxon "bluebells" — is referred here by Cockayne: A. nutans is described by Clusius hist. i. p. 177, and Parkinson par.; is known to grow in Italy, Spain, and throughout middle Europe as far as Britain (Blackw. pl. 61, Thuil., Engl. bot. pl. 377, and Pers.). Eastward, is known to grow in the Tauro-Caspian countries (Bieb., and Steud.).†

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* *Mulgedium? alpinum* of Subarctic Europe and Asia and mountains farther South. Called in Sweden "tota" or "tolta," in Lapland "jerja," and from early times its stems peeled and eaten crude by the Laplanders — (Linn.): termed "sonchus cæruleus" by Camerarius epit. 281, "s. lævis laciniatus cæruleus vel s. alpinus cæruleus" by C. Bauhin pin. 124, and known to grow on the mountains of Northern Europe and of Switzerland (Bauh. hist. ii. 1006, fl. Dan. pl. 182, Smith brit. ii. 815, Pers., and Wats.): observed by Linnæus on the flanks of the mountains of Lapland, frequent in shaded situations and often as tall as a man; by Pallas, on the Ural.

Mulgedium? Sibericum of Subarctic climates. From early times the weather prognosticated by the closing of its flowers — (Linn.): termed "lactuca salicis folio flore cæruleo" by Amman 211; received by Linnæus from Northern Sweden, Lapland, and Finland; and observed by Gmelin ii. pl. 3 in Siberia. Farther East, according to Hooker, grows from 66° to the mouth of the Columbia and Lake Huron.

† *Campanula rotundifolia* of Subarctic climates. The *blue-bell* of Scotland (Prior) so-called as early probably as this date: — C. rotundifolia is described by Lobel pl. 321; is termed "c. minor rotundifolia vulgaris" by Tournefort inst. 111; is known to grow on the mountains of Switzerland, and from France throughout Northern Europe as far as Lapland and Iceland (All., Lam. fl. fr., Pers.,

"1463 A. D." (see Galvan.) death of prince Henry of Portugal, through whose maritime enterprises the African coast was made known from Cape Non to Sierra Leone "in 8° N."

"In this year" (Velasco, and Markh.), Hualcopo Duchicala succeeded by his son Cacha, now fifteenth scyri of Quito.

"In this year" (Barrow, see Major 2d edit. Columb. p. xxvii), under orders from Alfonso V. of Portugal, John Vaz Costa Cortereal accompanied by Alvaro Martens Homem exploring the Northern Seas. They discovered Newfoundland; and on their return touching at Terceira found the captaincy vacant, and solicited the appointment: — their commission is "dated in Evora, 2nd April, 1464."

1464 A. D., in Java, Raden Patah after marrying the grand-daughter of Raden Rachmat and before the birth of a child proceeded Westward from Ampel to establish himself where he should find the sweet-scented grass called "bintara." This grass was observed growing on a few dry spots in an extensive swamp, and the new city was accordingly called Bintara.

"Aug. 31st" (Alst., and Nicol.), Pius II. succeeded by cardinal Peter Barbo, now Paulus II., fifty-seventh pope. Louis XI. ruling France; Edward IV., England; and James III., Scotland.

The tale of "The Wright's chaste wife" written in the reign of Edward IV. — (All., and Cockayne).

Paris quadrifolia of Europe and Northern Asia. Called in Britain *four-leaved grass* or *trulove* from the Danish "trolovet" betrothed, or *herb paris* from the medieval Latin "herba paris" of a pair (Prior), in which we recognize the herb "truelove" of the Wright's chaste wife — (Cockayne): P. quadrifolia is described by Fuchsius p. 87 (Spreng.); and is known to grow from the Mediterranean throughout middle and Northern Europe as far as Lapland and Iceland (fl. Dan. pl. 139, Pers., Hook., and Wats.). Eastward, is known to grow throughout Siberia (Wats.), and as far as the Japanese islands of Yeso and Niphon (Thunb., and Sieb.).

"In or about this year" (Rees cycl., and Pouchet), *decimals* (the invention of George Purbach, "b. 1423"), substituted by Joannes Muller called Regiomontanus for the sexagesimal division of the Circle in his Table of sines. Regiomontanus also according to Pouchet first used *clocks* in astronomical observations.

"The same year" (Clavig., and Humb. atl. pict.), Motezuma-Ilhuicamina succeeded by Axajacatl, sixth Mexican emperor.

The disease *syphilis* among the Aitians and other American tribes from early times, as appears from legends — collected by F. Roman Pane 6 (F. Columb. 62 and 74). In Europe, syphilis continued unknown in the days of Chaucer c. t., and was brought from America by companions of Columbus, according to the direct testimony of Oviedo nat. hyst. 75 and gen. hist. ii. 14: the "new disease" according to Ruellius i. 45 made its first appearance in Spain; and according to Alsted 310, was "brought in 1495 into Germany" by soldiers returning from the war in France.

Guaiacum officinale of the West Indies. A Zygophylloid tree yielding the gum-resin *guaicum*, called in Aitian "guayacan" (Ovied.), and from early times used as a remedy in syphilis: — the "guayacan" tree was observed by Oviedo nat. hyst. 75 on Hayti and the other islands, but not on the main land: G. officinale by Sloane ii. pl. 222, and Macfadyen, on Jamaica; by Swartz obs. 168, also in the West Indies, its "wood excessively hard and compact" (Lindl.). The drug guaiacum was procured by Gonsalvo Ferrand from the natives of Hayti and brought to Europe "in 1508" (Pereir. mat. med.); is mentioned also by Monardez, Ruellius i. 45, Valerius Cordus, and Dalechamp annot. Dioscor.; is "stimulant and tonic," continues to be "employed as a diaphoretic and alterative" (Lindl.); and was found by Forskal mat. med. well known in the drug-shops of Egypt.

Heimia salicifolia of Mexico. A Lythraceous herb called in Mexican "hanchinol" (Lindl.), and from early times regarded as a specific in venereal disorders, — acting as "a powerful sudorific and diuretic:" observed by Humboldt and Bonpland n. g. vi. 192 growing on the volcano of Jorullo.

Smilax sarsaparilla of the Eastern declivity of the Mexican table-land. Its root the original *sarsaparilla*, a remedy derived from the American tribes and called in Mexico "zarzaparilla" (Schiede), growing — according to Humboldt iii. 8 in the province of Vera Cruz: "S. medica" was observed by Schiede on the Eastern slope of the mountains, and was told that its roots are gathered all the year long, dried in the sun, tied in bundles, and carried to Vera Cruz for export: off the Western or Pacific coast of Mexico, a ship laden with "salsaperilla" was captured by Drake (Nuno da

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Hoffm. germ., fl. Dan. pl. 825, Linn. lap., and Hook.). Eastward, was observed by Sibthorp in the Peloponnesus and on mount Athos; and is known to grow throughout Siberia (Gmel., and Pall.). Farther East, is known to grow in Alaska (Wats.), on the Rocky mountains (E. James), at Cumberland House Lat. 54° in central North America (Drumm.), on the shore of Lakes Superior and Huron (A. Gray), in Greenland (Wats.) and Newfoundland (Lapyl.), ceasing along the Atlantic in about Lat. 42° (Pursh, and myself).

Silua in soc. Hackl.). "Sarsaparilla from Mexico" is mentioned by Monardez, the drug first becoming known in Europe "in 1530" (Pereir.); is described by Matthioli 838 (Spreng.); was found by Alpinus used medicinally in Egypt, and according to Forskal mat. med. is called there "sabarina" or "oschbe," and is imported by way of Europe. (See S. siphilitica.)

Smilax officinalis of Colombia, from Guayaquil to the Magdalena. Called by the natives "sarzaparilla" (Humb.) from "sarsa" bramble and "parilla" vine (Markh.), and doubtless used by the natives around Guayaquil as early as this date:* — S. officinalis was observed growing there by Cieza de Leon LV., who regards it as better and more efficacious than any found in other "parts of the Indies;" by Humboldt and Bonpland, collected by the natives on the Magdalena and sent in great quantities to Mompox and Carthagena, thence to Jamaica and Cadiz; suspected by Pereira to be the so-called "*Jamaica sarsaparilla*, the best and most valuable kind in market." South of the Magdalena, "S. purhampuy" of the Eastern declivity of the Peruvian Andes, highly extolled by Ruiz, is regarded by Lindley as perhaps not distinct.

1465 A. D. (= "1390 an. jav.," Raffles x.). in Java, before the completion of a mosque with eight columns at Bintara, death of Raden Rachmat after delivering into the hands of Raden Paku a pusaka kris received from the prince of Majapahit. — The name of the new city was afterwards changed to Demak, and the mosque continued standing when Raffles was writing in "1816."

"The same year = 'tching-hoa,' 1st year of Tchun-ti, or Hien-tsoung-tchun-ti," or Hien-tsoung II., "of the Ming" or Twenty-third dynasty (Chinese chron. table). He established an inquisitorial tribunal of eunuchs, with orders to put to death all persons suspected of rebellion — (Pauth.).

"The same year (= 2125th of Synmu," art de verif.), Gofunnazo succeeded by his son Go-Tsutsi-Mikaddo, now dairo of Japan.

"The same year" (Crawfurd vii. 11), Marhum reigning on Ternate.† — He partially adopted the Mohammedan religion.

"1466 A. D." (Blair), the second *printed volume* issued in Europe, Cicero de officiis. Books now becoming more accessible, — a *Revival of literature* among European nations, and the languages of the people coming more into use in writing.

"The same year" (Martin Behaim in voyag. Belg., and Major pr. H. 134), the uninhabited Azores islands, Fayal and Pico, given by Alfonso V. to his sister the duchess of Burgundy, and colonized by Belgians saved from famine.

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* *Aralia nudicaulis* of Northeast America. Called *wild sarsaparilla* (A. Gray), its root said to be used by the Crees in venereal, and its bruised bark from early times applied by them to recent wounds — (Hook., and R. Brown jun.): probably the kind of "sarsaparilla" gathered at Fort Popham on the Sachadehock: "two" kinds of "sarsaparilla" are enumerated by Josselyn rar. 59 as growing in New England, one "not above a foot in height, without thorns:" A. nudicaulis was observed by Lapylaie in Newfoundland; by Michaux, in Canada and on the Alleghany mountains; by myself, a frequent woodland plant throughout New England; and may grow along the Atlantic as far as 40° N. (Barton), and on the mountains to Carolina (Pursh). Westward, was observed by E. James along the base of the Rocky mountains; and is known to grow from Lake Huron to 64° N. (Hook.). Transported to Europe, is described by Plukenet alm. pl. 138. (See Smilax glauca.)

Stillingia sylvatica of Carolina and Florida. From early times employed by the natives against syphilis — (Forst. note to Bossu p. 8).

Echinopanax horridum of Northwest America. From early times, employed in venereal by the natives — (R. Brown jun.): observed by myself, frequent between the mount Rainier ridge and the Pacific; by Mertens, around Norfolk Sound; known to grow also at Nootka, Sitka, and on the island of Kodiak (Dec.); and received by Hooker from the Rocky mountains and California.

Berberis aquifolium of Northwest America. A pinnate-leaved barberry, from early times employed by the natives in venereal — (R. Brown jun.): observed by E. James on the Rocky mountains at the sources of the Arkansas; by Lewis and Clarke, at the rapids of the Columbia; by myself, frequent on Puget Sound; according to Hooker, grows from 40° to 49° along the Pacific, and inland to the sources of the Columbia in 52°; was received by Decandolle from Nootka.

Betula sp. of Northwest America. A species of *birch*, from early times employed by the natives in venereal — (R. Brown jun.).

Abies Douglassii of Northwest America. A tall *spruce*, its wood from early times used by the natives for fuel, also the leaves in infusion in venereal — (R. Brown jun.): observed by Douglass on the Columbia; by myself, frequent from the mount Rainier ridge to the Pacific.

† *Capparis baducca* of the Ladrones or Marian Islands. A rough-stemmed shrub, six feet or more high, brought to the Philippines as early possibly as this date: — well known at Parañaque, according to Blanco, and substituted for the capers of commerce. Westward, was observed by Rheede vi. pl. 57 in Malabar (Pers.).

"At this time" (Stanley edit. C. Correa p. xxxvii), Negro slaves so abundant in Portugal that Rosmithal and Blathner a Hungarian prince, having requested two of them, Alfonso V. replied, "Those are trifles which do not require the asking."

"1467 A. D." (art de verif.), Koschkadam succeeded by Belbay; and before the close of the year, by Timar Bogha, thirty-sixth Memluk sultan of Egypt.

Solanum Aethiopicum of Tropical Eastern Asia? Called in Egypt "bydingan el-qoutah" cup eggplant, or "tiffah dahaby" golden apple, or "tiffah el-heb" love apple (Del.); and the Egyptian "pělimŏn," — translated "malus silvestris" by Kircher 177, may be compared: S. Aethiopicum was received by Dodoens pempt. iii. 4. pl. 32 under the name of "malum Aethiopicum" from Spain, supposed to have been brought there from Aethiopia; is termed "lycopersicum æthiopicum" by Miller (Steud.). Eastward, was observed by Loureiro in Anam. By European colonists, was carried to Northeast America, observed by myself under cultivation in our middle States, mistaken for a variety of S. melongena. (See S. miniatum.)

One hundred and seventy-third generation. Sept. 1st, 1467, onward mostly beyond youth: the Persian writer Mahmud Ben Mohammed wr. 1496 (Ainsl.): the Jewish writers, Elia Bashiatschi, the astronomer R. Elias Misrachi, Abraham Zacuto ben Samuel: the Arab writers, Abu'lbaka Bedri, Ebn Shohné: the Greek writers, Georgius Trapezuntius d. 1486, Georgius Gemistus Pletho, Georgius Protosincellus, Georgius Phrantzes d. 1477, Constantinus Lascaris d. about 1494, Emmanuel Georgilas d. 1498, Stephanus Sachlekes, Constantinus d. 1500: Conradus Celtes, Angelus Politianus, Jacob Wimpheling, Marsilius Ficinus, Baptista Platina, M. A. C. Sabellicus, Joannes Nauclerus, Philippus Bergomensis, J. Picus Mirandola, Rudolphus Agricola, Nanni or Annius of Viterbo; Francis Philelphus; John Wesselus; Bessarion; Thomas a Kempis; Joannes Argyropulus; Georgius Merula; Antonius Rosellus, Ambrosius Camaldulensis, Pacificus, Angelus Clavasius, Baptista Trovamala: the scholastic theologians, Dionysius Carthusianus, and Gabriel Biel: Bernard de Trevise d. 1490 (Pouchet): the botanists, Johannes Tollät von Vochenberg, Georgius Valla Placentinus: the painters, Andrea Mantegna d. 1505.

"1468 A. D." (art de verif.), Timar Bogha succeeded by Kayt-Bay, thirty-seventh Memluk sultan of Egypt. Who built at Cairo the small but remarkable mosque that bears his name (Clot-Bey xv. 2).

Coffea Arabica of Equatorial Africa. Called in Abyssinia "boun" (A. Rich.), the berries long known there as edible, and for making the beverage introduced into or established in Aden by the mufti Mohammed Dhabhani, — who died in 1471 (="875 hej." of Abd-alkader, De Sacy chrest. arab.): drinking "kahwa" or *coffee* reached Egypt about the close of the century ("901 to 910 hej.") through Arabs from Yemen performing religious services in a mosque at Cairo, where Schehab-eddin ben Abd-algaffar according to his own account partook of the new preparation: the first attempt to suppress the use was made in 1511 (="917 hej.") under the authority of Khair-beg pasha and mohtesib of Mecca; and only in 1555 (="962 hej." of geogr. Turc) did coffee become known in Constantinople and Greece: the berries and beverage were both seen in Syria by Rauwolf. The shrub was doubtless soon introduced into Yemen, where its cultivation became of importance, and was observed on the mountains by Forskal; living stocks were even seen in Egypt by Alpinus, and a recent attempt there at cultivation is mentioned by Clot-Bey. C. Arabica is known to grow wild in Abyssinia and throughout Equatorial Africa to Sierra Leone and Monrovia on the Western coast (Ritter, Vogel, and Hook. fl. nigr.). By European colonists, was carried prior to 1690 from Arabia to Batavia in the Malayan archipelago; in 1717, to the Mauritius Islands; in 1718, to Surinam in Tropical America; and according to Meyen, has become naturalized on the Corcovado mountain near Rio Janeiro (Schouw 18, and A. Dec.).

"1469 A. D." (Galvan.), by Alfonso V. of Portugal, the trade of "Guine" leased for five years to Fernam Gomez, for a sum of money, with the condition "that euery yeere he should discouer an hundred leagues."

"In this year" (Dallet p. cxxvii), accession of Sieng-tsong, now king of Corea.

"1470 A. D." (Alst. p. 308), invasion of Styria and Carinthia by the Turks under Mohammed II.; and some thousands of the inhabitants carried away captive.

"In this year" (Galvan.), Arzila and Tanger in Africa captured by Alfonso V. of Portugal.

"The same year" (art de verif. contin., see also Humb. atl. pict.), death of Nézahualcojotl, king of Acolhuacan at Tezcuco. He had composed in Aztec an elegy on the destruction of the city of Azcapozalco, also one on the instability of human greatness, and sixty hymns to the Supreme Being.

"In this year" (Talvi ii. 1, and Major p. lxxv), Athanasius Nikitin of Tver in Russia, after passing his first Easter in Nain, his second in Mazanderan, his third at Ormuz, arriving in Western Hindustan, — where he passed his fourth and fifth Easter. His sixth was passed at Muscat, and he reached home "in 1474."

Hedyotis umbellata of Tropical Hindustan. The *chay* or *Indian madder*, a small suffruticose plant called in Telinga "cheri-velloo" (Lindl.), in Tamil "saya" or "emboorel cheddie" or "rami-

seram vayr" from growing plentifully on that island (Drur.), is probably one of the "colour plants" seen by Nikitin in the country around Calicut: *— H. umbellata was observed by Graham "common in the Concans" as far as Bombay, its "root used in dyeing red, purple, and brown orange;" by N. L. Burmann ind. 37, Ainslie, Roxburgh, Wight, and Simmonds, as far as Coromandel, cultivated besides extensively, but on Ceylon "the wild plant" considered preferable (Drur.); is known to occur also on Java (Lindl.). By European colonists, was carried to Mexico (Lindl.).

Phaseolus aconitifolius of Hindustan. Called in Yemen "gotn" (Forsk.), in the environs of Bombay "mut" (Graham), in Hindustanee "dal" (Badg.); and the "dalon" produced according to Nikitin in Cambay, — is referred here by Badger edit. Varthem. p. 107: P. aconitifolius was received by Jacquin obs. pl. 52 from Tranquebar (Pers.); was observed by Roxburgh, and Wight, in peninsular Hindustan as far as Bengal; by Graham, "cultivated in the Deccan and Goozerat;" by Forskal p. 214, cultivated in Yemen for cattle-feed. Transported to Europe, is described by the younger Linnæus, and is termed "dolichos dissectus" by Lamarck (Steud.: compare Cajanus flavus).

Curcuma amada of Tropical Hindustan. The *mango ginger* is called in Bengalee "amada" (Lindl.), in the environs of Bombay "kajula gauree" (Graham), and is probably one of the "aromatic roots" † seen by Nikitin in the country around Calicut: — C. amada is termed "tommon manga" by

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* *Morinda umbellata* of Tropical Eastern Asia. A woody climber called in Tamil "noonamarum," in Telinga "mooleoghoodoo," on the Deccan "chota-alka" (Drur.); and probably one of the "colour plants" in question, — a permanent yellow dye being obtained from its root: M. umbellata was observed by Rheede vii. pl. 27 in Malabar; by Nimmo, in "S. Concan" (Graham), nearly as far as Bombay; by Ainslie, Roxburgh, Wight, and Drury, as far as Travancore and Courtallum. Farther East, by Loureiro in Anam, a red dye obtained by the addition of sappan-wood, according to Simmonds brilliant and very permanent.

Morinda tomentosa of Southern Hindustan. A shrub called in Malabar "munjenatie" (Drur.); and probably among the "colour plants" in question, — its wood known to take an excellent polish, and a dye procured from it: — M. tomentosa was observed by Gibson "at a village below Poorundher Fort in the Deccan" (Graham); by Buchanan, and Wight, in other parts of the peninsula; and by Drury, "common in Travancore."

Wrightia tomentosa of Tropical Hindustan and Burmah. A small Apocynoid tree, abounding in yellow milky juice, and probably among the "colour plants" in question: — W. tomentosa was observed by Rheede ix. pl. 3 in Malabar; by Nimmo, in "the hilly parts of the Concan" (Graham), to and beyond Bombay; by Roxburgh, and Wight, as far as the Circars, cloths dyed in its juice preserving "their colour for two years as bright and as fresh as at first" (Drur.); by Mason, in Burmah.

Cuscuta reflexa of Hindustan. Called in the environs of Bombay "akas pawan" or "amurvel" (Graham); and possibly among the "colour plants" in question, — being used medicinally, and occasionally in dyeing: C. reflexa was observed by Powell in the Punjaub; by Vaupell, "common in Guzerat on hedges and bushes by the roadside," by Nimmo, and Graham, in "the Concans" and "on trees at Mahableshwur;" by Roxburgh cor. ii. pl. 104, as far as Silhet (Drur.).

Phyllanthus multiflorus of Tropical Hindustan. A straggling shrub climbing where obtaining the support of bushes, called in Tamil "poola vayr puttay," in Telinga "nella-pooroogoodoo," in Malabar "katou niruri" (Drur.); and possibly among the "colour plants" in question, — its roots sold in bazaars for medicinal use, and the bark for dyeing reddish brown: P. multiflorus was observed by Rheede x. pl. 27 in Malabar; by Graham, "water courses and other shady moist places in the Concans" to and beyond Bombay; by Ainslie, Roxburgh, and Wight, as far as Coromandel and Bengal.

† *Alpinia allughas* of Tropical Hindustan and Burmah. A Scitamineous herb called in the environs of Bombay "taraka" (Graham); and probably one of the "aromatic roots" in question, — being employed medicinally: — observed by Rheede xi. pl. 14 in Malabar; by Nimmo, in "S. Concan" (Graham), nearly as far as Bombay; by Retz, Ainslie, and Simmonds, in other parts of Hindustan, yielding "an inferior sort of *galingal*" (Drur.); was received by Linnæus fl. zeyl. from Ceylon (Steud.); and was observed by Mason in Burmah.

Zingiber zerumbet of Tropical Eastern Asia and the Malayan archipelago. A species of *wild ginger* called in the environs of Bombay "booteh" or "mahaburree booteh" (Graham), in Bengalee "butch" or "mahaburee-butch" (Lindl.), in Anam "ngai xanh" or "ngai mat tloi" (Lour.); and probably one of the "aromatic roots" in question: — Z. zerumbet was observed by Loureiro 3 in Anam, both wild and cultivated, not edible, but applied externally in contusions and pain in the limbs; is termed "lampujum" by Rumphius viii. pl. 64; was observed by Blume rare in moist situations on Java; by Blanco, on the Philippines, employed medicinally by the natives; by myself, in the Malayan

Rumphius v. p. 169; was observed by Roxburgh in Bengal (Lindl.), its root "used as a carminative and stomachic" (Drury); by Nimmo, in "the Concans and Guzerat," the "fresh roots smelling like green mangoes" (Graham).

Zingiber cassumanar of Tropical Eastern Asia and the Malayan archipelago. The *cassumanar*, called in Sanscrit "vuna ardrukum," in Bengalee and Hindustanee "bun ada," in Telinga "karpush-poo" (Lindl.), probably among the "aromatic roots" in question: — Z. cassumanar was observed by Graham "in gardens Bombay," and found by Nimmo "wild in the Concans," by Koenig, and Roxburgh as. res. xi. pl. 7, as far as Bahar, Bengal, and Coromandel; by Blume, on the opposing portion of Java; and is described by Rumphius v. pl. 65. The imported root according to Lindley "once in great repute" in "hysteric epileptic and paralytic disorders, but now out of use."

"1471, Aug. 9th" (Alst., and Nicol.), Paulus II. succeeded by cardinal Francis d' Albescola della Rovere, now Sixtus IV., fifty-eighth pope. — Sixtus IV. engaged in war, imposed on Naples the yearly tribute of a white horse and trappings, and is supposed to be the first pope who "placed his effigy on the coins struck in his states."

"In this year" (Galvan.), in fulfilment of the Fernam Gomez lease, John de Santarem and John Descouar sailed along the coast as far as Mina in "5° N."

"In this year" (Barbar. 37, and Remus. trav. C. Zeno 11), arrival at Venice of Azimamet, Morat, Nicolo, and Chefarsa, four ambassadors sent by the Persian king Hassan Beg to induce the Venetians to send a fleet against the Turks. Other European powers declining to co-operate, Caterino Zeno was elected ambassador, and departed to reside at the Persian court.

"1472 A. D." (Galvan.), Fernando da Poo discovered the outlying island, called after him Fernando Po.

"About this time" (Galvan.), the neighbouring islands of St. Thomas and Principe, situated under the Equator, and the main land of Benin as far as Cape St. Catharine "in 3° S." discovered by Sequeira, a servant of the king.

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archipelago naturalized, but seemingly wild in great abundance on the basal portion of the mountains of the Feejeean, Samoan, and Hawaiian Islands, its presence on Tongatabu, a low coral-island, indicating introduction by the natives. Westward from Anam, was observed by Mason indigenous in Burmah; by Roxburgh cor. iii. pl. 201, wild in woods about Calcutta (Lindl.); by Rheede xi. pl. 13, in Malabar; by Graham, and Nimmo, "wild in the Concan" as far as Bombay. The imported roots were formerly sold in the drug-shops of Europe under the name of *rad. zerumbeth*, but are no longer used (Lindl.); the transported plant is described by Blackwell pl. 402, and Miller ii. pl. 25.

Kaempferia galanga of Tropical Eastern Asia. Stemless with leaves spreading flat on the ground, called in Sanscrit "chundra-moolika" (Lindl.), in the environs of Bombay "chundra mulika" or "chanda mula" (Graham), in Tamil "katsjolum" (Drur.); and probably among the "aromatic roots" in question, — its root used medicinally and as a perfume: K. galanga was observed by Rheede xi. pl. 41 in Malabar; by Nimmo, in "S. Concan" (Graham) nearly as far as Bombay; by Burmann pl. 13, on Ceylon; by Kaempfer am. pl. 902, Retz, Roxburgh, and Wight, as far as Bengal, and besides "much cultivated in gardens" (Drur.); "said to be very common on the mountainous districts beyond Chittagong," and brought by the mountaineers to the markets of Bengal; observed by Mason indigenous in Burmah and called "kha-mung," the roots for their perfume worn by Karen females, also put with clothes, and used "to a small extent medicinally;" by Loureiro i. 12, in Anam.

Kaempferia rotunda of Tropical Eastern Asia. Flowering while the plant is leafless, and called in Tagalo "dusog" or "dusod" or "dusu" or "guisol," in Bisaya and Pampango "guisol" or "cusol" or "dusul" (Blanco), in Burmah "myœ-ban-touk" (Mason), in Bengalee and Hindustanee "bhoo-champa" or "bhoi-champa," in Sanscrit "bhoo-chumpuca" (Lindl.); and probably among the "aromatic roots" in question, — the root and whole plant being employed medicinally: K. rotunda was observed by Rheede xi. pl. 9 in Malabar; by Graham, "in gardens" at Bombay; by Ainslie, Roxburgh, Wight, and Drury, cultivated all over Hindustan for the beauty and fragrance of its flowers, but nowhere wild. Farther East, was observed by Mason in Burmah, enumerated as indigenous; by Blanco, under cultivation on the Philippines and the root used medicinally by the natives.

Curculigo orchioides of Tropical Eastern Asia and the Malayan archipelago. A stemless grass-leaved Hypoxid plant called in Bengalee "tamoolie" or "telnoor moodol," in Tamil "nelapannay," in Telinga "nala-tatta-gudda," in Hindustanee "nialmooslie" (Drur.), in the environs of Bombay "mooslee kund" (Graham); and possibly among the "aromatic roots" in question, — its root being employed medicinally: C. orchioides was observed by Rheede xii. pl. 59 in Malabar; by Nimmo, in "the Concans" (Graham), to and beyond Bombay; by Ainslie, Roxburgh, and Drury, in the "peninsula everywhere" as far as Travancore; by myself, as far as Singapore; and by Rumphius vi. pl. 54, on Amboyna (Pers.).

As early as this year (see addit. art de verif.), the Quito district invaded by Huayna Capac, sent by his father the Inca Tupac Yupanqui. — After "three years." resistance, the country was subdued: great buildings were erected by the Inca and his son, which the natives called Quito, "whence the city took its name" (Ciez. xl).

By means of a system of posts at intervals of half a league, *verbal messages* were transmitted by runners in "eight days" from Quito to Cuzco, a distance of "six hundred leagues" — (Ciez. xli, and xlii).

"1473 A. D." (Alst. p. 308, and C. Zeno 16), the Persian king having crossed the Euphrates, finally defeated by the Turks under Mohammed II.; and compelled to retire.

"The same year (Nicol.), a synod at Madrid. "To remedy the ignorance of the Spanish clergy, scarcely one of whom understood Latin."

"The same year" (Blair), the study of the Greek language brought into France by Gregoras Tiphernas.

"1474 A. D." (Stanley edit. Barb. 50 and 69), returning with a Persian ambassador, Josafa Barbaro arriving at the court of the Persian king Assambei or Hassan Beg. — He remained in Persia "five years."

"In this year" (Burm. hist., and Mason 27), Ooparaza with the title of Dhammawatie reigning in Pegu.

"In or about 1475 A. D. (= 1400 an. jav.," Raffles ix to xi, Crawfurd gives 1478). in Java, capture and destruction of Majapahit by Muslim converts under prince Raden Patah. The seat of government was now removed to Demak, Mohammedanism becoming the established religion.

"In or about 1475 A. D." (Garc. de la Vega, the addit. art de verif. giving "1523 — his 42d year" = 1482), Tupac Yupanqui succeeded by his son Huayna Capac, now twelfth Inca of Peru.

Huayna Capac went beyond his father, and declared, That the sun must have a "Lord more powerful than himself, who orders him to make this journey, day by day, without resting." The new saying of the Inca was regarded by the natives as "of evil omen, as well as his freedom in gazing at the Sun" — (Acosta, and G. de la Vega ix. 10).

"1476 A. D." (Alst., and Blair), in Switzerland, the invading Burgundians under Charles the Bold defeated.

"In this year" (Humb., and Major 2d edit. Columb. p. xxix), John Szkolny, a Polish pilot in the service of Christian II. of Denmark, visiting Greenland. He is said to have seen a country beyond.

Parnassia palustris, of Subarctic climates. Called in Britain *grass of Parnassus* (Prior), in Sweden "slotter-blomster" or "harnacker" or "flenort" or "hwit-wisil" or "hiarteblad" (Linn.), and from early times employed medicinally, and sold in drug-shops under the name of "hepaticæ albæ;" — termed "gramen parnassium" by Dodoens pempt. 564, "p. palustris et vulgaris" by Tournefort inst. 246, and known to grow from Lapland throughout middle Europe (C. Bauhin pin. 309, fl. Dan. pl. 584, Engl. bot. pl. 84, and Pers.), and even in North Africa (Wats.): was observed by Linnæus in Sweden, abounding in moist meads; by Sibthorp, on the Bithynian Olympus; by Bieberstein, on the subalpine portion of Caucasus; by Pallas, between the Yenisei and Lake Baical. Westward, by Hooker in Iceland; by Drummond, at 54° near Fort Cumberland on the Saskatchewan; grows according to A. Gray on the "shore of Lake Superior, Upper Michigan, and northward;" according to Hooker, in Labrador, Newfoundland, and throughout Canada to the Arctic Circle and Rocky mountains; was observed by Chamisso from Escholtz Bay to Bering's Straits (Schlecht.).

Dianthus armeria of Europe and the adjoining portion of Asia. Called in Britain *maiden* or *Deptford pink* (Prior), in Gothland "sarons blomster" (Linn.), and known from early times: — termed "armeria sylvestris altera" by Lobel pl. 448, "viola barbata angustifolia" by Dalechamp 810, "cariophyllus barbatus sylvestris" by C. Bauhin pin. 208, and Tournefort inst. 333, and known to grow in barren soil from Sweden throughout middle Europe (fl. Dan. pl. 230, Engl. bot. pl. 317, and Pers.): observed by Linnæus in Sweden, in cultivated as well as sterile soil as far as Scania; by Sibthorp, in Greece. By European colonists, was carried to Northeast America; observed by myself in the environs of Salem, Mass., and according to A. Gray occurs also in Pennsylvania.

Lepidium campestre of Europe and the adjoining portion of Asia. Called in Sweden "konung Salomons ljusstake" or by the Ostrogoths "stillfro" (Linn.), and known from early times: — termed "t. latifolium" by Fuchsius 306, "t. arvense vaccariæ incano folio majus" by C. Bauhin pin. 106, "t. vulgatius" by Tournefort inst. 212, described also by Anguillara 171, and known to occur in cultivated and fallow ground throughout middle Europe (Curt. lond. v. pl. 45, and Pers.): observed by Hooker in Iceland; by Linnæus in Sweden; by Sibthorp, around Constantinople; and by Bieberstein, along the Taurian mountains. By European colonists, was carried to Northeast America, where it occurs in "fields, sparing from Massachusetts to Delaware" (A. Gray).

Geranium sanguineum of Europe and the adjoining portion of Asia. Called in Sweden "orm-

gras" (Linn.), and known from early times: — termed "g. septimum hæmatodes" by Clusius hist. ii. 202, "g. s. maximo flore" by C. Bauhin pin. 318, and Tourn. inst. 267, and known to grow throughout middle Europe (fl. Dan. 1107, Engl. bot. pl. 272, and Pers.): observed by Linnæus in Sweden; by Sibthorp, and Chaubard, from the Peloponnesus to mount Hæmus and Constantinople.

Orobus vernus of middle Europe and the adjoining portion of Asia. Called in Sweden by the Ostrogoths "krakarter," and from early times furnishing the "orobi farina" of the drug-shops — (Linn.): termed "o. sylvaticus vernus" by Thalius herc. pl. 6, "o. pannonicus primus" by Clusius hist. ii. 230, "o. s. purpureus vernus" by C. Bauhin pin. 351, and Tournefort inst. 393, and known to grow in woods throughout middle Europe (Pers.): observed by Linnæus in Sweden; by Sibthorp, on mount Athos and the Bithynian Olympus.

Orobus niger of Europe and the adjoining portion of Asia. Called in Sweden "wipp-arter" (Linn.), and known from early times: — termed "astragaloides" by Dodoens pempt. 551, "o. pannonicus secunda" by Clusius hist. ii. 230, "o. sylvaticus viciæ foliis" by C. Bauhin pin. 352, and Tournefort inst. 393, and known to grow throughout middle Europe (Rivin. tetr. pl. 60, fl. Dan. pl. 1170, and Pers.): observed by Linnæus in Sweden, its root sweet and the plant turning black in drying; by Sibthorp, and Chaubard, from the Peloponnesus to mount Hæmus and Constantinople.

Vicia sepium of Europe and the adjoining portion of Asia. Called in Sweden "tranarter" (Linn.), and known from early times: — mentioned by Fuchsius 110, and Matthioli: termed "v. s. perennis" by Bauhin hist. ii. 313, "v. s. folio rotundiore acuto semine nigro" by Tournefort inst. 397, and known to occur in hedges throughout middle Europe (C. Bauhin pin. 345, Rivin. tetr. 56, fl. Dan. pl. 699, Engl. bot. pl. 1515, and Pers.): observed by Linnæus in Sweden, in hedges and shaded situations; by Sibthorp, in woods on Cyprus.

Viola hirta of Europe and the adjoining portion of Asia. A vernal species called in Sweden "buske-fioler" (Linn.), and known from early times: — termed "viola" by Brunfels pl. 137, "v. martia major hirsuta inodora" by Morison ii. 5. pl. 35, and known to grow throughout middle Europe (Ray hist. 1051, Curt. lond. i. pl. 64, fl. Dan. pl. 618, and Pers.); observed by Linnæus in Sweden; by Sibthorp, on mount Athos.

Lithospermum arvense of Eastern Europe and the adjoining portion of Asia. Called in Sweden "hoorletta" or "sminckrot" (Linn.), and its root from early times used by Northern maidens to paint their faces: — termed "anchusa arvensis minor facie milii solis" by Tabernæmontanus pl. 849, "lithospermum arvense radice rubra" by C. Bauhin pin. 258, "echioides flore albo" by Rivinus mon. 9; was already in Britain in the Sixteenth century (Park. theatr. 433), but as in Italy, Sicily, and Algeria, only in cultivated ground (Tourn. inst. 134, and A. Dec.): was observed by Linnæus in rye fields as far as Lapland; by Sibthorp, Chaubard, Fraas, Reut. and Margot, frequent in cultivated ground in Greece, but no native name given; by Grisebach, to all appearance wild in Thrace, as probably in the Crimea and on the Talysch mountains (Bieb., Mey., and Hohen); was observed by Thunberg in Japan. By European colonists was carried to Northeast America, occurring according to A. Gray on "sandy banks and road-sides, New England to Pennsylvania and Michigan;" according to Chapman in "cultivated grounds and waste places, Florida, and northward."

Campanula glomerata of Europe and the adjoining portion of Asia. Called in Sweden "mosisroser" (Linn.), and known from early times: * — termed "cervicaria minor" by Dodoens pempt. 164,

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* *Linnæa borealis* of Subarctic climates. Called in Sweden "windgras" or "benwarksgras" or "torrwarksgras" or "klagras" or "hwita klacker," in Norway "norrislegrass," and from early times used medicinally — (Linn.): termed "obolaria" by Siegesbect prim. 79, "campanula serpyllifolia" by Bauhin hist. ii. 816, "nummularia norwegica repens folio dentato floribus geminis" by Petiver mus. 787, and known to grow from Lapland throughout Northern Europe and Siberia as far as the Altaian mountains (fl. Dan. pl. 3, Pers., Dec., and Wats.), also on the mountains of Switzerland (Scheuch, alp. 131 to 454, Hall. helv. 608, Seguier veron. i. 182, and A. Dec.): was observed by Rudbeck, Celsius, and Linnæus, in Lapland and Sweden; is known to grow in Scotland (Dec.), and in Mecklembourg in Prussia (A. Dec.). Westward, according to Decandolle, grows in Newfoundland, Canada, and as far as Unalaska; according to Hooker, from the Arctic Circle to the Columbia and Kotzebue Sound; according to Watson, on the Aleutian Islands; was observed by Mertens at Norfolk Sound; by Nuttall, along Lake Huron; by Pursh, from Wiscasset in Maine to the mountains of New York and Pennsylvania; by myself, from 45° to 42° along the Atlantic, but according to A. Gray, grows in New Jersey and along the Alleghanies as far as Maryland.

Sparganium natans of Subarctic climates. Called in Smoland "flotagræs," and from early times sought for by cattle and horses, and regarded as indicating the presence of fishes — (Linn.): was observed by Linnæus only in Smoland, Norland, and the woody portion of Lapland, growing outside of other aquatic plants in water more than six feet deep; by Hudson, in Britain (Steud); and is

"trachelium minus" by Clusius hist. ii. 171, "c. pratensis flore conglomerato" by C. Bauhin pin. 94, and Tournefort inst. 110, and known to grow throughout middle Europe (Engl. bot. pl. 90, and Pers.): observed by Linnæus as far as Scania in Sweden; by Allioni pl. 39, on mount Baldo in Piedmont; by

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known to grow in Ireland, Russia, and Switzerland (Engl. bot. pl. 273, and Wats.). Westward, was observed by Hooker on Iceland; by myself, in a weedy lake abounding in fish not far from Monadnock mountain in Jaffrey, growing in deep water, the leaves half an inch or more in width; by Nuttall, in Massachusetts; by A. Gray, in Central New York; and is known to grow as far as Alaska (Wats.).

Juncus bulbosus of Northern Europe and Asia. A rush called in Sweden "stubb-togh" (Linn.), and known from early times: — termed "gramen junceum junci sparsa panicula" by Morison iii. 8. pl. 9, "j. compressus" by Jacquin, and known to grow from Sweden to Switzerland (fl. Dan. pl. 431, Hall. helv. 254, and Pers.), and as far as the Taurian mountains (Bieb.): observed by Linnæus in Sweden, forming patches in moist pasture-land and even near dwellings; by Decandolle, in France. Westward, by Hooker in Iceland. (See J. Gerardi).

Carex panicea of Northern Europe and Asia. Called in Sweden "hirss-starr" (Linn.), and known from early times: — termed "gramen cyperoides gracile alterum glomeratis torulis spatio distantibus" by Morison iii. 8. pl. 12; described also by Plukenet alm. pl. 91, Scheuchzer 431, Ray hist. 1293, and Micheli pl. 32 (Linn.): known to grow from Iceland and Lapland to Switzerland, Russia, and Northern Asia (Pers., and Wats.); and observed by Rudbeck i. pl. 31, and Linnæus, in Lapland and Sweden. Probably by European colonists was carried to Northeast America, observed by H. Little near Boston; but according to J. Carey, occurs from "New England to Wisconsin, and southwestward."

Agrostis canina of Europe and the adjoining portion of Asia. Called in Sweden "brun-hwen" (Linn.), and known from early times: — termed "gramen supinum caninum paniculatum folio varians" by C. Bauhin pin. 1 and theatr. 12 (Linn.), and known to grow in meads throughout middle Europe (Scheuch. hist. 141, Smith brit. 78, and Pers.), from Russia and Ireland to Switzerland (Wats.); observed by Linnæus frequent in moist meads in Sweden. Westward, is known to grow in Iceland (Wats.); and according to Watson, and A. Gray, has been introduced into Northeast America.

Airopsis præcox of Northern and middle Europe. A diminutive grass called in Sweden "wartatel" (Linn.), and known from early times: — termed "gramen parvum præcox panicula laxa canescente" by Plukenet phyt. pl. 33, and Ray angl. iii. pl. 22, "g. minimum spica brevi habitiore nostrum" by Scheuchzer hist. 219 (Linn.); known to grow from Denmark throughout middle Europe (fl. Dan. pl. 383, Smith angl. i. 87, and Pers.) as far as Switzerland (Wats.); observed by Linnæus in Sweden, in depressed sandy situations subject to inundation in Scania. By European colonists, was carried to Northeast America, observed by Pursh in the outskirts of Philadelphia, and according to A. Gray occurs in "sandy fields, New Jersey to Virginia, rare."

Arrhenatherum avenaceum of Northern and middle Europe. An oat-like grass called in Sweden "knyl-hafre" (Linn.), and known from early times: — termed "gramen avenaceum elatius juba longa splendente" by Morison iii. 8 pl. 7, and Scheuchzer hist. 239, and "avena elatior" by Linnæus: known to grow in meads throughout Northern and middle Europe (Schreb., Leers, and Pers.); was observed by Linnæus in Sweden as far as Lapland, sometimes in gardens. By European colonists, was carried to Northeast America, observed by myself in cultivated and fallow ground near Salem, Mass.; by Torrey, in the environs of New York city; by Curtis, in North Carolina (Chapm.); by Baldwin, in the Western part of Georgia (Ell.); and according to A. Gray has become naturalized.

Lycopodium clavatum of Northern climates. A *club-moss* called in Sweden "ralf-mossa" or "wisp-mossa" or "kalfwerefwor" or "mattegras," and from early times used for making mats, blistering bread, and sold in the drug-shops under the name of "musci clavati," its seeds as "lycopodii" — (Linn.): described by Valerius Cordus 111 (Spreng.); termed "muscus terrestris clavatus" by C. Bauhin pin. 360, "lycopodium vulgare pilosum anfragosum et repens" by Dillenius musc. pl. 58, and known to grow throughout Northern Europe (. . . .): observed by Tillands pl. 143, and Linnæus, in Lapland and Sweden. Westward, by myself in New England, as far as 42° along the Atlantic; according to A. Gray, is "common northward" from central New York; and according to Chapman, grows on the "mountains of North Carolina."

Lycopodium annotinum of Northern climates. Called by the Westrogoths "ref-gras" (Linn.), and known from early times: — termed "muscus terrestris repens clavis singularibus foliosis erectis" by Plukenet alm. pl. 258, and known to grow in woods throughout Northern Europe (Moris. iii. 15. pl. 5, Dill. musc. pl. 63): observed by Linnæus in Sweden. Westward, by myself from 47° 30′ on the Lower St. Lawrence to the base of the White mountains and of Monadnock; by Oakes, and

Sibthorp, on mount Athos. By European colonists, was carried to Northeast America, where it seems naturalized in the immediate vicinity of Salem, Mass.

Sedum rupestre of Europe and the adjoining portion of Asia. Called in Sweden "bergknoppar" (Linn.), and known from early times: — termed "s. minus luteum folio acuto" by Tournefort inst. 263, "s. m. a rupe S. Vincentii" by Ray angl. iii. 270, and known to grow on rocks from Sweden to the Mediterranean (Engl. bot. pl. 170, and Pers.): was observed by Hooker in Iceland; by Linnæus, on calcareous rocks in Sweden; by Sibthorp, and Chaubard, on rocks from Crete and the Peloponnesus to Parnassus.

Sedum sexangulare of Europe and the adjoining portion of Asia. Called in Sweden "kantknoppar" (Linn), and known from early times: — termed "s. minimum luteum non acre" by Bauhin hist. iii. 695, "stenegrop" by Petiver 42. f. 9, and known to grow in arid situations and on walls from Sweden to the Mediterranean (Pers.): observed by Linnæus in Sweden, intermingled with s. acre, but the leaves not acrid. In Britain (Curt. lond. iv. pl. 33) is regarded by Watson, and Bromfield, as probably not indigenous (A. Dec.).

Ajuga pyramidalis of middle Europe and the adjoining portion of Asia. Called in Sweden "kiaringruka" or "miolkgubbar," and from early times used medicinally and sold in drug-shops under the name of "consolidæ mediæ" — (Linn.): termed "consolida media genevensis" by Bauhin hist. iii. 432, "phyllochnos" by Renealmi 125, "bugula sylvestris villosa flore cæruleo" by Tournefort inst. 209, and known to grow from Sweden to the Pyrenees and mountains of Switzerland (fl. Dan. pl. 185, Engl. bot. pl. 1270, Pers., and Benth.): observed by Linnæus in Sweden; by Sibthorp, on mount Hæmus; and by Meyer, on Caucasus. By European colonists, was carried to Greenland (Wats.).

Melampyrum cristatum of middle Europe and the adjoining portion of Asia. Called in Sweden "ænggubbar" or "korsort" (Linn.), and known from early times: — termed "m. c. flore albo et purpureo" by Bauhin hist. iii. 440, and Tourn. inst. 173, and known to grow from Sweden throughout middle Europe (fl. Dan. pl. 1104, Engl. bot. pl. 41, and Pers.): observed by Linnæus in Sweden, frequent in meads in sterile soil; by Sibthorp, around Constantinople.

Globularia vulgaris of Europe and the adjoining portion of Asia. Called in Sweden "bergskrabba" (Linn.), and known from early times: — termed "aphyllanthes Anguillaræ" by Camerarius hort. pl. 7, "globularia" by Clusius hist. ii. 6: was known to Lobel adv. nov. 200 as "rare" and growing in Finland, Germany, and Italy; but has since become more abundant in central Europe (Pers., and A. Dec.): was observed by Linnæus in rocky situations exposed to the sun from Gothland to Oeland; by Sibthorp, on the Bithynian Olympus and as far as Smyrna.

Myosotis arvensis of Europe and the adjoining portion of Asia. Called in Sweden "forgat mig ei" (Linn.), and known from early times: — termed "echium scorpioides arvense" by C. Bauhin pin. 254, "m. hirsuta arvensis major" by Linnæus, and known to grow from Lapland throughout middle Europe (Dill. giss. 55, and Boerh. lugd. i. 190): observed by Tillands, and Linnæus, frequent in arid meads in Lapland and Sweden; by Chaubard, in cultivated ground in the Peloponnesus. By European colonists was carried to Northeast America, observed by A. Gray in "fields etc., not very common," its flowers "small, blue, rarely white."

Ornithogalum luteum of Europe and the adjoining portion of Asia. Called in Sweden by the Ostrogoths "wafferdagslok," and from early times known as a weed in gardens, and its bulbs eaten in times of scarcity — (Linn.): termed "bulbus sylvestris" by Dodoens pempt. 222, "pyrrochiton" by Renealmi pl. 90, "o. luteum" by C. Bauhin pin. 71, and known to grow in meads and woods throughout middle Europe (fl. Dan. pl. 612, and Pers.): observed by Chaubard in the Peloponnesus.

Ornithogalum minimum of Europe and the adjoining portion of Asia. From early times intermingled with the preceding: — termed "o. pannonicum luteo flore" by Clusius hist. i. 189, "o. luteum minus" by C. Bauhin pin. 71, and known to occur throughout middle Europe: observed by Linnæus rarer than the preceding species, but occurring especially in the kitchen-gardens of Upland. "O. minus" of Linnæus was observed by Chaubard in the Peloponnesus.

Russell, as far as 42° 30′ along the Atlantic (Robinson); by A. Gray, "common northward" from central New York.

Isoetes lacustris of Northern climates. An aquatic called in Britain *quillwort* (Prior), in Sweden "braksnagras," uprooted by Cyprinus brama and hence omens drawn from early times — (Linn.): termed "subularia lacustris sive calamistrum herba aquatico-alpina" by Ray angl. i. pl. 210, and known to grow in shallow water at the bottom of lakes and rivers throughout middle Europe (Dill. musc. pl. 80): observed by Celsius, P. Osbeck, and Linnæus, in the lakes and rivers of Sweden. Westward, was observed by Conrad near Philadelphia, and specimens shown me; according to A. Gray, is "not rare northward" of central New York, New England specimens agreeing well with European; was received by Hooker from the Saskatchewan.

Orchis militaris of Europe and the adjoining portion of Asia. Called in Britain *military orchis* (Prior), in different parts of Sweden "gulltuppor" or "Johannis nycklar" (Linn.), and known from early times: — termed "o. maslatifolia" by Fuchsius 554, "cynosorchis latifolia hiante cucullo major" by C. Bauhin pin. 80, and known to grow in meads throughout middle Europe (Tourn. inst. 432, Jacq. var. pl. 598, Rudb. elys. ii. pl. 185, and Pers.): observed by Linnæus in Gothland and Oeland; by Herbert, in England (A. Dec.), by Vaillant pl. 31, in the environs of Paris; by Haller pl. 28, in Switzerland; and by Sibthorp, in the environs of Constantinople.

Orchis nigra of Northern Europe and mountains farther South. Called in Switzerland "jalousie," in Jemtia in Sweden "brunkulla," and its flowers used there from early times to colour ardent spirits — (Linn.): the plant is termed "o. palmata angustifolia alpina nigro flore" by C. Bauhin pin. 86, and Tournefort inst. 436 "satyrium foliis linearibus" by Royer lugd. 14, "s. nigrum" by Linnæus: is known to grow in Denmark and on the mountains of middle Europe (Jacq. austr. pl. 368, and Pers.): was observed by Rudbeck elys. ii. pl. 217, and Linnæus, in Sweden; by Haller pl. 27, on the Alps of Switzerland; by Sibthorp, on the mountains of the Peloponnesus.

Ophrys muscifera of Europe and the adjoining portion of Asia. Called in Britain *fly orchis* (Prior), in Sweden "flugblomster" (Linn.), and known from early times: — termed "orchis myodes prima floribus muscam exprimens" by Lobel pl. 381: described also by Dodoens . . . 237 (Spreng.), C. Bauhin pin. 83, and Tournefort inst. 434, and known to grow throughout middle Europe (Engl. bot. pl. 64, Vaill. pl. 31, and Pers.): observed by Linnæus as far as Oeland; by Haller pl. 24, in Switzerland; by Sibthorp, and Chaubard, in the Peloponnesus.

Luzula pilosa of Northern climates. A leafy rush called in Sweden "il-togh" (Linn.), and known from early times: — termed "gramen nemorosum hirsutum latifolium majus" by C. Bauhin pin. 7 and theatr. 101, "j. nemorosus latifolius major" by Tournefort inst. 246, and known to grow from Lapland to the Mediterranean (Curt. lond. ii. pl. 19, Hoffm. germ. 168, Pers., and Wats.): observed by Rudbeck elys. i. pl. 63, and Linnæus, in Lapland and Sweden; by Decandolle, in France; by Savi, in Etruria; by Desfontaines, on the Atlas mountains (A. Dec.); by Sibthorp, and Chaubard, from the Peloponnesus to Constantinople; by Thunberg, in Japan. Westward, by Hooker in Iceland; is known to grow also in Greenland and Labrador (Wats.), and as far as the Saskatchewan (Hook.); according to A. Gray, is "common northward;" is attributed by Muhlenberg to Pennsylvania, and by Chapman to the "mountains of North Carolina."

Juncus squarrosus of Europe and the adjoining portion of Asia. A leafless rush called in Sweden "borst-togh" (Linn.), known there from early times as indicating turfy and sterile soil: — termed "gramen junceum foliis et spica junci" by C. Bauhin pin. 5 and theatr. 78, "j. montanus palustris" by Tournefort inst. 247, and known to grow from Lapland throughout middle Europe (fl. Dan. pl. 430, Engl. bot. pl. 933, and Pers.): was observed by Hooker in Iceland; by Linnæus, in Lapland and Sweden; by Loesel, in Prussia; by Sestini, in the environs of Constantinople (Sibth.).

Juncus articulatus of Europe and Northern Asia. A rush called in Sweden "ryll-togh" (Linn.), and known from early times: — termed "gramen junceum folio articulato aquaticum" by C. Bauhin pin. 5 and prodr. 12, "j. foliis articulosis floribus umbellatis" by Tournefort inst. 247, and known to grow in watery places from Lapland throughout middle Europe (Engl. bot. pl. 238, and Pers.): was observed by Linnæus along the margin of rivers and lakes in Lapland and Sweden; by Sibthorp, frequent in wet places along rills on the Greek islands; by Gmelin, in Russia and throughout Siberia. Westward, by Hooker in Iceland; but probably by European colonists carried to New England, observed by myself along roadsides in Western Massachusetts; and according to A. Gray, occurs in "wet places, Rhode Island to Lake Huron, and northward, the genuine European form received from" Olney and Sartwell. "J. lamprocarpus," described by Ehrhart, figured in Engl. bot. pl. 2143, and observed by Chaubard in the Peloponnesus, is by some writers regarded as not distinct.

Carex muricata of Europe and Northern Asia. Called in Sweden "pigg-starr" (Linn.), and known from early times: — termed "gramen nemorosum spicis parvis asperis" by C. Bauhin pin. 7 and theatr. 100, "carex spicis brevibus echinatis sessilibus distinctis" by Haller 245; and known to grow throughout middle Europe (Ray hist. 1298, Scheuchz. 485 pl. 11, and Pers.), also along the Taurian mountains (Bieb.), and in Siberia (Wats.): was observed by Linnæus in Sweden and especially in Norland; by Brotero, near Beira in Portugal; by Desfontaines, in Barbary. Westward, by Hooker in Iceland; but probably by European colonists was carried to Northeast America, was observed by Pursh in the State of New York; and according to J. Carey, occurs in "fields, Massachusetts (introduced?), Ohio, and Kentucky, rare."

Carex pallescens of Europe and the adjoining portion of Asia. Called in Sweden "blek-starr" (Linn.), and known from early times: — termed "cyperoides polystachion flavicans spicis brevibus prope summitatem caulis" by Plukenet alm. pl. 34, and Tournefort inst. 530: known to grow from Lapland throughout middle Europe (fl. Dan. pl. 1060, Engl. bot. pl. 2185, and Pers.), also in Russia and Siberia (Wats.): was observed by Rudbeck elys. i. pl. 54, and Linnæus, in Lapland and Sweden;

by Decandolle, in France; by Savi, on the Appenines; by Sibthorp, in a grove not far from Constantinople. Westward, by Hooker in Iceland; but clearly by European colonists was carried to New England, observed by myself in both Eastern and Western Massachusetts, by Dewey in Western Massachusetts, by Torrey on the highlands along the Hudson, occurs according to J. Carey in "Pennsylvania, and northward," (A. Gray), and seems completely naturalized.

Carex hirta of Europe and the adjoining portion of Asia. Called in Sweden "grus-starr" (Linn.), and known from early times: — termed "gramen spicatum foliis et spicis hirsutis mollibus" by C. Bauhin theatr. 48, "cyperoides polystachion lanuginosum" by Tournefort inst. 529; and known to grow from Sweden and Russia throughout middle Europe (Engl. bot. pl. 685, Pers., and Wats.), and as far as the Taurian mountains (Bieb.); was observed by Hooker in Iceland; by Linnæus, in Sweden; by Sibthorp and Chaubard, from the Peloponnesus to Constantinople.

Carex elongata of Europe and the adjoining portion of Asia. A sedge called in Sweden "rank-starr" (Linn.), and known from early times: — termed "cyperoides polystachion spicis laxis paniculam veluti componentibus" by Scheuchzer agr. 487 pl. 11; and known to grow in marshy ground from Russia and 63° in Sweden to the Mediterranean (Engl. bot. pl. 1920, Pers., and Wats.): observed by Hooker in Iceland; by Linnæus, as far as Upsal, rare; by Sibthorp, in the Peloponnesus.

Carex leporina of Europe and the adjoining portion of Asia. Called in Sweden "har-starr" (Linn.), and known from early times: — termed "gramen cyperoides palustre majus spica divisa" by C. Bauhin pin. 6 and theatr. 88, "g. c. spica e pluribus spicis brevibus mollibus composita" by Scheuchzer hist. 456 pl. 10 f. 15 (Linn), "carex ovalis" by Willdenow; and known to grow in moist meads throughout Northern and middle Europe (Huds. 404, Engl. bot. pl. 306, Leers 195 pl. 14 f. 6, and Pers.): observed by Hooker in Iceland; by Linnæus, in Lapland and Sweden; by Sibthorp, in moist meads in Greece.

Carex vulpina, of Northern climates. Called in Sweden "raf-starr" (Linn.), and known from early times: — termed "gramen cyperoides triquetrum spica integra" by Bauhin hist. ii. 479, "g. c. palustre majus spica compacta" by C. Bauhin pin. 6 and theatr. 87: known to grow in marshes throughout Northern and middle Europe (fl. Dan. pl. 308, Engl. bot. pl. 307, and Pers.), also about Caucasus and the Taurian mountains (Bieb.), and as far as Japan (Wats.): was observed by Linnæus in Sweden; by Sibthorp, and Chaubard, in watery places in the Peloponnesus. Westward, by Hooker in Iceland; and according to J. Carey grows in "Ohio, Illinois, and Kentucky" (A. Gray).

Carex digitata of Europe and the adjoining portion of Asia. A woodland sedge called in Sweden "hwisp-starr" (Linn.), and known from early times: — termed "gramen caryophyllatum montanum spica varia" by C. Bauhin pin. 4 and theatr. 48, and by Scheuchzer 448 pl. 10: known to grow throughout Northern and middle Europe (Engl. bot. pl. 615, and Pers.); was observed by Linnæus in Lapland and Sweden; by Sibthorp, in woods in the environs of Constantinople.

Trisetum flavescens of Europe and the adjoining portion of Asia. A grass called in Sweden "golhafre" (Linn.), and known from early times: — termed "gramen avenaceum spica sparsa flavescente locustis parvis" by Morison iii. 8 pl. 7, "g. a. pratense elatius panicula flavescente locustis parvis" by Tournefort inst. 525 and Scheuchzer hist. 223, "avena flavescens" by Linnæus: known to be frequent in meads throughout middle Europe (Curt. lond. iii. pl. 5, and Pers.); observed by Bergius in meads in Gothland (Linn.); by Sibthorp, in the environs of Constantinople.

Phalaris arundinacea of the marshes of Northern climates. A reedy grass called in different parts of Sweden "flack" or "ror-flen," and from early times used for thatching roofs — (Linn.): termed "gramen arundinaceum spicatum" by C. Bauhin pin. 6 and theatr. 94, "g. paniculatum aquaticum phalaridis semine" by Tournefort inst. 523; and known to grow from Lapland and the Feroe Islands to Switzerland (fl. Dan. pl. 259, Pers., and Wats.), also on Caucasus, and in Siberia and Japan (Kunth); was observed by Linnæus on the shores of lakes and rivers in Sweden; by Sibthorp, in watery places around Constantinople. Westward, by Michaux in Canada, New England, and Pennsylvania; by Lapylaie, in Newfoundland, as far as 51°; by myself, in marshes from 42° 30′ to 40° along the Atlantic; by Drummond at 54° on the Saskatchewan near Fort Cumberland; and according to A. Gray is "very common northward" from central New York. The variety with striped leaves, cultivated for ornament under the name of *ribbon grass* (Prior), was probably imported from Europe.

Phalaris phleoides of Europe and the adjoining portion of Asia. A grass called in Sweden "roll-flen" (Linn.), and known from early times: — termed "gramen typhoides asperum primum" by C. Bauhin pin. 4 and theatr. 51 (Linn.), "gramen spicatum spica cylindracea tenuiori longa" by Tournefort inst. 520, and known to occur throughout middle Europe (Ray hist. 1267, Scheuch. 61, fl. Dan. pl 531, and Pers.); observed by Celsius, and Linnæus, in Sweden, in meads as well as along the margin of fields; by Forskal on Imros, by Sibthorp around Constantinople and frequent in cultivated ground on the Greek islands.

Phleum alpinum of the Arctic region and mountain-summits farther South. A grass called in Sweden "fiall-kampe" (Linn.), and known from early times: — termed "gramen typhoides alpinum spica nigra brevi" by Burser (Mart. 498) and Rudbeck elys. i. pl. 8 (Linn.), "g. typhoides alpinum spica brevi densa et veluti villosa" by Scheuchzer prodr. pl. 3: known to grow in Britain (Engl. bot. pl. 519), and on the Alps and Pyrenees (Dec.); observed by Linnæus frequent on the mountains of Lapland; by Haller 1529, on the Swiss Alps; by Savi, on the Appenines; by Sibthorp, on the Bithynian Olympus; is known to grow on Caucasus (Bieb.), and in Siberia (Wats.). Westward, was observed by Hooker in Iceland; by myself, on the summits of the White mountains of New England; is known to grow in Greenland and Labrador (Wats.), and in Unalaska (Kunth).

Alopecurus geniculatus of Northern Europe and Asia. Called in some English works *flote gruss* (Prior), in Norland "stakra," in Sweden "kiarr-kafle" (Linn.), and known from early times: — termed "gramen aquaticum geniculatum spicatum" by C. Bauhin pin. 3 and theatr. 41, "alopecurus culmo infracto aristis gluma longioribus" by Royer lugdb. 54 (Linn.): known to occur in North Africa, Ireland, Russia (Wats.), Siberia, and Japan (Kunth); observed by Linnæus in wet meads in Sweden, and floating on the lakes of Lapland. Westward, was observed by Hooker in Iceland; by myself, in wet places in the outskirts of Salem, Mass., clearly introduced; by Chapman, in "wet cultivated grounds, Florida and northward;" by Short, in Kentucky; by Nuttall, and Pitcher, in Arkansas; and received by Hooker fl. bor. am. from Canada and the Northwest.

Milium effusum of Europe and the adjoining portion of Asia. A fragrant woodland grass called in different parts of Sweden "myskegras" or "luktgras" or "haslebrodd" or "amur" (Linn.), and known from early times: — termed "miliaceum gramen" by Lobel pl. 3, "gramen sylvaticum panicula miliacea sparsa" by C. Bauhin pin. 8 and theatr. 141 (Linn.), and by Tournefort inst. 523; known to grow from Lapland and Russia to the Mediterranean (fl. Dan. pl. 1143, Curt. lond. iv. pl. 12, and Wats.), also in Siberia (Kunth); observed by Hooker in Iceland; by Rudbeck, and Linnæus, in Sweden; by Decandolle, in France; by Savi, in Etruria; by Sibthorp, in woods on Cyprus; and by Bieberstein, along the Taurian mountains. ("M. glaucum" of North America, observed by Nuttall in West Pennsylvania, by myself on the White mountains, and according to A. Gray "common northward," is possibly not distinct.)

Agrostis spica-venti of Europe and the adjoining portion of Asia. A grass called in different parts of Sweden "kiosa" or "hwen" or "aker-when" (Linn.), and known from early times: — termed "gramen capillatum" by Bauhin hist. ii. 462, described also by Royer lugd. 59 (Linn.); known to occur about cultivated ground throughout middle Europe (Scheuchz. hist. 144, and Pers.); observed by Linnæus in Sweden, a frequent weed in rye-fields; by Chaubard, in the Peloponnesus. Westward, an Agrostis with long upright awns has been observed by myself on the border of cultivated ground around Salem, Mass.

Catabrosa aquatica of Europe and Northern Asia. Called in some English works *flote grass* (Prior), in Sweden "kiarr-tatel" (Linn.), and known from early times: — termed "gramen caninum supinum paniculatum dulce" by C. Bauhin pin. 2 and theatr. 13 (Linn.), "g. paniculatum aquaticum miliaceum" by Tournefort inst. 521, and Vaillant paris. pl. 17, "aira aquatica" by Linnæus, and "poa airoides" by Koeler (Pers.): known to grow throughout middle Europe (Ray angl. iii. 402, Curt. lond. i. pl. 5, and Wats.), along the Taurian mountains (Bieb.), on Caucasus, and in Siberia (Kunth); was observed by Linnæus in Sweden, about springs and pools as far as Upsal; by Sibthorp, and Chaubard, in watery places in Greece as far as the Peloponnesus. Westward, was observed by Hooker in Iceland; according to Kunth, grows in North America, and according to Watson in both British America and the United States.

Aira canescens of Europe and the adjoining portion of Asia. Called in Sweden "borst-tatel" (Linn.), and known from early times: — termed "gramen foliis junceis radice jubata" and "g. sparteum variegatum" by C. Bauhin pin. 5 and theatr. 72 to 74 (Linn.), "g. paniculatum capillaceo folio minimum" by Tournefort inst. 523 and herb. (Smith); known to grow in sandy situations throughout middle Europe (Roy. lugd. 60, Engl. bot. pl. 1190, and Pers.); observed by Linnæus in Sweden, in sandy fields as far as Scania; by Sibthorp, in the maritime sand of Achaia.

Melica ciliata of Europe and the adjoining portion of Asia. A grass called in Sweden "grusslok" (Linn.), and known from early times: — termed "gramen avenaceum montanum lanuginosum" by C. Bauhin pin. 10 and theatr. 156 (Linn.), and by Tournefort inst. 524, "melica floribus horizontaliter patentibus" by Royer lugd. 57; known to grow throughout middle Europe (Scheuch. alp. pl. 4, and Pers.); observed by Linnæus in Gothland and Sweden, becoming rare in Scania; by Forskal on Imros; by Sibthorp, and Chaubard, frequent on the hills of Greece as far as the Peloponnesus.

Sesleria cærulea of Europe and the adjoining portion of Asia. Called in Britain *moor grass* (Prior), in Sweden "elf-exing" (Linn.), and known from early times: — termed "gramen glumis variis" by C. Bauhin pin. 10 and prodr. 21 and theatr. 158, "g. spicatum glumis variis" by Tournefort inst. 519, "cynosurus cæruleus" by Linnæus; known to grow in mountainous situations through-

out middle Europe (Ray angl. iii. 339, Scheuch. hist. 83, Arduin. pl. 6, Pers., and Engl. bot. pl. 1613); observed by Linnæus in meads in Sweden; by Scopoli 189, in Carniolia; and by Sibthorp, on mount Parnassus.

Poa alpina of the Arctic region and mountain summits farther South. A grass called in Sweden "fiall-groe" (Linn.), and known from early times: — described by Dalibard, and known to grow on the Alps and Pyrenees (Dec.); also in Britain, Russia (Engl. bot. pl. 1003, and Wats.), and on Caucasus (Kunth); termed "gramen montanum spica foliacea graminea" by Scheuchzer alp. 38 pl. 4; observed by Linnæus in Lapland, its viviparous form continuing even under cultivation; by Sibthorp, on the Bithynian Olympus. Westward, by Hooker in Iceland; is known to grow in Greenland, and British America (Wats.); and was received by Kunth both from North America and the Falkland Islands.

Poa nemoralis of Northern Europe and Asia. A woodland grass called in Sweden "lund-groe" (Linn.), and known from early times: — described by Scheuchzer gram. 164 pl. 2, and termed "gramen sylvaticum panicula tenui e raris locustis composita" by Dillenius sp. 57: known to grow from Lapland to the Mediterranean (Engl. bot. pl. 1265, Pers., and Wats.), also on Caucasus, and in Siberia (Kunth); observed by Linnæus in Sweden, in woods at the base of mountains; by Sibthorp, in woods near Constantinople. Westward, was received by Hooker from the Saskatchewan and Slave river, — is known to grow in Russian America (Wats.), and var. "glauca" was observed by Hooker in Iceland (Kunth); (but the species growing in woods from "New England to Wisconsin," and observed by Nuttall near Philadelphia, is regarded by A. Gray as distinct and termed "p. alsodes").

Poa decumbens of Europe and the adjoining portion of Asia. A low grass called in Sweden "ax-swingel" (Linn.), and known from early times: — termed "gramen triticeum palustre humilius spica mutica breviore" by Morison iii. 177 pl. 1, "g. avenaceum parvum procumbens paniculis non aristatis" by Plukenet alm. pl. 34, and Tournefort inst. 525, "festuca decumbens" by Linnæus: known to grow throughout Northern and middle Europe (Engl. bot. pl. 792, and Pers.); was observed by Linnæus in Sweden, in sterile pasture-land as far as Scania and Upland; by Sibthorp, in the environs of Constantinople.

Bromus tectorum of Europe and the adjoining portion of Asia. A grass called in Sweden "taklosta" (Linn.), and known from early times: — termed "festuca avenacea sterilis humilior" by C. Bauhin pin. 10 and theatr. 148, "gramen avenaceum locustis villosis angustis candicantibus et aristatis" by Tournefort inst. 526, and Scheuchzer gram. 254: known to grow on barren hills and on walls and roofs throughout middle Europe (Leers pl. 10, and Pers.); observed by Linnæus in fields and along their margin in arid soil, and covering the roofs of houses in Upsal; by Forskal, at Constantinople; and by Sibthorp, and Chaubard, around Athens and in the Peloponnesus.

Bromus pinnatus of Europe and the adjoining portion of Asia. A woodland grass called in Sweden "sparr-losta" (Linn.), and known from early times: — termed "gramen spica brizæ perlonga aristis brevibus donata" by Tournefort inst. 517; and known to grow in grass-patches in woods throughout middle Europe (Rudb. elys. i. pl. 80, Hall., Engl. bot. pl. 730, and Pers.): observed by Bromelius 40 in woods in Gothland; by Linnæus in mountainous situations as far as Upland; by Sibthorp, and Chaubard, frequent in woods in shaded situations in the Peloponnesus and Greek islands.

Equisetum sylvaticum of Northern climates. Called in Sweden "grangras" or "hastgroning," and from early times esteemed there as feed for horses — (Hagstrom, and Linn.): termed "equisetum sylvaticum" by Tabernæmontanus 562, "e. s. tenuissimis setis" by C. Bauhin pin. 16 and theatr. 145, and known to grow throughout Northern and middle Europe (Rudbeck the younger elys. i. pl. 124, Roy. lugdb. 496, and Engl. bot. pl. 1874): observed by Linnæus in Sweden; by Sibthorp, from Greece and Cyprus to Constantinople. Westward, by myself from the Lower St. Lawrence to 42° 30 along the Atlantic; by Drummond, at 54° on the Saskatchewan near Fort Cumberland; and according to A. Gray is "common northward" from central New York.

As early perhaps as this year (see addit. art de verif.), expedition of the Inca Huayna Capac against Tumpiz and the countries beyond under the Equator, after assurance of success from the oracle at Pachacamac and the speaking statue in the valley of the Rimac.

"Feb., 1477" (Columb. mem., and Rafn. antiq Amer.), visit of Columbus to Iceland; in a ship "from Bristol, England." Columbus according to his own account, sailed a "hundred leagues beyond Thulé" called Frislanda to "Lat. 73° and an island as large as England where the English come to trade." (art de verif. contin.).

Theodorus Gaza translating Theophrastus into Latin. — He died "in 1478."

Polygonum fagopyrum of Eastern Tartary. The *buckwheat*, called in Esthonian "tatrikat" or "tattar," in Polish or Bohemian "tatarka," in Italy "faggina," in different parts of Spain "fajol" or "alforjon" or "alforfon" (Mor., and A. Dec.), in Japan "kjo" or usually "soba" (Thunb.); and the "trionum," a name given by Theodorus Gaza — apparently from the triangular seeds, is identified by

Ruel ii. 25 with the "Turcicum frumentum" brought into Europe "avorum nostrorum ætate," the seeds triangular and resembling beech-nuts; the account by John Bruyerinus in 1530 corresponds: buckwheat is mentioned in a German bible printed in 1522 (Beckm. 426), and according to Conrade Heresbach (writing before 1576) came from Northern Asia: is described also by Tragus, Dodoens, Cæsalpinus, and Bauhin hist. ii. 994; continues under cultivation in Western Europe, and was seen by Sestini in the environs of Constantinople (Sibth.). Farther East, is known to grow in Siberia around Lake Baikal (Ledeb.); was observed by Royle under cultivation in Northern Hindustan, but devoid of a Sanscrit name; by Kaempfer, and Thunberg, cultivated and growing spontaneously throughout Japan. By European colonists, was carried to Northeast America, where it continues abundantly cultivated in our Northern and Middle States; and to Ceylon, having there according to Moon 32 no native name.

"The same year" (Acost., Clavig. ii., and Humb. atl. pict.), Axajacatl succeeded by Tizoc, seventh Mexican emperor.

"In this year" (Burm. hist., and Mason 27) the Talaing general Thameinparau at the head of an army erecting an iron post on the Chinese frontier, to mark the boundary of the Peguan Empire. On his way back he was captured by the Burmese.

"1478 A. D." (Blair), expulsion from Florence of Laurence de Medici; under an anathema from pope Sixtus IV., "which greatly distressed learning." The Medicean *Library* had been collected through the agency of John Lascaris.

"The same year" (Pouchet) publication of the "Livre de Nature:" the first printed work on Natural History.

"In this year" (Grey transl. C. Zeno 38), Hassan Beg succeeded by Yakoob, now king of Persia.

"Sept. 4th, 1479" (Major pr. H. 129), the Canary Islands and Granada confirmed by treaty to Spain; and the African coast "from Cape Non" with the seas and islands as far as the Indies, to Portugal.

"1480 A. D." (Grey transl. C. Zeno 10), Otranto in Southern Italy captured by the Turks and a great part of Apulia ravaged: but being called away by war in Asia, a garrison only was left behind, — which at the end of a year surrendered.

"In this year" (Galvan.), Alfonso V. succeeded by John II., "thirteenth" king of Portugal (Camoens iv. 61).

"The same year" (Humb. atl. pict., Clavig. giving 1482), Tizoc succeeded by Ahuitzotl, eighth Mexican emperor.*

"1481 A. D." (Galvan., & Major), by John II. of Portugal, the castle of Mina built, and Diego d'Azambuxa appointed to the command.

About this time, Martin Behaim voyaging to West Africa to procure "malagueta" — (Yule cath. i. 89). A globe was constructed at Nuremberg "in 1492" under his instructions (Stanley edit. Magell. 58).

Amomum grandiflorum of Western Equatorial Africa. A Scitamineous plant: its seeds included perhaps in the "malagueta" procured by Martin Behaim, — being grey or lead-coloured, much less polished than paradise-grains with a totally different flavour, resembling and equalling camphor in warmth and pungency (Lindl.): A. grandiflorum is known to grow in Sierra Leone (J. E. Smith exot. ii. p. 111).

Amomum melegueta of Western Equatorial Africa. Probably included in the "malagueta" procured by Martin Behaim, — for according to Yule cath. i. 88, its seeds continue to be exported from certain parts of the West African coast.

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* *Cheiranthodendron pentadactylum* of Southern Mexico. Called *hand tree* from its flowers resembling the human hand; and a stock planted by a "king." of Toluca at his residence — long continued the only one known, and is described by Cervantes (Humb. ii. 6). Recently, the tree has been found indigenous in Southern Mexico.

Taxodium distichum of Carolina, the Lower Mississippi, and Texas. The deciduous or *bald cypress* is a lofty tree, filling swamps, and known from early times: stocks planted in a garden in Mexico before the Spanish invasion are mentioned by Humboldt (F. A. Mx.); and according to Kunth, the tree grows in the temperate portion of Mexico at the elevation of "870 to 1190." Eastward, "cypress" were seen by Amadas and Barlow in 1584 on Roanoke Island; and stocks eighty feet without a branch, by Strachey on James river: T. distichum is known to grow along the Atlantic as far as 39° at the capes of the Delaware (F. A. Mx.); was observed by myself from about 38° to 33°; by Catesby i. pl. 11, and Elliot, in South Carolina; by Chapman, in "deep swamps, Florida, and northward;" by Darby, in Louisiana and to 34° on Red river; by Short, in Kentucky, 38° being its Northern limit on the waters of the Mississippi according to Nuttall.

"1482 A. D." (voyag. Belg.), Van Ghistele visiting Egypt, found Alexandria one of the most commercial cities in the World: containing resident merchants of all countries, from Barbary, also Spaniards, Catalans, Genoese, Italians, Venetians, Turks, Persians, Tartars, Arabs, and Abyssinians. After proceeding as far as Thebes, he returned; the Egyptian government at this time prohibiting Europeans from going to Abyssinia, or sailing down the Red Sea to Hindustan. — In the following year, Van Ghistele visited Tauris in Persia; also a great commercial city, situated on one of the routes from Hindustan to the Black Sea.

"In this year (= 887 A. H." of Ferisht., Elph.), a naval expedition sent by Mahmud of Guzerat; the pirates of Balsar defeated at sea, and their resort the islands of Jigat and Bet captured.

"1483 A. D." (Alst.), Mohammed II. succeeded by his son Bajazet II., tenth Turkish sultan.

"The same year" (Talvi i), the first *printed Slavonic book;* a missal in Glagolitic letters. — About seven years later, the first printing in Cyrillic letters.

"The same year" (H. H. Wils. transl. Vishn. pur. pref. 24), date of one manuscript of the Vayu Purana.*

1484 A. D. (= "1409 an. jav.," Raffles xi.), Raden Patah or Panambahan Jimbun succeeded at Demak by his son Pangeran Sabrang Lor, second sultan of Java.

"In this year" (Alst. p. 308), Wallachia laid waste by the Turks under Bajazet II.

"Aug. 29th" (Alst., and Nicol.), Sixtus IV. succeeded by cardinal John Baptist Cibo, now Innocentius VIII., fifty-ninth pope. Charles VIII. ruling France; and Richard III., England.

"In this year" (Galvan.), Diogo Caon or James Cam sailing along the African coast as far as the mouth of the Congo, where he erected a pillar of stone; thence to a river near "the Tropicke of Capricorne," setting up other pillars. Returning to the Congo, the king of that country "sent an ambassadour and men of credit into Portugall." From this embassy (according to Gaspar Correa voy. Da Gama i. 1, and Barros), information of countries Eastward as far as India was obtained by John II.

In considering the dimensions of the known World, made "fifteen hours" by Marinus, leaving a deficit of "about eight hours" to complete its spherical shape, Columbus conceived that there must be land Westward: and having already sailed with the Portuguese along the African coast to the Equator, communicated his plan to John II. of Portugal, who instead of accepting, secretly sent one of his own vessels West: the vessel returned without accomplishing any thing, and Columbus hearing of the affair, left Portugal "about the end" of this year (F. Columb. 4 to 12 and 41) for Spain.

"The same year" (Alst.), end of the chronicle of Wernerus.

"1485, Aug. 22d, Monday" (Blair, and Nicol. p. 328), in England, Richard III. defeated and slain in battle at Bosworth; ending the civil war between the "Houses of York and Lancaster." He was succeeded by Henry VII.

In this year (Spreng.), publication at Mayence of the Third edition of the Ortus Sanitatis, under the supervision of Hieronymus of Braunsweig. — Whose work De arte distillandi was published "in 1500."

Hepatica triloba of Northern climates. Called in Britain *noble liverwort* (Prior), in Germany "edel leberkraut" (Trag.) or "gulden klee" (Braunsw.), in France "hepatique" (Nugent): described by Braunsweig, — Brunfels, Lyte i. 40, and observed by Tragus i. pl. 177 in the woods of Germany as well as in gardens; termed "ranunculus tridentatus vernus flore simplici cæruleo" by Tournefort inst. 286; known to grow wild in various parts of Europe (Pers.); and observed by Sibthorp, but the locality not given; by Savi, on the Appenines. Westward, is a frequent vernal flower in North America; observed by myself from 43° along the Atlantic; by Schweinitz to 36° in Upper Carolina; by Elliot, in the upper district of Carolina and Georgia; by Chapman, in "Florida and northward;" by Short, in Kentucky; by Beck, on the Mississippi near St. Louis; by Pursh, from Carolina to Canada, growing according to Hooker as far as 52°; and observed by Drummond at 55° on the Rocky mountains.

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* *Momordica dioica* of Burmah. A climbing Cucurbitaceous vine called in Telinga "agokara" (J. F. Wats.) or "agakara," in Malabar "erimapasel," in Tamil "paloopaghel" (Drur.), in Burmah "sa-byet" (Mason); probably known in Hindustan as early as this date: — observed by Rheede viii. pl. 12 in Malabar; by Graham, "cultivated in the environs of Bombay," the "fruit size of a pigeon's egg, knobbed;" by Roxburgh, Ainslie, hort. beng. 70, Piddington 103, and Wight, as far as Bengal, the young fruit and tuberous roots of the female plant eaten by the natives, the roots also, which are mucilaginous, employed medicinally (Rheede, and Drur.). Eastward, was observed by Mason v. 471 to 747 indigenous in Burmah, its "small muricated" fruit "occasionally eaten by the natives."

Tragopogon pratense of Europe and the adjoining portion of Asia. Called in Britain *goat's beard* (Prior), in Germany "bocks bart" (Trag.); in which we recognize the "barba hircina" of Hieronymus apodix., — and "barbula hirci" of Tragus i. pl. 93: T. pratense was observed by Tragus in the meads of Germany, its root eaten by boys; is termed "t. pratense luteum majus" by Tournefort inst. 477; is known to grow from Britain throughout middle Europe (Thuil., and Engl. bot. pl. 434); was observed by Sibthorp on mount Haemus and around Constantinople.

Pyrola rotundifolia of Northern climates. Called by Turner *winter-green* (Prior), in Germany "winter-grün" or "waldmangolt" or "holtz mangolt" (Trag.): the "winter-grün" is mentioned in the German ed. of the Ortus Sanitatis 316, is termed "pirola" by Hieronymus apodix., or (according to Tragus litt. Brunf.) "pyrola" by Braunsweig lib. de simpl.: — the "betula" prescribed by Gariopontus i. 16 is referred here by Tragus: P. rotundifolia is known to grow from Lapland throughout Northern Europe to the mountains of Switzerland (fl. Dan. pl. 110, Lam. fl. fr., and Wats.); was observed by Tragus in Germany, by Savi on the Appenines; and is known to grow throughout Siberia to Kamtchatka (Gmel., and Pall.). Farther East, was observed by Chamisso on Unalascha; by Drummond, at Fort Cumberland 54° on the Saskatchewan; by Pursh, in Canada; by Chapman, on the mountains of Georgia; by Schweinitz, at 36° in Upper Carolina; by myself, from about 40° to 45° along the Atlantic; by Parry, as far as Five-hawser Bay in Arctic America (Hook.); is known to grow also in Greenland (Wats.); and was observed by Hooker on Iceland.

Antennaria dioica of Northern climates. A Gnaphalioid herb called in Britain *cat's foot* (Prior), in Germany "hasenpfatlin" or "meussorlin" (Fuchs.); and the "pilosella minor" of the Herbarius manuscript — is referred here by Fuchsius pl. 606: A. dioica is known to grow from North Cape throughout middle Europe as far as Switzerland (fl. Dan. pl. 1228, Engl. bot. pl. 267, Pers., and Dec.); and Eastward to the Taurian mountains, Lake Baikal, and throughout Siberia to Bering's Island, Nootka Sound, and 54° to 64° in North America (Gmel., Pall., and Hook.). "A. plantaginifolia," occasionally developing "large lower leaves," appears to have been regarded by Josselyn as an American species, and is given as distinct by Plukenet alm. pl. 348; has been observed by myself along the Atlantic from 45° to 38°, by Schweinitz as far as 36° in Upper Carolina, by Chapman in "Florida and northward," by Short in Kentucky, and by Nuttall on the Arkansas.

Polygonum amphibium of Northern climates. A showy *water peachwort* called in Germany with the bistort "naterwurtz," or by herbalists "colubrina" and "serpentaria," and mentioned in the Old manuscript Herbarius — (Fuchsius pl. 774): P. amphibium is termed "phyllitis lacustris" by Valerius Cordus (Spreng.), "persicaria salicis folio potamogeton angustifolium dicta" by Tournefort inst. 509: is known to grow in and along the margin of pools throughout Northern and middle Europe (fl. Dan. pl. 282, Curt. lond. iv. pl. 28, and Pers.); was observed by Brotero in the Tagus, by Decandolle in France, by Sibthorp in Asia Minor in the Nicæan Lake and around Constantinople; was received by Bieberstein from Tauria; by Richard from Abyssinia, and by E. Meyer and Drège from Austral Africa (A. Dec.). Westward, was observed by Hooker on Iceland; by Michaux, in Lake St. John's in Canada; by Drummond at 54° near Fort Cumberland; by myself, along the Atlantic from 43° to 40°; by Short, in Kentucky; and according to Pursh grows along the Ohio and Mississippi. Its root-like stems according to Lindley are substituted in France for sarsaparilla.

Cheiranthus annuus of the West Mediterranean countries. Called in France "quarantain" from growing up and flowering within forty days (Pers.): described by Braunsweig f. 43 — (Spreng.), and known to grow in maritime situations in Southern Europe (Pers.).

Gentiana cruciata of the mountains of middle Europe. Called in Germany "modelgeer" or "creutzwurtz" (Trag.); in which we recognize the "creutz wurtz" of Hieronymus apodix. or Braunsweig: — G. cruciata was observed by Tragus i. pl. 83 in Germany, much used medicinally, and sometimes called "heil allen schaden;" is described also by Gesner; is termed "tretorrhiza" by Renealmi pl. 73; and is known to grow on wooded mountains from France to Austria (Jacq. austr. pl. 372, and Pers.).

"In this year" (Burm. hist., and Mason 65), accession of Zeyathura as "twenty-ninth" king of Toungoo. He built a new city for his seat of government; — to which the name of the old one, "Toungoo," has been transferred.

"In this or the following year" (Galvan., and Spreng.), Alonso Aveiro following the African coast as far as Benin.

Piper Afzelii of Western Equatorial Africa. Specimens of *Guinea cubebs* or "rabo pola" or "pimenta de rabo, pepper with a taile," brought home by Alonso Aveiro, "the first of that kinde seene in Portugall" — (Galvan.): "cubebs from Guinea" are mentioned also by Smith (in Rees cycl.), Nees, Ebermaier, and others: P. Afzelii, the plant in question, is known to grow at Sierra Leone, but "the quality of its fruit has still to be ascertained" (Lindl.).

"1486 A. D." (Churchill coll.), Bartholemew Diaz following the African coast "one hundred and twenty leagues" farther than any before him, discovered mountains which he called "Sierra Parda."

Passing a bay beyond, called by him "De los vaqueros" on account of the great herds of *cattle*, he touched at a small island named by him "Santa Cruz;" entered the mouth of a river, named by him "Del infante;"—and after sailing some distance Eastward, returned, and "May 1487" (Humb. cosm. iv.) reached the Southern point of the continent, which he named cape "Tormentoso;" a name afterwards changed to cape of "Good Hope."

The "vaqueros" having herds of cattle were of course *Hottentot* tribes: the animal having reached them through the neighbouring Caffers, who call a *cow* "go"—(Thunb. trav. iv. 10). The Hottentots are further described by Thunberg as not cultivating the soil; carrying on neither war nor commerce with remote neighbours; having no kind of money but exchanging articles directly, or bartering; having no calendar nor new year's day, but reckoning their age by the annual flowering of certain bulbous plants; possessing two musical instruments, the "kora" and "rabekin;" burying old people alive; the custom of *circumcision* in his day becoming obsolete.

"The same year" (Humb. iii. 8), on the Mexican table-land, building of the stone teocalli, or pyramidal mound, by the emperor Ahuitzotl.

First edition of the "Margarita philosophica," an encyclopædic work by Father Reisch (Humb. cosm.).

1487 A. D. (="1412 an. jav.," Raffles xi.), Pangeran Sabrang Lor succeeded at Demak by his brother Pangeran Tranggana, third sultan of Java.

"May" (Major ind. voy. p. lxxxii, and M. Russel 127), under instructions from John II. of Portugal Pedro de Covilham leaving Lisbon for Egypt and the Red Sea. From Aden he proceeded to Calicut and Goa, being the "first" Portuguese "who had sailed on the Indian Ocean."—Crossing to Sofala, he obtained information respecting the Southern termination of Africa, and returning as far as Egypt transmitted home the intelligence, That ships from Guinea on arriving "in the Eastern ocean, their best direction must be to enquire for Sofala, and the Island of the Moon" (Madagascar). After a visit to Ormuz, Covilham entered Abyssinia, where he was cordially received by king Iscander and conducted to the royal residence at Shoa, but was either persuaded or compelled to remain in the country: he married, held highly important posts, welcomed his countrymen on the arrival of an embassy "in 1525," and died after a residence of "thirty-three years."

"In this year" (Markham p. liii), accession of Hosein Meerza as sultan at Herat in Persia. He encouraged Literature, and his court was frequented by the poets Jami and Hatafi, and the historians Mirkhond and Khondemir.—He died "in 1506."

His grand vizier Ali Shir Beg composed a poem in the Toorki language, also wrote a complete prosody—(Markham p. liii).

"The same year" (Lubke and Lutrow), in Spain, building of the chapel of Hernandez de Velasco in the cathedral at Burgos.

"In this year" (Markham edit. Ciez. p. 140), Cacha, last scyri of Quito defeated and slain in battle by the Inca Huayna Capac; who married his only daughter Paccha, annexing the country to Peru.

Nectandra cinnamomoides of the Eastern slope of the Equatorial Andes. The *American cinnamon*, a Lauraceous tree, cultivated in the region around Quito as early probably as this date; its dried calyx brought also from forests to the Eastward and used as a spice, making a warm cordial drink—(Ciez. xl.): N. cinnamomoides was found by Gonzalo Pizarro "in 1539" growing wild in the district of Quijos, East of Quito, this and El Dorado being the objects of his expedition (Ovied., Schomb. edit. Ralegh, and Markham); but according to Garcilasso de la Vega, the product of the wild trees is inferior to that obtained from cultivation by the natives: N. cinnamomoides was observed by Humboldt and Bonpland n. g. ii. 169 cultivated about Mariquita, substituted for cinnamon in New Granada, and called "canela" (Lindl.). From transported specimens, is termed "cinnamomum sylvestre americanum" by Seba thes. ii. pl. 84.

"1488 A. D.='houng-tchi,' 1st year of Hiao-tsoung-king-ti" or Hiao-tsoung II., "of the Ming" or Twenty-third dynasty,*—(Chinese chron. table).

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* *Salacia Sinensis* of Tropical China. A small Hippocrateaceous tree called in Tagalo "matang-olang" (Blanco); and from early times, its insipid berries eaten:—received by Linnæus from China; and observed by Blanco in Malinta on the Philippines.

Munchausia speciosa of Tropical China and the Philippines. A beautiful flowering tree called in Tagalo "banaba" (Blanco); and from early times, its tough durable timber much used:—observed by Blanco frequent on the Philippines; is known to grow also in China (Pers.). From transported specimens, is termed "munchhausia speciosa" by Linnæus.

Paspalum villosum of the Philippines and Japan. A grass two feet high, called in Tagalo "parag-is" (Blanco); and from early times, its root used by women medicinally:—observed by Blanco on the Philippines.

As early perhaps as this year (Dutch mem. emb., and Stanley edit. De Morga 18), the Chinese expelled from the Philippines by the natives. — They continued however to come in their ships and trade.

As early as this year, Nicolaus Leonicenus writing, — He is mentioned by Hermolaus Barbarus, and died in his hundredth year "in 1524" (Spreng.).

Ammania verticillata of Equatorial Africa. The "corneola" seen by Leonicenus near Ferrara, used for dyeing green, and supposed by him to be the "lysimachia," — may be compared with the "cornelia verticillata" seen in Italy by Arduino ii. pl. 1, and referred here by Lamarck pl. 77. "A. Ægyptiaca" of Willdenow hort. berol. i. 6, observed by Delile pl. 15 in the rice grounds of Egypt, may also be compared.

"1489 A. D." (Alst.), end of the chronicle of Matthias Palmerius. Hermolaus Barbarus writing. — He published his castig. Plin. "in 1492," and died "in 1493."

Hibiscus (*Abelmoschus*) *moschatus* of Tropical Eastern Asia. Called in Tagalo "castoli" or "castio castiogan" or "dalupan," in Pampango "castocastolian," in Bisaya "ducum" or "maricum" or "maropoto" or "sapinit" (Blanco), in Burmah "ba-lu-wa" (Mason), in Tamil "kathe-kasturi" or "kasturi-venday," in Telinga "kasturi-benda," in Bengali "mushak-dana," on the Deccan "mushk-bhendi" (Drur.), in Egypt "hab el-mosk," musk grains: the "rosam moscheuton" of Hermolaus Barbarus — may be compared: A. moschatus was observed by Alpinus, and Delile, in the gardens of Egypt; and according to Lindley, the "musky seeds" are "considered cordial and stomachic and by the Arabs mixed with coffee." Eastward, A. moschatus was observed in Hindustan by Rheede ii. pl. 38, Roxburgh, Wight, and by Graham "in gardens pretty common." Farther East, is described by Mason v. 418 and 505 as one of the "most common indigenous plants" in Burmah, its seeds "said to be an antidote to snake bites," and the mucilage used in clarifying sugar: was observed by Blanco in the Philippines, its seeds used medicinally by the natives. By European colonists, was carried to the West Indies (Cav. iii. pl. 62, and Pers.).

Euphrasia lutea of the West Mediterranean countries. The "euphrasia" is described by Hermolaus coroll. iii. 10 as having "luteolos" yellowish flowers — (Fuch. 91): E. lutea is described by Morison iii. pl. 24; is termed "e. laevis" by Gatereau; was observed by Crantz, and Jacquin pl. 398, in Austria; and is known to grow in arid mountainous situations in other parts of Southern Europe and in Barbary, the flowers yellow (Pers.).

Gypsophila? saxifraga of middle Europe. The "florem gariofillum" by some according to Hermolaus enumerated among "saxifragias," — may be compared: G. saxifraga is termed "dianthus saxifragus" by Linnæus, "tunica saxifraga" by Scopoli; and is known to grow in France, Switzerland, and Austria (Cav., Pers., and Steud.).

"1490 A. D." (= 26th year of Tsutsi-Mikaddo, ann. Jap. transl. Tits., and art de verif.), death of Josijmassa, cubo of Japan.

As early probably as this year, islands discovered by the Japanese navigator Osaska-wara. They proved uninhabited and received the name of "Mou-nin" (Bonin) Islands. Among the productions, the tree called "nan-kin-faze (*Croton sebiferum*)," the "arbre de cire" (. . . .), trees too large for a man to clasp and very lofty with the wood hard and fine (. . . .), lofty trees resembling the "siouro (tsoung-liu or *Chamærops excelsa*)," the tree whose nuts are called in Chinese "pe-louan-tsu" (. . . .), the "katsiran" (. . . .), "bois de sandal rouge" (. . . .), the "fou-mou" (. . . .), the "camphrier" (. . . .), "figues caques" of the mountains (*Ficus* . . . .), lofty trees with leaves resembling those of the "lierre" (*Aleurites triloba?*), "cannelliers" (*Cinnamomum* . . . .), and "muriers" (*Broussonetia papyrifera*), and among more humble plants the "Smilax china" called "san-ki-rei" (*Smilax* . . . .), the "to-ki" (. . . .), and a medicinal herb called "assa-ghiou-kwa" (. . . .), — are enumerated in the San-kokf (transl. Klapr.). As a penal colony was established by the Japanese on these islands, the "cocotiers" (*Cocos nucifera*) and "arbre qui porte l'areca" (*Areca catechu*) may have been subsequently introduced. According to Kaempfer i. 4, the giant *crab* "four to six feet long" occurs around these islands.

"A few years before the" Spanish conquest (De Morga 307), "a few natives of the island of Borneo began to come with their trade to" Luzon, — "especially to the towns of Manila and Tondo; and the people of the two islands intermarried:" the Borneo people were "Mussulmans," and "were introducing their sect amongst these natives, giving them short prayers and ceremonies and forms to be observed, by means of some gazizes whom they brought with them: and already many, and the greatest chiefs, were beginning (although by piecemeal) to become Muslims, circumcising themselves, and taking Muslim names."

"In this year" (Humb. cosm. iv.), a *comet* observed in Mexico, and recorded in a manuscript written (or painted) "at least a quarter of a century before the arrival of the Spaniards." The same comet is "mentioned as having been observed in December of that year only in the Chinese comet-register."

"In this year" (Galvan.), by John II. of Portugal, Gonzalo de Sousa sent with three ships to convey "home the ambassadour of Congo." On their arrival, the king of Congo was "very glad," and "yeelded himselfe and the greater part of his realme to be baptized."

"1491 A. D." (Blair), the study of the Greek language brought into England by William Grocyn.*

"1492, Aug. 11th" (Alst., and Nicol.), Innocentius VIII. succeeded by cardinal Roderic Borgia, now Alexander VI., sixtieth pope. James IV. ruling Scotland.

Linum catharticum of Europe and the adjoining portion of Asia. Called in Britain *purging flax* or *fairy flax* or *dwarf flax* or *mill-mountain* from "chamælinum montanum" and the Greek "hamailinŏn" — (Prior): L. catharticum is termed "l. pratense foliis exiguis" by Tournefort inst. 340; and is known to grow throughout middle Europe as far as Britain (Blackw. pl. 368, and Pers.). Eastward, was observed by Sibthorp in the environs of Constantinople. The plant according to Lindley is "powerfully, but as it seems, not dangerously cathartic."

Spergula arvensis of Europe and Northern Asia. Called in Germany "spark" (Grieb), in France "spurrie" (Cotgrave) or "espargoutte," in Britain *spurry*, — from which word according to Lyte i. 38 the Latin "spergula" was formed (Prior): S. arvensis is described by Cornelius Petrus (Spreng.), and Dodoens 537; is termed "alsine spergula dicta major" by Tournefort inst. 243; was observed by Desfontaines in Barbary; and is known to occur as a weed throughout middle and Northern Europe as far as Lapland and Iceland (fl. Dan. pl. 1033, Hook., and Wats.). Eastward, was observed by Sibthorp, and Chaubard, in cultivated ground from the Peloponnesus to Caria and Constantinople; is known to occur also in Siberia, as far as the Altaian mountains and the river Yenisei (Ledeb.). By European colonists, was carried to Madeira (Lem., and A. Dec.); to North-east America, where it continues a weed in grain-fields as far even as the Assiniboin and Columbia rivers (Hook.); to Austral Africa (Drège); and to Ceylon, where it was observed by Gardner naturalized in one locality on the mountains.

Sagittaria sagittifolia of Northern Europe and Asia. Called in Britain *arrow head* (Prior), in France "flèche d'eau" (Nugent), in Germany "pfeilkraut," in Northern Italy "saettaria" (Lenz), and known from early times: — termed "sagitta aquatica major latifolia" by C. Bauhin pin. 194, and though unknown in Greece proper, was found by Grisebach in Thrace; by Hohen, and Ledebour, as far East as Lenkoran and the Altaian mountains; by Gmelin, from the Irtisch to Kamtchatka. Westward, seems unknown in Barbary, Sicily, and Southern Italy (A. Dec.); but was observed in Northern Italy by Scopoli, and Lenz; by Brotero, in Portugal; and is known to grow as far as Lapland (Linn.), Finland and Casan in Russia (Lam. fl. fr., Fries, and Wirtz).

Turritis glabra of Northern climates. Called *tower-mustard* from the tapering inflorescence something in the form of a Dutch spire — (Lobel kruydb. p. 262, and Prior); described also by Thalius 16 (Spreng.); termed "t. foliis inferioribus cichoraceis cæteris perfoliatæ" by Tournefort inst. 224; and known to grow throughout middle and Northern Europe as far as Sweden (flor. Dan. pl. 809, Curt. lond. iv. pl. 47, and Pers.). Eastward, observed by Sibthorp, and Chaubard, on the mountains of Greece; and known to grow in Northern Asia (Wats.). Farther East, observed by Mertens at Norfolk Sound on the American coast; occurring also from the Rocky mountains to Hudson's Bay and as far North as Lat. 64° (Hook.); and along the Atlantic as far South as Lat. 42°.

Arabis hirsuta of Northern climates. Known to European writers as early probably as this date: — described by Bauhin prodr. pl. 42, Linnæus, and Jacquin rar. pl. 126; and known to grow wild throughout middle Europe as far as Sweden and Ireland (Pers., and Wats.). Eastward, observed by Sibthorp, and Chaubard, in shady situations in Southern Greece and in the environs of Constantinople; and by Thunberg, in Japan and called "inu nassuna," naturalized nassuna. Farther East, observed by Chamisso on the opposite American coast at Unalascha; known to grow at the mouth of the Columbia, on the Rocky mountains, at Hudson's Bay, and from as far North as Lat. 68° (Hook.) throughout Canada to our Northern States, the Alleghanies, and even Kentucky (Short, A. Gray, and Chapm.).

Melampyrum arvense of the Caucasian countries? Known as a weed in middle Europe as early probably as this date: — described by Clusius, and Bauhin; termed "m. purpurascente coma" by

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* *Calla palustris* of Northern climates. An Aroid growing in wet ground, and the "arona" figured in the edition of Ortus Sanitatis for 1491 is referred here by Pritzel thes. — C. palustris was observed by Fuchsius pl. 844 in Germany; by Decandolle, in Alsace on the Rhine; by Linnæus, in Lapland, and bread prepared from its root highly esteemed and called "missebrœd" (Lindl.); by Gmelin, growing throughout Siberia. Westward, was not found by Lapylaie in Newfoundland, but has been observed by Michaux in Canada; by myself, from 48° on the Lower St. Lawrence to 42° along the Atlantic; by Torrey, as far as 41°; by Pursh, from Canada to Pennsylvania; by Drummond, at 54° near Fort Cumberland; and was received by A. Gray from Wisconsin.

Tournefort inst. 173; known to grow in cultivated ground as far North as Denmark, but in Britain, where it is called *cow-wheat*, first noticed by Dillenius (fl. Dan. pl. 911, A. Dec., and Prior). Eastward, observed by Sibthorp in cultivated ground around Constantinople; but around Caucasus occurring apparently in wilder situations (C. A. Mey., Gœbel, and Koch).

Sedum reflexum of Europe and the adjoining portion of Asia. Called in Britain *stonor* or *stonehore* or *trip madam*, in France "trippe madame" (Prior), in Belgium "tripmadame," and from early times eaten there in salads — (Linn. fl. suec.): termed "s. minus luteum ramulis inflexis" by Tournefort inst. 263, and is known to grow in the woods of middle Europe (Pers.); was observed by Sibthorp around Constantinople. In Sweden, was seen by Linnæus in a garden at Upsal, recently introduced and not as yet flowering; and in Britain (Engl. bot. pl. 695) is regarded by Watson, and Bromfield, as probably not indigenous (A. Dec.).

Scutellaria galericulata of the marshes of Northern climates. Called in Britain *skullcap* or *helmet flower* (Prior), and known from early times: — termed "lysimachia galericulata" by Dalechamp 1060, "cassida palustris vulgatior flore cæruleo" by Tournefort inst. 182, and known to grow from Lapland to Northern Spain and throughout Siberia (Bauh. hist. iii. 435, Rivin. mon. 76, fl. Dan. pl. 637, Curt. lond. iii. 36, and Benth.): observed by Linnæus along lakes and streams in Lapland and Sweden; by Decandolle, in France; by Savi, in Etruria; by Sibthorp, around Constantinople; by Bieberstein, on Caucasus; by Jacquemont, at Cashmere; by Bunge, along the Altaian mountains and in Dahuria Westward, according to Hooker, grows from near 66° on the Mackenzie (A. Dec.) at Fort Franklin throughout Canada; was observed by Lapylaie at 49° on Newfoundland; by myself, along the Atlantic to 42°; by Collins to 40°, and by Nuttall in New Jersey; by Chapman, in "North Carolina;" by Short, in Kentucky; by Drummond, at 54° near Fort Cumberland; and by Douglas, on the Northwest coast (Benth.).

Dentaria bulbifera of Europe and the adjoining portion of Asia. Called in Britain *tooth-cress* or *tooth-violet* (Prior), and known from early times: — termed "dentaria tertia baccifera" by Clusius hist. ii. 121, "d. heptaphyllos baccifera" by C. Bauhin pin. 322, and Tournefort inst. 225, and is known to grow in woods from 60° in Sweden throughout middle Europe (fl. Dan. pl. 361, Engl. bot. pl. 309, Pers., and A. Dec.); was observed by Linnæus in Sweden; by Hœft, at 52° in Russia, in Koursk; by Sibthorp, on mount Hæmus; by Bieberstein, on Caucasus.

Spiranthes autumnalis of Europe and the adjoining portion of Asia. Called in Britain *lady's tresses* (Prior), and known from early times: — described by Brunfels 104, and Tragus 298 (Spreng.); termed "orchis spiralis alba odorata" by Tournefort inst. 433, "ophrys spiralis" by Linnæus, and known to grow from Denmark throughout middle Europe, also in Siberia (fl. Dan. pl. 387, Curt. lond. iv. pl. 59, and Pers.): observed by Sibthorp, and Chaubard, from the Peloponnesus to mount Athos and Constantinople.

Epipactis nidus-avis of Europe and the adjoining portion of Asia. A leafless orchid called in Britain *bird's-nest* from its matted roots (Prior), and known from early times: — mentioned by Tragus 298 (Spreng.); termed "neottia" by Dodoens pempt. 553, "nidus avis" by Lobel pl. 195, "orchis abortiva fusca" by C. Bauhin pin. 86, "ophrys nidus avis" by Linnæus, and known to grow in deep shade from Sweden throughout middle Europe (Tourn. inst. 438, fl. Dan. pl. 121, Engl. bot. pl. 48, and Pers.): observed by Rudbeck elys. ii. pl. 218, and Linnæus, in Sweden; by Haller pl. 37, in Switzerland; and by Chaubard, in the Peloponnesus.

Sanguisorba officinalis of Europe and the adjoining portion of Asia. Called in Britain *burnet blood-wort* (Prior), and from early times its root used for stanching blood: — termed "pimpinella sanguisorba major" by Matthioli comm. 103, C. Bauhin pin. 160, and Tournefort inst. 156, "pimpinella sylvestris s. sanguisorba major" by Dodoens pempt. 105, and known to grow throughout middle Europe (fl. Dan. pl. 97, Engl. bot. pl. 1312, and Pers.); observed by Linnæus in the meads of Gothland, also in gardens, and its root sold in drug-shops under the name of "pimpinella Italica;" by Sibthorp, and Chaubard, growing throughout the Peloponnesus.

Sagina procumbens of Northern climates. Called in Britain *pearl-wort* (Prior), and known from early times: — termed "alsine minima flore fugaci" by Tournefort inst. 243, and Ray suppl. 501, and known to grow from Lapland to the Mediterranean (Curt. lond. iii. pl. 12, Pers., and Wats.): observed by Linnæus in Sweden, frequent in sterile pasture-land; by Sibthorp, frequent on the Greek islands; by Thunberg, in Japan. Westward, by Hooker in Iceland; by Lapylaie, from 52° in Newfoundland; by myself, occurring as an introduced plant around Salem and sometimes in the city streets, but according to A. Gray is wild in "springy places, Maine to Pennsylvania;" grows according to Hooker on the plains of the Columbia and along the Northwest coast, was observed by myself abounding and clearly indigenous along the shores of Puget Sound. Has also been found in South America (Wats.), perhaps introduced.

Cardamine amara of Europe and the adjoining portion of Asia. Called in Britain *bitter cress* (Prior), in Sweden "backekrassa" (Linn.), and known from early times: — termed "nasturtium

aquaticum majus et amarum" by C. Bauhin pin. 104 and prodr. 45, "c. flore majore elatior" by Tournefort inst. 214, "c. nasturtiana" by Thuillier, and known to grow in woods and watery places throughout Northern and middle Europe (Curt. lond. iii. pl. 39, and Pers.): observed by Linnæus in Sweden; by Haller 558, in Switzerland; by Villars iii. pl. 39, in Dauphiny; by Sibthorp, in wet woods on mount Hæmus.

Lathyrus latifolius of Europe and the adjoining portion of Asia. Called in Britain *everlasting pea*, in France "pois eternel," and known from early times: — mentioned by Matthioli 690 (Spreng.); termed "l. major latifolius flore purpureo speciosior" by Bauhin hist. ii. 303, and known to occur along hedges in middle and Southern Europe (C. Bauhin pin. 344, Tourn. inst. 395, fl. Dan. pl. 985, Engl. bot. pl. 1108, and Pers.): was observed by Linnæus in Sweden, along hedges on the island of Muson; was already in Britain in the days of Ray syn. 319; escapes sometimes from the gardens around Paris and springs up spontaneously (Coss. and Germ.), and occurs in Southern France as far as the department of Calvados (A. Dec.); was observed by Sibthorp from the Peloponnesus to the banks of the Bosphorus. By European colonists, was carried to Northeast America, where it continues in gardens (A. Gray).

Trifolium agrarium of Europe and the adjoining portion of Asia. Called in Britain *hop clover* (Prior), in Sweden "jordhumble" or "skogshumble" or "gullkulla" (Linn.), and known from early times: — termed "t. pratense luteum fœmina flore pulchriore sive lupulino" by Bauhin hist. ii. 381, "t. montanum lupulinum" by Tournefort inst. 404 "t. aureum" by Pollich pat. ii. 344, and known to grow throughout middle Europe (C. Bauhin prodr. 140, Barrel. pl. 1024, fl. Dan. pl. 558, and Pers.): observed by Linnæus in Sweden; by Roth ii. 2. 207, in Germany; by Sibthorp, on mountains from Crete and the Peloponnesus to Caria. By European colonists, was carried to Northeast America, observed by myself naturalized in Western Massachusetts, and according to A. Gray, occurs also in Pennsylvania.

Pyrola secunda of the Subarctic forest. Called in Britain *yevering* or *yethering bells*, in medieval Latin "tintinabulum terræ," from its flowers resembling the string of little bells struck with a hammer in medieval pictures of king David — (Prior): the plant is termed "ambrosia montana" by Dalechamp pl. 1148, "pyrola secunda tenerior" by Clusius pan. 506, "p. folio mucronato serrato" by C. Bauhin pin. 181, and Tournefort inst. 256, is known to grow from Lapland throughout Northern Europe (fl. Dan. pl. 402, Engl. bot. pl. 517, and Pers.), and on the Pyrenees and Swiss Alps (Dec.): was observed by Linnæus in Lapland and Sweden; by Sibthorp, in woods on the Bithynian Olympus; by Bieberstein, on Caucasus; by Gmelin iv. pl. 56, frequent throughout all Siberia. Westward, by Hooker in Iceland; is known to grow in Greenland (Wats.); was observed by Lapylaie in Newfoundland; by myself, from 47° 30′ on the Lower St. Lawrence to 40° in peninsular New Jersey; by Drummond, at 54° on the Saskatchewan; by E. James, on the Rocky mountains; by Chamisso, around Elscholtz Bay on the Pacific; by Mertens, at Norfolk Sound.

Lychnis viscaria of Europe and the adjoining portion of Asia. Called in Britain *catch-fly* from its glutinous stalks (Prior), in Sweden "tjär-ört" or "bekblomster" (Linn.), and known from early times: * — termed "l. sylvestris quarta" by Clusius hist. i. 289, "l. s. viscosa rubra angustifolia"

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* *Pilularia globulifera* of Northern climates. Called in Britain *pill-wort* (Prior), and known from early times: — termed "graminifolia palustris repens vasculis granorum piperis æmulis" by Ray hist. 1325, and Morison iii. 15. pl. 7, "p. palustris juncifolia" by Vaillant paris. pl. 15, and known to grow throughout middle Europe (Dill. musc. pl. 79): observed by Linnæus in Scania, in pasture-land subject to river-inundation. Westward, this or an allied species was observed by Nuttall in the Arkansas.

Agrostis vulgaris of Northern Europe and Asia. Called in Britain *fiorin* from the Erse "fearh" grass — (Prior): A. vulgaris is described by Linnæus (Wahl.); and is known to grow from Switzerland throughout middle and Northern Europe as far as Lapland and Iceland (Hoffm. germ., Pers., Hook., and Wats.). By European colonists, was carried to Northeast America, where it has become abundantly naturalized, has been observed by myself from Lat. 48° on the Lower St. Lawrence to 41°, by Short in Kentucky, and by Nuttall along the Arkansas; and to St. Helena (Kunth).

Botrychium lunaria of Northern Europe and Asia. A fern called in Britain *moon-wort* from the semilunar segments of its frond, giving rise in former times to the same superstition about horseshoes — (Brande pop. antiq., and Prior): B. lunaria is described by Fuchsius pl. 182, Dalechamp p. 1313, and Columna phyt. pl. 18; and is known to grow throughout middle and Northern Europe.

Aspidium thelypteris of Northern climates. Called in Britain *marsh fern* (Prior), and known from early times: — termed "filix mollis s. glabra vulgari mari non ramosæ accedens" by Bauhin hist. iii. pl. 731, "filix minor palustris repens" by Ray angl. iii. 122, and known to grow throughout Northern Europe (. . . .): was observed by Linnæus in Sweden, as far as Upland. Westward, by myself in bogs and marshes from 46° near Montreal to 40° along the Atlantic; by A. Gray, "common" in central New York; by Chapman, as far as Florida.

Rhodomenia and *Halymenia*. Seaweeds called in Britain *dulse*, from the Gaelic "duillisg" water-leaf — (Prior).

by C. Bauhin pin. 205, and Tournefort inst. 337, and known to grow from Sweden throughout middle Europe (fl. Dan. pl. 1032, Engl. bot. pl. 788, and Pers.): observed by Linnæus ornamenting hills and waysides in Sweden; by Sibthorp, in woods on mount Hæmus.

Hippocrepis comosa of Europe and the adjoining portion of Asia. Called in Britain *horseshoe vetch* or *unshoe-the-horse*, and in Italy "sferra-cavallo," from its horseshoe-shaped legumes supposed on the doctrine of signatures to have that power — (Prior): H. comosa is described by Tabernæmontanus ii. p. 230, and Columna ecphr. i. pl. 301; is termed "ferrum equinum germanicum siliquis in summitate" by Tournefort inst. 400; was observed by Garidel pl. 34 at Aix; and is known to grow throughout middle Europe as far as Britain (Lam. fl. fr., Pers., and Engl. bot. pl. 31). Eastward, was observed by Sibthorp on mount Athos.

Myosotis scorpioides of Northern Europe and Asia. Called in Britain *scorpion-grass*, — and only by this name in the days of Lyte, its current name "forget-me-not" having been transferred subsequently to 1821 (Prior): M. scorpioides is termed "lithospermum palustre minus flore cæruleo" by Tournefort inst. 137; and is known to grow throughout middle and Northern Europe as far as Sweden and Iceland (fl. Dan. pl. 583, Roth germ., Pers., Hook., and Wats.). Eastward, was observed by Sibthorp along alpine rills in Greece; and is known to grow on Caucasus (Bieb.).

Asperula cynanchica of Europe and the adjoining portion of Asia. Called in Britain *squinancy* and in France "esquinancie," from its efficacy in quinsy — (Prior): A. cynanchica is described by Caesalpinus vi. 46 (Spreng.); is termed "rubeola vulgaris quadrifolia lævis floribus purpurascentibus" by Tournefort inst. 130; was observed by Forskal near Marseilles; and is known to grow throughout middle Europe as far as Britain (Lam. fl. fr., Pers., and Engl. bot. pl. 33). Eastward, was observed by Sibthorp near Smyrna and Constantinople.

Cystopteris fragilis of Subarctic climates. Called in Britain *bladder fern* (Prior), and known from early times: — termed "filix pumila saxatilis secunda" by Clusius pan. 706, known to grow throughout Northern Europe (Pluk. phyt. pl. 180, and Engl. bot. pl 1587) as far even as North Cape, and in Siberia (Hook.): observed by Linnæus in dry stony places in Lapland and Sweden; by Sibthorp, on mount Athos and the Bithynian Olympus. Westward, grows according to Hooker in Greenland, throughout Canada to Slave lake and the Rocky mountains or from 64° to 54°, also in Virginia; according to A. Gray, on "shaded cliffs, common" in central New York, and "very variable;" according to Chapman, on "moist rocks on the mountains of North Carolina."

"In this year" (Alst. p. 309 and 424, and Wilk. theb. and eg. p.), Granada captured by king Ferdinand, and the Moors or Muslims compelled either to leave Spain or embrace Christianity. The Jews were at the same time banished, — so many resorting to Palestine, that Spanish became the Jews' language there, and has so continued to the present day: a circumstance that in the absence of historical record might have proved inexplicable.

Vella annua of the Mediterranean countries. Perhaps indigenous on the Mediterranean border of Egypt; — where it was observed by Delile, growing spontaneously. Observed also by Sibthorp in Greece, but the locality not given. Westward, as observed by Clusius in Spain, is termed by him "nasturtium sylvestre valentinum;" is generally regarded as a Spanish plant (Trew pl. 10, Lam. ill. pl. 555, and Pers.), but has been found growing in England (Engl. bot. pl. 1442).

Hesperis ramosissima of the Northern border of the Desert. Indigenous in Egypt, — where it was observed by Delile around the pyramids at Sakara. Farther North, observed by Gittard on the coast of the Peloponnesus (Chaub.); and Westward, by Desfontaines ii. pl. 161 in the maritime sands of Algeria.

Raphanus lyratus of the East Mediterranean countries. Indigenous in Egypt and called there "rechad el-bar," wild cress: — observed by Lippi, Forskal, and Delile, in both Upper and Lower Egypt, growing on the river-flat. Farther North, observed by Labillardiere in Syria; received from Crete by C. Bauhin prodr. 30, and Tournefort cor. 17; and observed by Bory in Southern Greece.

Althæa Ludwigii of "Sicily." Known in Egypt as early perhaps as this date; — observed there by Delile, in cultivated ground near Bubastis; and Westward, said to grow in Sicily (Linn., Cav. ii. pl. 30 and v. pl. 423, and Pers.).

Sida spinosa of Equatorial Africa. Known in Egypt as early probably as this date; — observed there by Forskal, and Delile, as far North as Cairo, but no native names are given: from transported specimens, described by Commelyn hort. i. pl. 2. Southward, known to grow in Yemen, Abyssinia, Senegambia, the Cape Verd Islands, and Southeastern Africa (Pers., A. Rich., Guill., and E. Mey.). Eastward, has no Sanscrit name, but was observed in Hindustan by Roxburgh, and Wight (Pidd., and A. Dec.). By European colonists, carried to the Mauritius Islands (Bojer); and to our Middle and Southern States, where it occurs in waste ground from Philadelphia to Florida and Arkansas (Torr. and A. Gray).

Sida mutica of Equatorial Africa. Called in Nubia "gergydan;" — and observed by Delile in Upper Egypt, as well as in gardens at Rosetta.

Cissus rotundifolia of the mountains of Yemen. Called in Egypt "oudneh roumy;"—and observed there in gardens by Delile. Farther South, observed by Forskal p. 35 among the mountains of Yemen, frequent and called "hælæs" or "halka," the leaves cooked and eaten though very sour.

Psoralea Palæstina of Syria. Known in Egypt as early perhaps as this date;—observed there in a garden at Cairo by Delile; and known to grow wild in Palestine (Linn., Jacq. hort. ii. pl. 184, Pall., and Pers.).

Potentilla supina of middle Europe and the adjoining portion of Asia. Known in Egypt as early probably as this date;—but introduced and only naturalized on the river-flat and islets of the Nile near Cairo, where it was observed by Forskal, and Delile. Farther North, observed by Sibthorp on the Bithynian Olympus; and known to grow in Siberia (Pers.). Westward, termed "pentaphylloides supinum" by Tournefort inst. 298; known to grow in Austria, Germany, and France (Crantz, Lam. fl. fr., and Pers.); and from transported specimens described by Plukenet phyt. pl. 106.

Kalanchoe Aegyptiaca of the mountains of Yemen. Called in Egypt "ouedneh;"—and observed there in gardens by Forskal, Delile, and Clot-Bey. Farther South, observed by Forskal p. 89 in its wild state on mount Melhan in Yemen, and called there "odejn." From transported specimens, described by Plukenet alm. pl. 228.

Scabiosa prolifera of the Mediterranean countries. Called in Cyprus "sitōthōri;"—observed there in cultivated ground by Sibthorp; and received from Egypt by Willdenow. Westward, described by Hermann parad. pl. 125; termed "s. stellata annua prolifera" by Tournefort inst. 465; and known to grow in Barbary (Pers.).

Teucrium marum of Southern Europe.—Described by Matthioli comm. p. 537, Bauhin iii. 243, and Ludwig ect. pl. 14; and observed by Clusius in Spain. Eastward, observed by Gittard in Southern Greece, on mountains at Armyros (Chaub.); and according to Clot-Bey, recently introduced from the French gardens into Egypt.

Celsia Orientalis of the East Mediterranean countries.—From transported specimens, described by Zanoni 34 (Spreng.), and Linnæus; termed "verbascum orientale sophiæ folio" by Tournefort cor. 8. In its wild state, observed by Sibthorp pl. 605, and Chaubard, in Southern Greece and on the Greek islands; and known to grow in Cappadocia and Armenia (Lam. ill. pl. 532, and Pers.).

Celosia margaritacea of Hindustan and Burmah. Called in Japan "goofits" or "ino kadfits" (Thunb.), in Tagalo "candayohan" or "quindayohan" (Blanco), and known in Egypt as early probably as this date;—observed there by Delile, growing spontaneously around Cairo; and farther North, known in the gardens of Europe as early at least as the days of Tragus f. 219. Southward from Egypt, observed by Forskal under cultivation in Yemen. Eastward, observed in Hindustan by Rheede x. pl. 38 and 39, Burmann ind. pl. 25, Roxburgh, by Graham "common everywhere during the rains," and by myself in the Concan, to all appearance indigenous. Farther East, enumerated by Mason as indigenous in Burmah; by Blanco, as frequent on the Philippines, known to the natives; is known to grow in China (Pers.); and was observed by Kaempfer, and Thunberg 30, naturalized in Southern Japan.

Aerua tomentosa of Tropical Arabia. Called in Egypt "sadjaret ennadji;"—observed there by Forskal, and Delile, as far North as Cairo, also in Upper Egypt, growing in gardens and even in the Desert. Farther South, observed by Forskal p. 171 abounding in Yemen in sandy and calcareous soil called "ra" or "ærua," and the spikes of flowers used for stuffing cushions and saddles. Eastward, enumerated by Mason as "exotic" in Burmah; and known to occur also in Hindustan and Java (Linn., Juss., Burm. ind. pl. 65, and Pers.).

Euphorbia thymifolia of Tropical Arabia and Hindustan. Called in Bengalee "shewt-kherua," in Telinga "biddarie-nanabeeam," in Tamil "sittra paladi" or "chin-amaum-patchayarise" (Drur.), in Yemen "rummid;"—observed there among the mountains by Forskal, and perhaps the same species near the sea at Ghomfude, the bruised herb applied to wounds, and the juice with wheat flour formed into pills given as a powerful purgative. In Upper Egypt, observed by Delile, as also on the Mediterranean border near Damietta; and from transported specimens, described by Plukenet alm. pl. 113. Eastward, known to grow in "gravelly places all over India," the "leaves and seeds given by" Tamul physicians "in worm cases and certain bowel affections of children" (Lindl.); in Ceylon, observed by Burmann pl. 105; and farther East, by Thunberg in Japan, but no native name is given By European colonists, carried to the Mauritius Islands, where it has become a troublesome weed (Pers.).

Ornithogalum elatum of. . . . Known in Egypt possibly as early as this date;—described by Andrews bot. repos. p. 528 from specimens received from Alexandria.

Dactylis glomerata of Europe and the adjoining portion of Asia. Known in Egypt as early probably as this date:—observed there by Delile, growing around Alexandria. Farther North, observed by Forskal, Sibthorp, and Chaubard, in Greece and on the Greek islands, not uncommon along roadsides. Westward, described by Dalechamp 427, C. Bauhin, and Parkinson; termed "gra-

men paniculatum spicis erassioribus et brevioribus" by Tournefort inst. 521; was observed by Forskal near Marseilles; and is known to grow in waste places and in woods throughout middle Europe as far as Britain, where it is called *orchard grass* or *cock's-foot* (Engl. bot. pl. 335, Pers., and Prior). From Europe, was carried by colonists to Northeast America, where it has become naturalized, growing not only in waste ground, but extending into the forest.

Lappago racemosa of Hindustan. Known in Arabia (Pers.) as early probably as this date; — observed in the environs of Constantinople by Forskal, and Sibthorp. Westward, described by Tragus, and Haller; termed "gramen spicatum locustis echinatis" by Tournefort inst. 519; and known to grow in various parts of Southern Europe (Lam. fl. fr., and Pers.). Eastward, observed in Hindustan by Roxburgh, by Law, in the environs of Bombay (Graham); and specimens were shown me on the Deccan by Mr. Ballantine. The grass bears minute burs, and by European colonists was carried to the West Indies (Pers.).

Eragrostis poæoides of Subtropical Africa and Asia. A grass called in Nubia "gytt;" — and observed by Forskal p. 21 among the mountains of Yemen; and by him, and Delile, in Lower Egypt. Farther North, observed by Sibthorp, and Chaubard, in the Peloponnesus and on Samos, frequent in cultivated ground; and farther East, known to grow in Siberia. Westward, described by Lobel hist., Clus. rar. vi. 38, and Barrelier pl. 44; termed "gramen paniculis elegantissimis sive ĕragrōstis, majus" by Tournefort inst. 522; and known to grow in Italy, Switzerland, and Barbary (Pers.).

Festuca rubens of the Mediterranean countries. A grass known in Egypt as early probably as this date: — observed there by Forskal, and Delile pl. 11, on the margin of grain-fields around Alexandria. Farther North, observed by Forskal, Sibthorp pl. 83, and Chaubard, in Crete, the Peloponnesus, and on Imros, on the margin of fields and the site of old walls; and Westward, described by Tournefort inst. 524, and known to grow in Liguria and Spain (All., Pers., and Dec.).

Bromus mollis of Europe and the adjoining portion of Asia. A grass called in Greece "lukōnōra;" — observed there by Sibthorp, and Chaubard, frequent in cultivated ground on the Peloponnesus and the Greek islands; and farther South, observed by Delile growing around Cairo. Westward, termed "gramen avenaceum locustis villosis crassioribus" by Tournefort inst. 526; and is known to grow abundantly throughout middle Europe as far as Britain (Curt. lond. i. pl. 8, and Pers.). From Europe, carried by colonists to Northeast America, where though "scarce" it continues to occur in wheat-fields in our Middle States (A. Gray); also to Austral Africa (Rœm. and Schult.). According to Loudon, the seeds bring on giddiness in the human species and in quadrupeds, and are fatal to poultry (Lindl.).

"Sept. 6th, Thursday" (F. Columb. 15 to 44), departure of Columbus from the Canary Islands Westward: with three ships, provided by Isabella wife of king Ferdinand. "On the 13th" at nightfall, having sailed about two hundred leagues, he remarked *Variation of the magnetic needle:* continuing his observations on this — and his succeeding voyages, he discovered a "line without magnetic variation" one hundred miles West of the Azores.

"Oct. 11th, Thursday," in the night (F. Columb. 22 to 62), land discovered by Columbus, supposed by him to be the beginning of the Indies. In the morning, the land was ascertained to be an island, called by the natives "Guanahani;" which name was changed by Columbus to "St. Salvador." The natives proving friendly, on being asked by signs, Where they procured the bits of *gold* worn for ornament, pointed South. Seven natives were then taken on board, and Columbus proceeded in the direction designated to another island in sight, which he called "Conception;" thence to a third island, which he called "Fernandina;" thence to a fourth, whose native name "Saomotto or Somoto" he changed to "Isabella;" and next came in sight of Cuba, a large and mountainous island. A "beast like a badger" (*Capromys*) was killed here by a party sent on shore. Turning now East, Columbus followed the coast of Cuba "one hundred and six leagues" to its termination: and continuing beyond, reached another large and mountainous island, and changed its native name "Aiti" to "Hispaniola." On this island, the source of the *gold* above mentioned, he lost his largest ship; and with the materials, saved through the aid of the natives, built a fort; and left behind thirty-nine of his men.

In the new archipelago, the *tides* were observed by Columbus to be "quite contrary to ours; for it was low water when the moon was Southwest and by South."

The natives first met with, are described (F. Columb.) as "of a middle stature, well shap'd, plump, but of an olive colour, like the people of the Canaries or peasants that are sun-burn'd. Their countenances were pleasant, and their features good, but their too high foreheads made them look somewhat wild. Their hair lank, thick, very black," and in some individuals cut short (agreeing with the Malayan race, but the complexion too light). They easily repeated the words they once heard; had javelins pointed with fish-bone, and sword-like clubs; and some of their canoes were large enough to contain "forty or fifty" men. "Their beds were like a net drawn together in the nature of a sling tied to two posts," and were called "hamacas" (*hammocks*, now first made known to Europeans). They had *nets*, cotton "very well spun, *cotton cloth*," and "looms to weave;" also *honey*, and balls of

wax (. . . .). By the Cubans, large fishes and turtle were captured by means of the remora or suck-fish (*Echineis*).

Hayti was found governed by four principal caciques; each having under him seventy or eighty local subordinate chiefs, who "were obliged, whensoever called upon, to assist them in their wars, and till the ground." The principal chiefs spoke through an intermediate officer (as among the Feejeeans); in making treaties presented a "girdle" or belt (as among our North American tribes); and in travelling, were carried in "a sort of palanquine." Medicine-men are described (another point in common with our North American tribes; and as among the Hawaiians), bones of individuals were kept in calabashes, and certain stones were supposed to cause "women to be delivered without pain." Bows and arrows, the latter pointed with "a fish's tooth or bone," were in use (F. Columb.).

The natives generally, are described by Columbus as "so loving, tractable, and free from covetousness," that "there are no better people" in "the world. They love their neighbour as themselves, and their conversation is the sweetest in the universe, being pleasant and always smiling. True it is, both men and women go as naked as they were born;" yet "the king is served with great state; and he is so staid, that it is a great satisfaction to see him, as it is to think what good memories these people have, and how desirous they are to know everything, which moves 'em to ask many questions, and to enquire into the cause and effects of every thing." In regard to religious ideas, "I could discover neither idolatry nor any other sect among them, tho' every one of their kings, who are very many, as well in Hispaniola, as in all the other islands," has "a house apart from the town in which there is nothing at all but some wooden images carved" (compare Feejeeans): "I have taken pains to find out what it is they believe, and whether they know what becomes of them after they are dead; especially I enquired of Caunabo;" who "and the rest answered, That they go to a certain vale, which every great cacique supposes to be in his country, where they affirm they find their parents, and all their predecessors, and that they eat, have women, and give themselves up to pleasures and pastimes."*

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* *Bombax ceiba* of the West Indies and neighbouring portion of Tropical America. An immense tree called by the natives "ceyba" (Ovied.), and its spiny trunk scooped out for canoes, some large enough according to Columbus lett. I to contain "seventy and eighty men, each with his oar:" — "arboles que llevan lana" and are "muy espinosos" were seen by Columbus on Hayti, on his Second voyage (Columb. lett. in soc. Hackl.); the "ceyba" was observed by Oviedo gen. hist. ix. 11 growing wild; trees of the girth of fifteen men were seen in Nicaragua by a writer (quoted by Lerius); and according to Barcia i. 24, this was one of the first trees to engage the attention of the colonists (Spreng.): B. ceiba was observed by Jacquin am. pl. 176 on the West Indies or neighbouring mainland. By Nimmo, has recently been introduced into the environs of Bombay (Graham).

Isotoma longiflora of the West Indies. A Lobeliaceous plant called by Spanish colonists "rebenta cavallos" (Lindl.); and the "ruybaruo" mentioned by Columbus lett. I, — may be compared: I. longiflora is termed "trachelium sonchi folio flore albo longissimo," by Plumier iii. pl. 353, as observed on Jamaica (Pers.); was also observed in the West Indies by Jacquin amer. 219; is known to grow on Cuba, Hayti, and Martinique, and is "one of the most venomous of known plants," bringing on "fatal hypercatharsis," and the juice applied to "the lips or eyes" producing "violent burning inflammation" (Lindl.).

Schinus molle of Western Peru. A small pinnate-leaved Terebinthaceous tree, apparently the "almastiga, arbol, hoja y eh fruto es semejante al lentisco," seen by Columbus in the West Indies: — S. molle, together with the *potato*, was introduced into Mexico after the time of the Montezumas (Hernand. iii. 15, and Humb. iv. 9); was observed by myself wild and frequent along river-banks in Western Peru; the bark and leaves according to Lindley are "filled with a resinous matter" that "concretes into a substance resembling mastich, a white odoriferous substance" also "procured from the leaves" and "used in diseases of the eye." Transported to Europe, the tree is described by Clusius post. 94 (Spreng.), and Lamarck pl. 822, "S. aroeira," if a variety only, was doubtless brought from Peru into Brazil, where it was found by Maximilian of Wied Neuwied employed by the native tribes in diseases of the eye.

Torreya taxifolia of Florida and the West Indies. A middle-sized tree of the pine tribe; and the "pinos" bearing instead of cones "frutos" that "parecen azeytunas del Axarafe de Sevilla," seen by Columbus journ. Nov. 25th and 27th in the West Indies — (Humb. cosm. i.) may be compared: T. taxifolia was observed by Croom, and Chapman, "along the east bank of the Apalachicola river, middle Florida."

Areca oleracea of the West Indies. Called by the Caribs "aouari" (Descourt.), and probably one of the "palmas de seys o de ocho maneros" seen by Columbus lett. I: — A. oleracea was observed in the West Indies by Oviedo (Spreng.), Jacquin amer. pl. 170 (Pers.), and Descourtilz.

Elais Occidentalis of the West Indies. Probably one of the "six or eight kinds of palm-trees"

Canella alba of the West Indies. A tree forty to fifty feet high, called *wild cinnamon* and affording the *canella bark* of commerce: doubtless the "canela" found by Columbus lett. 1 on Hayti, — mentioned also by Barcia i. 61: C. alba was observed by Browne pl. 37, Catesby ii. pl. 50, and Swartz, in the West Indies, all its parts when fresh "hot aromatic and pungent" (Lindl.).

"1493, March 4th" (F. Columb., and Major), after sailing from Hayti in the beginning of the year, Columbus arriving at Lisbon in Europe.

X. THE REIGN OF COMMERCE.

Egypt now ceased to be the main or only route through which foreign animals and plants reached Europe, and the broad ocean becoming the theatre of commerce, was deprived of her relative importance; remaining in a measure neutral, slowly and but slightly participating in the new order of things.

From pope Alexander VI. a grant was obtained, Confirming to Spain the new land found by Columbus, and "all that should be discovered Westward, till it should come to the East, where any Christian prince was then actually in possession" (F. Columb. 43). — Limits, notwithstanding some encroachments by the French and English, very nearly defining the Spanish colonies to the present day.

In this year, in Java, death of Raden Paku or Sunan Giri aged "sixty-three." (The date probably taken from his tomb at Giri, which continued extant containing the pusaka kris when Raffles was writing in 1816).

The same year (= "29th year of Tsutsi-Mikaddo," art de verif.), in Japan, departure of Josijsimmi, invested with the title of "dai-seogun," to command the army.

"The same year" (Blair), the study of the Greek and Hebrew languages, brought into Germany by Reuchlin.

"The same year" (Alst. p. 308), in Croatia, the Christians defeated by the Turks under Bajazet II.

As early perhaps as this year (see Spreng.), Joannes Platearius writing his Comment. in Nicolai Praepos. — The work was published "in 1562."

Arabis turrita of the mountains of middle Europe. — The "maior Platea." of Clusius hist. ii. pl. 126, is referred here by Sprengel: A. turrita is known to occur along hedges on the mountains of Switzerland, France, and Hungary (Jacq. austr. pl. 11, and Pers.). In Britain, was first observed "in 1728" on the walls of a college at Cambridge (Huds.), afterwards at Oxford and in Kent, and in a locality near Kinross; but seems unknown in Ireland (Mackay) and in Northwestern France, and is regarded by A. Decandolle as derived from the botanic gardens at Cambridge and Oxford.

"Nov. 2d, in the night" (F. Columb. 46 to 51), arrival of Columbus on his Second voyage at a point in the West Indies farther South. In the morning, being Sunday, the new island in sight was named by him "Dominica." Turning North, he soon reached a second island, named by him "Marigalante."* And next "another great island," which he called "Guadalupe" and found inhabited by the warlike *Caribbes*; who were cannibals, and made their captives *eunuchs*.

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in question: — E. Occidentalis was observed in the West Indies by Oviedo (Spreng.); by Swartz i. 619, in mountain valleys on Jamaica (Pers.).

Thrinax parviflora of the West Indies. Ten to twenty feet high, and probably one of the "six or eight kinds of palm-trees" in question: — T. parviflora was observed in the West Indies by Oviedo (Spreng.); by Browne 190, and Swartz i. 614, in barren and maritime situations on Jamaica and Hayti (Pers.).

Cocos fusiformis of the West Indies. Probably one of the "six or eight kinds of palm-trees" in question: — observed in the West Indies by Oviedo p. 38 (Spreng.); by Swartz i. 616, on Jamaica and Hayti (Pers.).

Fureræa odorata of the West Indies and Mexico. Called by the natives "cabuya" (Ovied.); and the "liguñaloe" of Columbus lett. 1, — termed simply "aloe" in the poem written on his return by Guiliano Dati, may be compared: F. odorata was observed by Oviedo vii. 10 in the West Indies; by Jacquin amer. pl. 260, on Cuba; and is said to occur also in Mexico (Lam. enc. i. 52, and Pers.).

* *Hippomane mancinella* of the seashore of the West Indies and neighbouring portion of South America. A very large tree, called by the English colonists *manchineel*, by the French "mancenillier" (Nugent): landing on Marigalante, some of the crew touching a wild fruit with their tongues, such heat and pain followed that according to Chanca "they seemed to be mad:" "mancanillas olorosas" are mentioned by Oviedo . . f. 11: H. mancinella was observed by Sloane ii. pl. 159,

From Guadalupe continuing North, Columbus reached a fourth island, named by him "Monserratte;" and next a fifth, whose native name "Ocamaniro" he changed to "Redonda;" a sixth, named by him "Antigua;" a seventh, named by him "St. Martin;" and after visiting another island, turned West, leaving in the North "above fifty islands," the largest of which he named "St. Ursula," and the others "the Virgins." Continuing West, Columbus next came in sight of a very large island, by the natives termed "Borriquen" (Porto Rico).

On reaching Hayti, Columbus found his fort burned and not one of the Spaniards living: the result, according to native testimony, mainly of dissensions among themselves and a night-attack by a neighbouring unfriendly chief. A new site was in consequence selected, farther East; and the town of Isabella was built there, the first settlement in America that proved permanent. A tribute was imposed by Columbus on the natives of Hayti; — and before the close of his administration, some of them were held as slaves (F. Columb. 74 to 81).

"1494, Jan. 30th" (date of lett. in Hackl. soc.), Columbus writing from the city of Isabella to the home Government.

"May 4th, Sunday" (F. Columb. 54 to 60). Westward from Hayti another large island, Jamaica, discovered by Columbus. Returning to the coast of Cuba, he continued West among a labyrinth of low islets, and at length learned from a native, that Cuba is an island and not part of a continent. After reaching the island "Evangelista" (Pinos), Columbus turned back, re-visited Jamaica, and discovered the South coast of Hayti, which he followed throughout.

"Sept. 15th, in the night" (F. Columb.), *eclipse* of the moon. Observed by Columbus near the Eastern extreme of Hayti at the islet Adamanai; and "which he said varied five hours twenty-three minutes from Cadiz." Proceeding through the Mona Passage, Columbus reached the town of Isabella "Sept. 29th:" — and eighteen months afterwards, sailed for Spain, arriving at Cadiz "June 11th 1496" (Major 2d edit. lett. p. 159).

"In this year" (Dallet p. cxxvii), end of the reign of Sieng-tsong, king of Corea.

"In this year (=900 A. H." of Ferisht., Elph.), by Mahmud of Guzerat, a sea and land force sent against Bombay, occupied by a revolted officer of the Bahmani king of the Deccan. The fleet was destroyed in a storm, but through the co-operation of the Bahmani king, Bombay was recovered.

Before the following year (="1421 an. jav.," Raffles xi.), "the whole island of Java had submitted to the authority of" sultan Tranggana, and the Mohammedan religion now firmly established throughout.

"1495 A. D." (Crawfurd vii. 11), the Mohammedan religion adopted by Zainalabdin, properly regarded as the first Muslim king of Ternate. Javanese in numbers now visiting the island, partly to extend the Mohammedan religion, and partly to procure *cloves*.

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and Jacquin amer. pl. 238, in the West Indies, abounding in white caustic venomous juice, a drop, like fire, instantaneously raising a blister on the back of the hand (Lindl.).

Bursera gummifera of the West Indies and neighbouring portion of South America. An Amyroid tree called in Carib "chibou" (Desc.), affording a turpentine-like secretion that hardens as it dries: the "arboles de trementina muy singular é muy fina" seen by Chanca on Hayti, — may be compared: B. gummifera was observed by Swartz 130, Jacquin am. pl. 75, and Descourtilz, in the West Indies and neighbouring portion of South America. *B. acuminata* of Porto Rico and Hayti, yielding according to Royle a yellow concrete essential oil, is regarded by Lindley as "not very different."

Terminalia latifolia of the West Indies. The "mirabolanos cetrinos" observed on Hayti by Chanca on the Second voyage of Columbus — (lett. in Hackl. soc.), may be compared: T. latifolia is known to grow in woods on the mountains of Jamaica, and its root is employed by the inhabitants in diarrhœa (Swartz fl. ii. 747, and Lindl.).

Nectandra puchury-major of the Upper Orinoco. A Lauroid tree called there "puchury" or "puchery" or "puchyry" (Lindl.); and the trees seen by Chanca whose bark tastes and smells like "nueces moscadas" — may be compared: N. puchury-major was observed by Martius at Tabatinga in the forest on the Rio Negro. *Pichurim beans*, exported to Sweden in the middle of the last century, were found a valuable tonic and astringent medicine, and during the continental war "were used as a bad substitute for nutmegs," but are no longer known in commerce (Lindl.).

Nectandra puchury-minor of Eastern Equatorial America. Its seeds said to possess similar qualities, — and according to Humboldt are exported, and are the *sassafras nuts* of the London shops (Nees, and Lindl.).

Amomum sylvestre of the West Indies. The "raiz de gengibre" seen by Chanca worn by a native around the neck, — may be compared: A. sylvestre was observed by Sloane i. pl. 105, and Swartz 11, in the forest on Jamaica (Pers.).

"Oct. 27th" (Barros, and Camoens iv. 60 to 64), John II. succeeded by Manuel, fourteenth king of Portugal.

"1496 A. D." (Major edit Bethenc. p. 129), the Guanches of Teneriffe subdued, and the Canary Islands now entirely in Spanish possession.

"In this year" (art de verif.), Kayt-Bay succeeded by Mohammed Abu-l-Saadat, thirty-eighth Memluk sultan of Egypt.

"The same year" (narrat., and Mason ii. 28), Pegu first visited by a European, Hieronimo di Santo Stefano, who lost his companion "Dec. 27th." — Proceeding Southward, he found on Sumatra a cadi who had some knowledge of Italian; and on his way home, touched at the Maldive Islands, and at Cambay was assisted with money by some Moorish merchants of Alexandria and Damascus. He wrote an account of his voyage "at Tripoli in Syria, on the first of September, 1499."

Lodoicea Seychellarum of the Seychelles Islands. A remarkable palm, bearing very large double nuts, which drifting to the Maldive were long supposed to be produced there: "cocoa nuts of large size" were found on the Maldive Islands by Hieronimo di Santo Stefano: — and nuts imported from the Maldives were used as an antidote by the Javanese when visited by Nieuhoff in 1665. The "cocos maldavica" was first ascertained by Sonnerat to be a native of the Seychelles Islands; and L. Seychellarum is also described by Commerson and Labillardiere.

"1497, June 24th" (Pasqualigo, J. W. Jones introd. Hackl. p. lxix, and Asher edit. Huds. p. lxviii), under letters patent from Henry VII. of England, John or Zuan Cabot sailing from Bristol Westward "seven hundred leagues" discovered land which he called Terra-primum-visa. He "coasted for three hundred leagues, and landed," saw "no human being," but "found some felled trees," also "certain snares which had been set to catch game, and a needle for making nets." He planted a large cross "on his new-found-land," and returned to England "about August 10th."

"In this year" (Spreng.), Schrickius editing the writings of Johannes Tollat von Vochenberg.

Ribes rubrum of Subaretic climates. Called in Britain *red currant* from the diminutive raisins imported from Corinth, by Turner "raisin-tree" (Prior), at Anjou "castilles" (Ménage), in France in the days of Dodoens p. 748 "groseille d'outre mer," names indicating foreign origin, the earliest notice of the plant being "ribes Ioannis" in this edition by Schrickius — (Spreng.): the thornless "rubra grossula" called "transmarina" is mentioned by Ruel i. 106, the "ribes hortense" by Tragus 375, and the "ribes" bearing red fruit by Fuchsius pl. 663; but in Britain, R. rubrum is not enumerated by Tusser in 1557 among cultivated fruits (Philips), and continued rare in 1597 as appears from Gerarde p. 1143: Eastward, was observed by Forskal in gardens at Constantinople, but has not been met with in Greece nor in Egypt. Is said to grow wild from North Britain and Sweden as far as Lapland (Pers., and Wats.) and throughout Siberia to Kamtchatka (Ledeb., and A. Dec.): farther East, is clearly wild from the mouth of the Mackenzie throughout Canada (Hook.), at the Lake of the Woods (Schwein.), in Wisconsin (A. Gray), was observed by Michaux along the Mistassiny river, and by myself as far South as the flanks of the White mountains: but our gardens have been stocked from Europe.

"Dec. 21st" (Castanheda), Vasco da Gama in three ships from Portugal passing the island of Cruz, containing the last landmark left by Diaz. The wind favouring "for three or four days," on Christmas he gave the name of "Natal" to the new country. — "Jan. 24th," anchored within a large bay at the mouth of a large river, careened the ships, and left on "Sunday, Feb. 24th:" following the coast, a sambuc at anchor contained a "Moor" from Cambay who understood a few words of Arabic, and a crew of caffres: after passing the shoals and bank of Sofala, another sail was sighted, and a "caffre" obtained from it who could converse with one of Da Gama's men, "a cafre of Guiné" (through the Congo Language, Stanley edit. C. Correa 79). "Thursday, March 1st" (Castanh., and Barros), Da Gama "saw the four islands of Mozambique," his crew on entering the port giving thanks that they could now see houses and people. "April 1st," he finally left Mozambique, and "on the 7th" arrived at Mombaza; "on the 15th, Easter Sunday," at Melinda; and "on the 24th" (Barros), having procured "a Guzarat pilot," sailed for Hindustan.

Ximenia spinosa of the Tropical shores of America, Africa, and as far as the Malayan archipelago. A small submaritime tree, more or less spinescent, called in Telinga "oora-nechra" (Drur.), in Suahili "m'peenjee," in Kinyoro "m'toondwah" (Grant); and the "yellow fruit of the size of walnuts" eaten by the natives around the bay where the ships were careened — (C. Corr. i. 10), may be compared: X. spinosa was observed by Grant in Unyoro and Ugani, oil extracted from its kernels. Eastward, was observed by Roxburgh, and Wight, in the Circars, its "yellow fruit, which is about the size of a pigeon's egg" eaten by the natives, and its pulverized wood used by the brahmins on the Coromandel coast in their religious ceremonies (Drur.); but possibly through Arab or Banian traders carried to Hindustan and Timor (Decaisne, and A. Dec.). Westward, is known to grow on the Atlantic shore of Equatorial Africa, in the maritime sands of Senegal (fl. Seneg., and fl. Nigr.), was observed by Chr. Smith as far as the Congo: also on the opposite American shore, was observed

by myself around the Bay of Rio Janeiro; by A. Saint-Hilaire, inland in Brazil as far as the Catingas forest; by Aublet pl. 125, in Guyana, and termed "heymassoli" (Steud.); by Plumier pl. 261, and Jacquin am. pl. 277, in the West Indies; is known to grow as far as Key West in Florida (Chapm.), and on the Pacific side of the Isthmus (Benth. voy. Sulph. 160).

"*Vitis sp.*" of Eastern Equatorial Africa. A shrub three feet high called "m'peengee-peengee" (Grant); and from early times, its one-stoned pear-shaped fruit eaten: — observed in Madi woods, having "neither tendrils nor thorns" (cf. Ximenia).

"May 20th, 1498" (Barros), arrival of Vasco da Gama in Hindustan, two leagues below Calicut. At the city, the commercial jealousy of the Moors was aroused, and during his stay, Da Gama derived assistance from the secret promptings of one of them, "a native of Seville" (C. Correa i. 16). On "Friday, Oct. 5th" (Castanh., and Goes), he left Hindustan, — and on "Monday, Feb. 7th" in the following year, arrived at Melinda. Having procured Moorish pilots, he continued his voyage homewards, finding the pilots familiar with the Mozambique current and African coast almost to the Cape of Good Hope, but not beyond. "On the 20th March" (Castanh.), he doubled the Cape.

Ficus elastica of the mountains of Assam and Eastern Hindustan. The *india-rubber fig-tree* is called "kasmeer" by the inhabitants of Pundua and the Juntipoor mountains, in Bengalee "kusneer" (Drur.); and boiled rice "on green fig leaves, which were as broad as a sheet of paper," were set before Da Gama at Calicut — (C. Corr. i. 17): "leaves of the Indian fig-tree which are very large and stiff" used for plates by the king of Calicut and invited brahmins, are mentioned by Barbosa: F. elastica is described by Roxburgh iii. 541, Howison as. soc. Calcutt. v, Falconer, and Royle him. 338; is known to grow also on the Khassya mountains, and according to Drury is "cultivated in Malabar;" was observed by Graham "in gardens about Bombay;" by Mason v. 523, introduced "within a dozen years" into Tenasserim, and "appears to grow as well as an indigenous plant." By European colonists, was carried to Northeast America, where it has become frequent in greenhouses. Its milky juice is used by the natives of Silhet to smear and render baskets water-tight (Drur.), and according to Lindley "inspissates into an excellent kind of caoutchouc, which is now imported." (Compare F. tsiela.)

"In May" (Churchill coll., and Asher edit. Huds.), under instructions from Henry VII. of England Sebastian Cabot, son of John, sailing Westward "by way of Iceland." On reaching the newly-discovered country, he found land extending continuously in the desired Northwestern direction as far as "56° N.," at which point he turned back; visited Newfoundland, brought away three natives, and continued Southward along the continent to "38°."

"Aug. 1st" (F. Columb. 47 and 68 to 73, Columb. lett. 3 gives "July 31st"), an island discovered and named Trinidad by Columbus, seeking on his Third voyage the "vast land Southward" he had heard of from the Caribbes. On the same day, the continent was in sight, but was at first mistaken for another island. Continuing along the South coast of Trinidad, Columbus entered the Gulf of Paria, finding the sea freshened by large rivers and the land continuous, "which he certainly concluded to be the continent." Of the *natives*, the men wore a covering in front, and the women were entirely naked; and strings of *pearls* in their possession, were explained by signs to have been brought from the Northwest. Columbus continued around through the straits; and turning Westward, followed the coast of Paria to and beyond an outlying island which he named "Margarita;" and thence sailed Northward direct to Hayti, arriving "Aug. 30th" (Major 2d edit. lett. p. 156).

Cæsalpinia echinata of Eastern Equatorial America. A large tree affording the *brazil-wood* of commerce, called by the aboriginals of Brazil "araboutam" (Ler.): the "brasil" in great quantities mentioned by Columbus in a letter from Hayti giving an account of his Third voyage — (Major 2d edit. 112), may be compared: much "brasil" along the river Maranon, is mentioned by Oviedo nat. hyst. f. 10; and C. echinata was observed in Brazil by Lerius. From transported specimens, is termed "pseudo-santalum rubrum s. arbor brasilia" by C. Bauhin pin. 393; is described also by Lamarck enc. i. 461; and has usurped the Oriental name of C. sappan from its wood equally dyeing red (see Cabral).

"In this year" (art de verif.), Mohammed Abu-l-Saadat succeeded by Kansu Abu-Said, thirty-ninth Memluk sultan of Egypt.

"The same year" (Alst. p. 308), Dalmatia again overrun by the Turks: and an army of them "seventy thousand" strong, sent by Bajazet II. into Russia.

"The same year" (Alst. p. 378), Savanarola a Dominican monk, having written against the supremacy of the pope, burned alive at Florence.

"1499 A. D." (Marcel), Kansu Abu-Said succeeded by Kansu Djan-balat, fortieth Memluk sultan of Egypt.

"The same year" (Churchill coll.), in a ship from Spain, Alonso de Ojeda "and some other private men," including Americus Vespucius "as merchant," followed the North coast of the new con-

tinent to Cape de la Vela;* and returned Eastward as far as the island of Margarita, and thence to Hayti.

"1500, Jan. 26th" (Churchill coll.), arrival at Cape St. Augustin, on the outer coast of the new continent, of Vincent Yañez Pinzon, in the first Spanish ship that crossed the Equator. Continuing Westward, Pinzon followed the coast as far as the mouth of the river Maranon.

"March" (Galvan., and Churchill coll.), Peter Alvarez Cabral leaving Portugal. Keeping at a distance from Africa "to shorten his way," he was driven out of his course as far as the new continent "in 10° S." Following this coast "to 17° S.," he entered a harbour named by him "Porto Seguro;" and landing, called the new country "Santa Cruz." — (The name "Brazil" was afterwards substituted, the country abounding in a kind of wood resembling "presillum" or sappan-wood; see Cæsalpinia echinata).

"Aug. 23d" (Major 2d edit. lett. 159 to 160), arrival in Hayti of Francesco de Bobadilla, superseding Columbus, who was sent home in chains; as appears from his letter written "Nov. 25th," just before reaching Spain.

"The same year" (Churchill coll., and D'Avezac edit. J. Cart.), from Tercera sailing Northwest, Gaspar Cortereal followed the land to "Lat. 50° or more," to a river loaded with glaciers called by him "Rio Nevado;" his own name was given to the country North of Newfoundland (since called Labrador), and he returned in safety to Lisbon.

"The same year" (Marcel), Kansu Djan-balat succeeded by Toman-Bay, forty-first Memluk sultan of Egypt.

"In this year" (Spreng.), Robertus de Valle publishing his Explic. Plin.

"The same year" (Alst.), end of the chronicle of Johannes Nauclerus.

One hundred and seventy-fourth generation. Jan. 1st, 1501, onward mostly beyond youth: the Arab writers, Ebn Ayyas, Soyuti d. 1505: the Greek writers, Jacobus Triboles d. after 1528, Demetrius Zenus d. about 1529, and Leonardus Phortius d. 1531; Barthelemi de Salignac, Augurellus, Raphael Volaterranus, Albertus Krantzius, Johannes Trithemius d. 1516 (Pouch.), Hector Boetius, Paulus Aemilius, Erasmus of Rotterdam, J. Jovianus Pontanus; Machiavel; Baptista Mantuanus; Alexander ab Alexandro; Dr. Thomas Lynacre; Petrus Pomponatius; Gawin Douglas; Sannazarius; Cornelius Agrippa: the scholastic theologians, Thomas de Vejo Cajetanus, Jacobus Almainus, Sylvester Prieras, Franciscus Victoria, and Dominicus a Soto: the Italian poet Ariosto: the editor Aldus Manutius: the architect Donato Lazzari called Bramante d. 1514: the painters, Leonardo da Vinci d. 1519, Raphael d. 1520, Luca Signorelli d. 1521, Pietro Perugina d. 1524, Lucas Cranach d. 1553, Michele Angelo d. 1563, Giorgio Barbarelli called Giorgione d. 1511, Titian d. 1576, Antonio da Corregio d. 1534, Benvenuto Tisio called Garofalo d. 1559; the engravers, Maso Finiguerra b. 1460, Albert Durer d. 1528.

"The same year" (Alst. p. 361), by the Theological Faculty of Mayence, following the example of the Academies of Paris and Cologne, adoption of the decree of the Conception without sin, "Mariam sine peccato originali conceptam." They who dissented, were termed "Maculists."

"The same year" (D'Avezac edit. J. Cart.), from Portugal sailing West-northwest, Cortereal on his Second voyage found land at the distance of "two thousand miles," covered with woods and well-peopled, supposed by him a continuation of the Northern land seen on his previous voyage. He followed the coast "six or seven hundred miles," and captured many of the natives; "fifty" of whom he retained in his own ship, which never returned. The other ship with "eight" natives on board, reached Lisbon "Oct. 8th."

"The same year" (Churchill coll.), from Lisbon Juan de Nova sailing in mid ocean discovered "in 8° S." a small island which received the name of "Conception" or "Ascension." In the Indian Ocean, another small island, that which bears his name. — And on re-entering the Atlantic, he found a third small uninhabited island "in 15° S.," which received the name of "St. Helena."

"The same year" (art de verif.), Toman-Bay succeeded by Kansu El-Gouri, forty-second Memluk sultan of Egypt. — The mosque and tomb built by him, is "at the extremity of the bazar Ghoreeh" in Cajro (Wilk. theb. and eg. 297).

"The same year (= 2161st of Synmu," art de verif.), Tsutsi-Mikaddo succeeded by his son Kasiawabara, now dairo of Japan.

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* *Mauritia flexuosa* of Guayana. The hammocks seen by Vespucci on the South American coast — in part of fibres of the "ita" palm; which also furnishes the natives with bread and wine, the pith being converted into flour, and the trunk tapped at a certain season for a saccharine drink (Schomb. edit. Ralegh): M. flexuosa was observed in the same district by Humboldt and Bonpland (Steud.). From transported specimens, is described by the younger Linnæus suppl. 454 (Pers.).

Bromelia caraguata of Guayana. Called there "caraguata" (Schomb.), and the other material of the hammocks seen by Vespucci — clearly its fibres (Schomburgk edit. Ralegh).

"1502, April" (Galvan.), three ships sent by king Manuel of Portugal, after following the Brazilian coast to "about 32° S." turned back, finding it tempestuous and cold.

"In this year" (Galvan.), Vasco da Gama on his Second voyage sailing from Mozambique direct for Hindustan, discovered an island "in Lat. 4°," and named it after himself "Almirante." He left there Vincent Sodre with five ships "to keep the coast of India."

"In this year (= 908 A. H." of the Kurrat el-Ayun, Badger edit. Varthem. 61), seven vessels seized by the Portuguese between Hindustan and Ormuz, and most of the crews murdered.

"In this year" (Lubke and Lutrow), in England, the chapel or choir in Westminster abbey built by Henry VII.

At this time (Spreng.), Io. Costæus writing his Adnot. in Mesue. — He died "in 1503."

"The same year" (Siguenz., coll. Mendoz., Clavig. ii., and Humb. atl. pict.), Ahuitzotl succeeded by Motezuma-Xocoiotzin, or Montezuma II., ninth Mexican emperor.

"In this year" (Gomara ii.), Alfonso Hoeida following the coast of Terra Firma to the province of Uraba — (Gulf of Darien).

"Aug. 14th, Sunday" (F. Columb. 88 to 108), Columbus, accompanied on his Fourth voyage by his son Ferdinand, sailing West beyond Hayti discovered land (Cape Honduras); and a party was sent on shore to take possession. Turning back, Columbus followed the coast to its Eastern termination, termed by him "cape Gracias a Dios." At "Guanaia," an outlying island, *natives* were seen; and proved to be "like those of the other islands, but not of such high foreheads"

A large canoe had put in here, laden "with commodities brought from the westward, and bound towards New Spain;" with quilts; clouts, to wear in front; "shirts of cotton, without sleeves, curiously wrought and dy'd of several colours;" large sheets, in which the women, who would besides "hide their faces," wrapped themselves; long wooden swords, edged with sharp bits of "flint fix'd with thread" (compare sharks'-teeth swords of the Kingsmill Islanders); hatchets to cut wood "made of good *copper*, also bells of the same metal, plates and crucibles to melt the metal;" "cacao" or *chocolate* nuts (afterwards found to pass for money); and for drinking, "a sort of liquor made of *maiz*" — (chicha, mentioned by Oviedo nat. hyst. f. 16, and observed by myself in use in Peru).

On the main land opposite, the natives proved to be "much like those of the islands, but that their foreheads are not so high, nor do they seem to have any religion:" they wore a covering in front; and there were "several languages among them." Columbus in one of his letters (Major 2d edit. 200) mentions ferocious "puercos" (*Dicotyles*), one of them subdued by a monkey called "begare" winding its tail around the snout (*Cebus*), "gallinas muy grandes y la pluma como lana" (*Rhea*), "leones" (*Felis puma*), "ciervos" (Cervus), "corzos otro tanto" (. . . .), "y asi aves" (birds).

From Cape Gracias a Dios, Columbus followed the coast South (F. Columb.). After some days, other *natives* made their appearance: "brandishing their spears, blowing horns, and beating a drum in a warlike manner" (Polynesian customs); also "chewing herbs" and "spurting it towards" the vessel. Columbus kept on as far as a harbour named by him "Porto Bello" and several leagues beyond (meeting with, according to Barcia i. 112, and Sprengel, "palmam" with winey fruit *Bactris minor*) while seeking a passage into the South Sea by a "streight" he had heard of: — (ascertained some years later to be a narrowing, not of the sea but of the land).

"1503, in the beginning of the year" (F. Columb. 88 to 108), returning as far as Veragua, Columbus attempted to settle a colony; but was compelled to withdraw to Jamaica; — reached Hayti "Aug. 13th, 1504;" Spain "Nov. 7th" (Major 2d edit. lett. 235); and died "May 20th, 1506" (F. Columb.).

"Sept. 22d" (Alst., and Nicol.), Alexander VI. succeeded by cardinal Francis Piccolomini or Pius III.; and "Nov. 1st," by cardinal Julian della Rovere or Julius II., sixty-second pope and a warrior. Maximilian ruling Germany and Italy; and Louis XII., France.

"In this year" (Johnst. east. bord.), marriage of James IV. of Scotland with Margaret Tudor: on which occasion, a poem on the "*thrissel* and the rois" composed by Dunbar.

"In this year" (Spreng., and Winckler), Pandolfo Collenucci writing his Simplic. Plin., in response to Leonicenus. — He was slain "in 1504," and his work was published with Brunfels herb. "in 1531."

"1504 A. D. = 17th year of the 'houng-tchi' of Hiao-tsoung.II." (Chinese chron. table), beginning of the Seventieth cycle. By census, the population of China found to consist of "53,280,000 persons; a diminution of about 7,000,000 within a little over a century" (Pauth. p. 405).

"In this year" (palm-leaf ann. Jag., and W. W. Hunter, Stirling giving 1503), Purushottama Deva succeeded by Pratab Rudra Deva, now king of Orissa; a learned man, deeply versed in the Sastras. — He was finally converted to the Vaidik faith, built the temple of Baraha at Jajpur, extended his conquests as far as Cape Comorin, and reigned "twenty-eight years."

"In this year" (Anderson, and Holmes ann. Amer.), the banks off Newfoundland visited by

Basque, Breton, and Norman fishermen, in "the first French vessels that appeared on the coasts of North America." According to the Narrative of Niflet and Antoine Maydini, the coast of Newfoundland was also visited (chron. edit. by Michelant).

"1505 A. D." (Galvan.), Francisco de Almeida, bearing the title of viceroy, arriving with a fleet of twenty sail at Quiloa, where he built a fort and appointed Peter Fereira to the command. Another fort was established farther South in Sofala by Peter de Anhaya. Crossing the Indian Ocean Almeida took possession of the island of Augedina, and built forts on the main land at Cananor and Cochin.

In this year (narrat. edit. Badger), after visiting Mecca, Aden, the Persian Gulf, the coast cities of Hindustan, and Tenasserim, Ludovico di Varthema at Pider in Sumatra.* He next proceeded with other Christians (Orientals) in a "chiampana" or small vessel with a native captain and crew to Bandan producing *nutmegs*, and Monoch producing *cloves*; and returning in "June," was informed of people towards the South who navigate by the Southern Cross, the climate beyond the said island being cold, and the day not lasting "more than four hours" — (compare New Zealand). "March 12th, 1506," Varthema was under Portuguese protection at Cannanore; "Dec. 6th 1507," he sailed for Mozambique; and reached Portugal in 1508.

"1506 A. D. = 'tching-te,' 1st year of Wou-tsoung-y-ti" or Wou-tsoung II., "of the Ming" or twenty-third dynasty (Chinese chron. table).

"The same year" (Galvan., and Churchill coll.), on a voyage from Portugal to the Indian Ocean, Tristan da Cunha having passed Brazil turned Eastward, and discovered the uninhabited island or islands that bear his name.

Arriving at Mozambique, Tristan da Cunha was joined by Emmanuel Telez de Meneses, who had been "driuen without the great island" of Madagascar, and "ran along the coast." The island, reported to be rich in "gengibre, crauo" or cloves, and silver, was visited from Mozambique, but without result.

"The same year" (Lubke and Lutrow), at Rome, the foundation of the first pillar for the cupola of St. Peter's church, laid by Bramante. — The building was placed under the superintendence of Michel Angelo "in 1546."

"1507 A. D." (Churchill coll.), Cuba, already known from native authority to be an island, circumnavigated by Sebastian de Ocampo: who sailed from Hayti.

"The same year" (Baumg.), Baumgarten visiting Egypt.

1508 A. D. (= "8th year of Kasiawabara," art de verif.), in Japan, the title "dai-seogun" conferred by Kasiawabara on Jositanno, twenty-first in descent from Joritomo.

"In this year" (Stanley edit. Barbos. p. ix and 62), the Egyptian sultan Kansu el-Gouri, hearing of the depredations of the Portuguese on the Indian Ocean, prepared a fleet; which sailing down the Red Sea successfully attacked them off Diu, — but "Feb. 3d" in the following year, was totally defeated by Almeida.

"The same year" (N. Shaw edit. Champl. p. ii, and D'Avezac edit. J. Cart.), by Capt. Thomas Aubert, at the expense of Jean Ango, Norman colonists first carried to Newfoundland; and a North American native brought back to France. "Aubry, the French seaman," "first explored the mouth of the St. Lawrence in this year" (Asher edit. Huds.).

"The same year" (Churchill coll.), by John Diaz de Solis and Vincent Yanez Pinzon, the coast of America followed as far as "forty degrees" in south latitude.

"Dec. 10th" (Blair), signing of the "League of Cambray," against the Venetians. Who in consequence, — lost in the following year their territories on the continent.

"In this year" (Wilk. theb. and eg. p. 546), the use of *Kufic letters* ceased.

"1509 A. D." (Churchill coll.), a Spanish colony from Hayti established on Jamaica.

"In this year" (Ciez. vi.), the town of Antigua founded on the Gulf of Darien. — "In the following year" (Markham edit. p. 34), Alonzo de Ojeda governor of Terra Firma, advancing "four leagues" inland, was defeated with the loss of "seventy Spaniards" by the natives at Turbaco: retiring to the ships, and reinforcements arriving, the natives were in turn defeated, and all put to the sword. Ojeda then founded the town of Uraba towards the head of the Gulf, left Francisco Pizarro in command as his lieutenant, and before the close of the year, sailed for Hayti.

"1510 A. D." (Churchill coll.), from Portugal sailing into the Indian Ocean, James Lopes de Sequeira continued beyond Hindustan as far as Sumatra and the Straits of Malacca, now first entered by a European ship.

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* *Tanarius major* of Sumatra. A tree called in Malay "laka" (Crawf.), its rose-coloured wood used in dyeing and pharmacy; and the "lacca" tree formed like our walnuts, seen by Varthema on Sumatra, — is referred here by Badger edit. p. 238. The wood according to Crawfurd disc. dict. p. 204 "is an article of considerable native trade, and is chiefly exported to China."

"September" (Nicol.), a synod at Tours. On the war about to be declared by Louis XII., supporting the duke of Ferrara against pope Julius II.

"1511, April" (Galvan., and De Morga 12), sailing from Cochin Albuquerque obtained possession of the city of Malacca.* "July," by returning Chinese he sent Duarte Fernandez with letters to Siam; who, "being the first Portugall" seen by the king, was received with great honour; and in company with ambassadors from Siam, returned overland by the way of Tanasarim. Albuquerque sent also Ruy Nunnez de Acunna with letters Northward along the coast beyond Tanasarim and Martaban to Pegu "in 17°;" and "in the end of" the year, three ships and "one hundred and twenty persons" under Antonio Dabreu for "Banda and Maluco." — In "January," Albuquerque returned to Goa.

"In this year" (Port. companion of De Soto 6, Churchill coll., and Presc.), a Spanish colony from Hayti established on Cuba by Diego Velasquez; with the aid of a Christian who had been left sick on the island many years previously.

"Sept. 1st" (Alst., and Nicol.), a synod at Pisa. Convened by certain cardinals. Pope Julius II. not having assembled a general Council, as he had sworn to do at his election.

"1512, March 27th" (Purchas, Churchill coll., art de verif. contin., and W. B. Rye edit. De Sot. p. x), Juan Ponce de Leon, sailing from Puerto Rico for "a country in the north" reported by the natives, discovered land; and named it "Florida" from the day being Pasqua Florida or Palm Sunday. Landing "April 2d," he formally took possession, and remarked that many of the fruits (unlike Tropical America) resembled those of Spain, but was repelled by the natives. He followed the coast as far as "30° 8'," doubled Cape Cañaveral "May 8th," "discovered the Bahamas and some other islands previously unknown," and reached Puerto Rico "Sept. 21st."

"May 3d" (Nicol.), Twentieth general ecclesiastical Council. Convened by pope Julius II. at the Lateran in Rome. — The last session was held "March 16th, 1517."

"The same year" (Blair), in London, St. Paul's school founded by John Colet.

"In this year" (Galvan.), Antonio Dabreu after passing Java, Sumbawa, Solor, Galao, Mauluca, Vitara, Rosolanguim, and the Aru Islands whence come dried birds "of great estimation because of their feathers" (*Paradisea*), came "to other islands lying in the same parallele" in "7° or 8° S." Turning North, he arrived at Ternate, and thence proceeded to the islands of Burro and Amboino, finding "dead men hanging in the houses, for the people there are eaters of man's flesh." On the other side at a place "in 8° S.," he "laded cloues, nutmegs, and mace, in a junco or barke which Francis Serrano bought here," and from Banda returned to Malacca.

"In this year" (narrative in Stanley's edit. Barbos. 225), Francisco Serano "with three other Christians" and "five Malay mariners and pilots" after sailing from the city of Malacca to Pegu, thence to Pedir on Sumatra, continued "south and south-east" to Bandan where *nutmegs* grow, thence "north-east and east-north-east through many channels as far as the islands of Malut," producing *cloves*, and "five in all." Serano was received with great honour by the king of Maluco, and married his daughter.

Mariners of Borney spoke of a people who used the Southern stars in navigating, and dwelt so far South that the climate is "very cold," with only "four hours of daylight" (compare New Zealand, and Varithema's account).

Francisco Serano (according to Galvano) was wrecked with his "junco" before the close of the year on the shoals of Lusupino; but "nine or ten" of those on board escaped to "Midanao," and "the kings of Maluco sent for them. These were the first 'Espanhoes,' that came to the Islands of Cloues, which stand from the equinoctiall line towardes the north in one degree, where they liued seuen or eight yeeres."

"1513, March 11th" (Nicol.), Julius II. succeeded by cardinal John de Medici, now Leo X., sixty-third pope. Henry VIII. ruling England: and in Scotland "Sept. 9th," James IV. succeeded by his son James V.

"The same year" (Churchill coll.), unsuccessful attack on Aden by Alfonso de Albuquerque. Who sailed thence into the Red Sea, now first visited by European ships.

"Sept. 25th" (Churchill coll., and Markh.), from the Spanish settlement on the Gulf of Darien, Basco Nunez de Balboa journeying inland to a mountain crest, discovered the Pacific Ocean. On reaching its shore, he learned from the natives, that the coast trended South.

"The same year" (Ov. gen. hist. i. and nat. hyst. 83, and Humb. cosm. v.), Oviedo (who ascended Vesuvius "in 1501") sent to Terra Firma: — where he resided in the town of Sancta Maria dela vera paz until his first return to Europe "in 1515." He ascended the volcano of Masaya in Nicaragua "in July 1529."

* *Metroxylon sp.* of the Western Equatorial portion of the Malayan archipelago. Discovered by Albuquerque on Sumatra — (Konig, and Spreng.).

According to Oviedo gen. hist. vi. 4, the boats of the *natives* are termed by them "canoas;" or by the Caribs, "piraguas," the latter at least being navigated with *sails*. A *stone hatchet* is figured; together with the process of *rubbing fire* with bits of wood (as among the Polynesians), vi. 4 and 5. A *drum* made of the trunk of a tree (as among the Polynesians and Feejeeans), is also figured, v. 1. Reports, that the natives (perhaps of the Isthmus) were acquainted with the art of *gilding* pieces of copper, had also reached Oviedo nat. hyst. 82.

"1514 A. D." (Alst.), Bajazet II. succeeded by his son Selim, eleventh Turkish sultan.

"The same year" (Alst.), end of the chronicle of Johannes Linturius.

"In this year" (A. Corsalis, Remus. i. 180, and Yule cath. i. p. cxli), a port in China first visited by the Portuguese. The adventurers were not allowed to land, but sold their goods to great profit.

"In this year" (Univ. Pittor., and Stanley edit. Barbos. p. ii and 46, San Roman giving "beginning of 1515"), the sultan of Ormuz having sent an ambassador to the king of Portugal, the city revisited by Albuquerque and his fleet, bringing the king's answer.

The above is the latest event mentioned by Duarte Barbosa, who after spending "sixteen years" on the Indian Ocean — "finished writing" his book "in 1516" (Stanley edit. Barbos. p. vii and 1).

Pogostemon patchouli of Tropical Hindustan. The *patchouli* is an aromatic Labiate herb two to three feet high, called in Bengalee "patchouli" or "pucha-pat," in Tamil "kottum," in Malabar "cottam" (Drur.), in the environs of Bombay "pach" (Graham); and from early times held sacred, its dried spikes and leaves sold in the bazaars as a most powerful perfume, and placed among clothing to keep out moths: the "pucho" drug, imported according to Barbosa into Malacca, — may be compared: P. patchouli was observed by Rheede x. pl. 77 in Malabar; by Graham at Bombay, "in gardens, also wild in the Concans;" by Wallich, in Silhet, and the Cashmere shawls scented with its essential oil. Farther East, patchouli is brought in great quantities by Arab merchants from Penang; is used by the Chinese in scenting their so-called "India ink," is known to have been exported from China. But in Europe, has only within "a few years" become familiarly known (Drur.).

Dioscorea purpurea of Equatorial Africa? The *Pondicherry sweet-potato:* the "yname" on which the Pareni of Malabar support themselves, resembling according to Barbosa the root of the maize found in the island of Antilla, — may be compared: D. purpurea is described by Roxburgh; and according to Drury is "an excellent kind of *yam*, but only found in a cultivated state."

Dioscorea globosa of Tropical Eastern Asia. The *round white yam*, called in Burmah "myoukphoo" (Mason), is possibly the "yname" in question: — D. globosa is described by Roxburgh iii. 797, as observed in Hindustan; "is much cultivated" according to Drury, as "the best kind of yam, much esteemed both by" the natives and Europeans; was observed by Graham as far as Bombay. Eastward, by Mason v 64, "exotic" in Burmah and the most esteemed of the white-rooted kinds.

"1515 A. D." (G. de la Vega ix. 14, and Churchill coll.), Basco Nunez de Balboa, having transported across the Isthmus hewn timber and all the materials for ship-building, now sailing on the Pacific along the coast Southward. He gave to the new country the name of "Peru." News of the strange ship and people reached the Inca Huayna Capac.

The common rat, *Mus decumanus*, unknown in Peru before the voyage of Balboa — (G. de la Vega ix. 22).

"The same year" (Alst.), end of the chronicle of Paulus Langius.

"1516 A. D." (art de verif.), Kansu El-Gouri succeeded by Toman-Bay II., of the Borgite Memluk dynasty; — the last Egyptian sultan.

"In this year" (biogr. univ.), Gariopontus publishing his medical writings.

"In this or the following year" (Asher edit. Huds. p. lxxii), under the patronage of Henry VIII. of England, Sebastian Cabot continuing along the American coast as far as "68° N." (Herrar.) in a seeming Northwestern Passage — (afterwards called Davis's Strait). The "west coast" of this "strait up to 67° 30′" is delineated "on Cabot's great planisphere of 1544," now in Paris.

"In this year" (Major edit. Zen. p. lxvii to lxxix), Eric Walckendorf, archbishop of Trondheim, collecting documents and oral traditions respecting the lost Greenland colony, and submitted to the king a proposal for the re-discovery, — but was banished before a plan could be arranged; and died "in 1523" at Amsterdam. Expeditions were "in 1578" and during the two succeeding centuries, all mistakingly searching the Eastern coast, until the voyage of Graah "in 1828" fully demonstrated that the site of the colony was on the Southwestern coast (see Ivar Bardsen).

"1517, Jan. 8th" (art de verif.), Francisco Hernandez de Cordova sailing from Santiago de Cuba westward with three ships navigated by Anton. de Alaminos, at the end of "twenty-one" days discovered Yucatan.

"The same year" (Marcel p. 189), after defeating in Syria the Egyptian army, partly through the employment of *artillery*, entrance of the Turks under Selim into Egypt. Obtaining possession of the country, the sovereignty and spiritual authority were removed to Constantinople; the Memluks

were formed into an aristocracy; and the names of the Turkish sultans were from this time inserted on the coins issued in Egypt (Wilk. theb. and eg. p. 557).

"The same year" (Churchill coll.), Fernan Perez de Andrade, continuing the discoveries of the Portuguese, sailed through the Straits of Malacca as far as Cambodia and Chiampa; and returned "to Malacca to refit." — When the weather again became "seasonable," he resumed his voyage, and reached Quantung (Canton) in China. According to the Chinese account (topog. Cant., and Pauth. p. 473), in the "12th year tching-te," strangers from West called "Fa-lan-ki" (Franks), saying that they brought tribute, entered the river abruptly and with their terribly resounding cannon shook the place from afar. When the news reached government, an order was dispatched, To repel the strangers and suspend commerce. From this time, tribute or duties were seldom brought to Canton, but went into Fou-kien: until at length, the governor of Canton wrote and obtained leave to re-open commerce. At a later period (Churchill coll.), permission was granted to the Portuguese, to settle on "a little island opposite to the port of Canton," and on which they built the city of Macao.

"In this year" (Anderson, and Holmes), fifty French, Spanish, and Portuguese ships employed in the cod fishery on the banks off Newfoundland.

"The same year" (Alst. p. 514, and Blair), "Indulgences" remitting sin, distributed by the pope in Germany, denounced by Luther an Augustinian monk.

The *Reformation* thus inaugurated — received the name of *Protestant* twelve years afterwards at the Diet at Spires.

"1518 A. D." (N. Shaw edit. Champl. p. ii), Baron de Lery sailing with the intention of forming a settlement in North America; but after leaving his cattle and pigs on Sable Island and at Canso, was obliged to return to France. — The cattle multiplying on Sable Island were "of the greatest service to certain of" De la Roche's people, who were left there seventy-three years later.

"In this year" (Ovied. gen. hist. xvii. 10, and Churchill coll.), from Cuba sailing Westward along Yucatan, Juan de Grijalva found his course arrested by continuous land (Mexico).

"The same year" (Alst. p. 310), the last remnant of the Moors or Muslims expelled by Charles V. king of Spain. The *Inquisition*, employed in discovering them, — was introduced by him some years later into Belgium.

Scorzonera Hispanica of the West Mediterranean countries. Called in Britain *viper-grass* from the Latin "viperaria" (Prior); and not earlier than this year, its juice employed by "a Moore, a bondslave," in bites of the viper, or "escuerso" as called in Catalonia — (Monard., Parkins. th. 410, and Beckm.): Monardes in his printed work speaks of the "yerva escuerçonera" as known in these parts for thirty years: S. Hispanica is termed "scorzonera" by Matthioli (Targ.), "s. edulis" by Moench, "s. sativa" by Gatereau; is cooked and eaten, is known to grow wild in Spain and Southern France (Lam. fl. fr.), and according to Persoon occurs also in Hungary and Siberia.

"Sept. 25th" (Alst.), through the influence of Frederic elector of Saxony, Luther relieved from a summons to Rome, and allowed to plead his cause before the pope's legate at Augsburg. "Nov. 19th," a written demand received from the pope's legate and shown to Luther; who in consequence appealed from the pope to the general Council. "Dec. 8th," the reply of Frederic, refusing to expel Luther or compel him to go to Rome, "as his error had not yet been demonstrated."

"In this year" (Spreng.), Marcellus Vergilius of Florence publishing his commentaries on Diosc. — He died in "1521."

Narcissus calathinus of the Mediterranean countries. Described by Marcellus Vergilius, — and known to grow wild on the Appenines (Spreng.): met with farther East by Rudbeck elys. ii. 60. f. 5 (Pers.).

"In this year" (Stanley append. De Morga 404), a machine for distilling sea water, and thus procuring fresh water at a distance from land, used by Domingo Rivera. — The plan was tried by Quiros, and so far as regards the quality of the product, with entire success.

"In this year, or perhaps some years later" (D'Avezac edit. J. Cart.), French colonists with a supply of domestic animals sent by Lery and Saint-Just to Sable Island. The want of water proved an obstacle to settlement: but cattle and swine were left behind, — and multiplying, became a resource subsequently to a shipwrecked party who were compelled to remain "five years" on the island.

"1519, Jan. 1st" (Alst. p. 408 and 515), at Tigurum, Zwinglius preaching; regarded as the first "Orthodox" theologian.

"April 25th" (biogr. univ.), the Tunisians defeated in naval combat by the Genoese under Andreas Doria.

Senecio Saracenicus of Western Europe? Called in Britain *Saracens consoud*, in medieval Latin "consolida Saracenica" (Prior), in Germany "heidnisch wundkraut" (Trag.), and the "doria" herb,

brought by Andrēas Doria returning in his fleet from Africa — (Caesalp. xii. 42), may be compared: S. Saracenicus is however described by Braunsweig; was observed by Tragus i. pl. 163 in the woods of Germany and much used as a vulnerary; is regarded by Jacquin austr. pl. 186, Persoon, Fries, and A. Decandolle, as indigenous in middle Europe as far as Denmark. In Britain, was known to Parkinson th. 540, to Ray as growing spontaneously, was found by Mackay in woods near Bantry in Ireland, but occurring chiefly in suspected localities is regarded by Watson cyb. ii. 118 as probably exotic.

Senecio Doria of the Mediterranean countries. — Termed "dorea" in the Viridarium botanicum Italo-Hyspanum (a manuscript of A. D. 1731, Targ.); "s. altissimus" by Miller, "s. carnosus" by Lamarck fl. fr. (Steud.); described also by Linnæus; and known to grow in France and Germany (Jacq. austr. pl. 185, and Pers.).

"June 28th" (Alst.), Maximilian succeeded by the king of Spain Charles V., now elected emperor of Germany and Italy.

"The same year" (Churchill coll.), landing in Mexico of a Spanish expedition under Hernando Cortes.

"In this year" (W. B. Rye edit. De Sot. p. xii), Alonzo Alvarez de Pineda sailing from Jamaica under "orders to search for some gulf or strait on the continent towards Florida." After following the coast Eastward, and then Westward, making a careful survey and taking possession of the country, he fell in with Cortes, engaged at Vera Cruz. From this limit he turned backwards, and on his way "discovered a mighty river" (the Mississippi), "at whose mouth dwelt a considerable population."

"1520 A. D." (Alst., and art de verif.), Selim succeeded by Suliman II., twelfth Turkish sultan. Agreeably to the uniform practice with Turkish sultans (Marcel p. 200), the coins issued by him bear the date of his accession only.

"June 14th" (Alst.), by pope Leo X., a decree excommunicating Luther and ordering his writings to be burned. "Nov. 4th," by Frederic of Saxony, another refusal to comply with the pope's demand and deliver up Luther. "Dec. 10th," at Witemberg in the presence of a large assembly, the pope's decree publicly burned by Luther.

"The same year" (Clavig., and Humb. all. pict.), Montezuma II. succeeded by Cuitlahuatzin; and after "three months," by Quauhtemotzin, eleventh Mexican emperor.

The collection of living animals kept by Montezuma included an *American bison*, Bos Americanus (Henderson in Am. Nat. for 1872); showing communication with the plains of the Arkansas and Missouri.

"In this year" (Ciez. de Leon, and Markham edit.), the city of Panama founded by Pedrarias de Avila governor of Terra Firma. — The city was captured and destroyed by the buccaneer Morgan in "Feb. 1671," and the new city bearing the same name is "some miles" distant.

"The same year" (Ovied. gen. hist. iv. 4), rebellion of Negro slaves in the West Indies. Also, sailing from Hayti of two ships under L. Vazquez de Ayllon for the Florida coast: in "about Lat. 32°," he named a cape "Santa Elena," and beyond entered the river Chico (Santee); where he enticed natives on board and returned with "fifty" to Hayti (art de verif. contin.): the experiment proved a failure, for the captives could not be induced to labour.

"Aug. 24th" (Stanley edit. Mag., and Pigaf.), Fernando de Magalhaens or Magellan, a Portuguese in Spanish employ, with four small vessels on his way Westward to join his friend Francisco Serano at the Moluccas, leaving Port St. Julian in Patagonia; where he had quelled a mutiny. Magellan continued South, and "Oct. 21st in about 52° S." entered an opening leading to three channels; and of the vessels sent to examine one secretly deserted and returned homewards. Magellan unaware continued onward in his explorations, and after many days word was brought by the boats of a "sea great and wide:" Magellan now "began to cry," for he "had made up his mind to go as far as seventy-five degrees towards the antarctic pole." On "Wednesday, Nov. 28th," he left the Straits (which continue to bear his name), sailing on the Pacific "West-northwest."

Apium dulce of Austral and Western America. Larger and possibly distinct from A. graveolens, the leaves more divided and incised; called in Britain *celery*, in France "celeri," in Italy "sellaro" (Prior): the "appio," a "very sweet herb" growing near the springs, was eaten by Magellan's party for several days "from not finding anything else;" there "is also some of the same kind which is bitter:" — "Alexander's scurvy grass" was found in the Straits of Magellan by Drake: A. dulce was first met with by myself within the Tropics, along the seashore of Southern Brazil; afterwards, at the mouth of the Rio Negro in Patagonia; and in crowded beds lining the Southern shore of Terra del Fuego, upright and tall and almost edible; but in Chili along the Pacific, rare, spreading on the ground, and inedible; is known to grow from the Falkland Islands to Mexico (Lindl.); and was observed by Nuttall in California (acad. Phila. n. s. i. 183). In regard to cultivated *celery*, Belon at Constantinople found the "ache" blanched and called "selino;" in Western Europe, celery appears to have continued unknown until about the end of the Seventeenth century (Beckm., Miller, and

Prior); and in Egypt, was found by Clot-Bey confined almost exclusively to the pasha's garden, and only the root eaten. By European colonists, was carried to Hindustan (Graham); to Burmah (Mason); and to Northeast America. (Compare A. graveolens.)

"1521, Jan." (Humb. eosm. v), the use of the *log* to ascertain the rate of sailing, "cadena de la popa" and "corredera" of Pigafetta, first mentioned on Magellan's voyage.

"Jan. 24th" (Churchill coll., and Stanley edit. Mag.), at the end of "fifteen hundred leagues" in "about 16¼° S." Magellan discovered a small uninhabited island "with trees on it" and no anchorage around (a coral-island) and named it San Pablo; "two hundred leagues" beyond "in 11¾° S.," a similar small uninhabited island, from the number of sharks around, received the name of Tiburones: crossing the Equator and proceeding as far as "13° N.," suffering much from scurvy and want of food, on "Wednesday March 6th" a cluster of islands was discovered, which from their experience with the natives was named Ladrones. Continuing West, on "Saturday March 16th" Samar, one of the Philippines, was discovered (and the same longitude having been reached on the Moluccas by Antonio Dabreu sailing East, the division of the globe between Portugal and Spain was completed). Magellan visited the neighbouring islands of Mazzava and Sebu,* and warring against a chief on Matan, who refused baptism and submission to the king of Spain, was slain with several of his companions on "Saturday, April 27th." His successor Duarte Barbosa was soon afterwards slain with others by natives who had professed friendship, and the vessels sailed Westward: one of them was burned at sea, and the other two visited Palawan and the Northern part of Borneo, and having procured a native pilot, returned along the coast of Mindanao, and on "Friday Nov. 8th" reached Tidore in the Moluccas. "Dec. 21st," the Victoria, one of these vessels now in the charge of Juan Sebastian del Cano, leaving Tidore continued her voyage Westward; visiting on the way the islands of Burro, and Timor "in 11° S." (Galvan.).

"1521, March 6th" (Alst.), through Frederic, Luther furnished with letters of safe-conduct from the emperor Charles V., and invited to the Diet at Worms: where he explained his views before the princes of the Empire. Returning under proscription, he was concealed by Frederic in the castle of Warburg. Among those writing against Luther, Henry VIII. of England received from pope Leo X. the honorary title of "Defender of the church."

"In this year," (Spreng., and Winckler), Johannes Manardus of Ferrara writing his Epist. Medic. . . . — He died "in 1536."

Heracleum panaces of the Pyrenees? Observed by Manardus in a garden at Ferrara — (Spreng.); termed "h. setosum" by Lapeyrouse (Steud.), and attributed to the Appenines and Siberia (Pers.).

After "nine months" of this year (Clavig. iv. 55 to 61), end of the reign of Quauhtemotzin, eleventh and last Mexican emperor: the Spaniards under Cortes now obtaining entire possession of the country.

"1522, Jan. 21st" (Churchill coll.); sailing of Giles Gonzales Davila, with four ships built on the Pacific side of the Isthmus. After following the coast Westward as far as Nicoya in Nicaragua, he landed: one of his ships under the command of Andrew Nino, continued on "three hundred leagues" in all, as far as the Bay of Fonseca in Guatimala.

"The same year = 'kia-tsing,' 1st year of Chi-tsoung-sou-ti" or Chi-tsoung II., "of the Ming" or Twenty-third dynasty (Chinese chron. table). The Great Wall was repaired by Chi-tsoung II. (Pauth. 406).

"March 18th" (Alvo, and Stanley edit. Mag.), Amsterdam Island (North of St. Paul's) in the Indian Ocean, discovered by Sebastian del Cano in the Victoria. Continuing Westward, the Victoria entered the Atlantic, and on "Saturday, Sept. 6th" (according to the reckoning of those on board), arrived at

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* *Canarium album* of Anam and the Philippines. A pinnate-leaved Terebinthine tree called in Tagalo "pisa" or "pilaui," in Ylocano "anten" (Blanco); and the animé gum of Pigafetta, "wrapped up in leaves of palms or fig-trees" to make candles by the natives on Mindanao, — may be compared: C. album was observed by Loureiro on Anam; by Blanco, frequent on the Philippines, its mixed resinous juice wrapped in a frond of Corypha umbraculifera for illumination.

Ficus (*Covellia*) *odorata* of the Philippines. A small tree called in Tagalo "agos-os" (Blanco), and possibly distinct from F. oppositifolia: the natives on Mindanao according to Pigafetta in cooking rice first place inside the earthen pot "a large leaf which lines it all round internally:" — F. odorata was observed by Blanco rare on the Philippines, its leaves used by the natives for lining the interior of the pot in cooking rice, to impart an agreeable odour. (Compare F. oppositifolia.)

Dioscorea tugui of the Philippines. Called in Tagalo "tugui" (Blanco); and the "yams" seen by Pigafetta on Palawan — may be compared: D. tugui was observed by Blanco on the Philippines, much cultivated by the natives and much esteemed.

San Lucar in Spain, being the first ship that sailed around the World. The names of the "thirty-one" returning companions of Magellan — have been preserved by Herrera.

"The same year" (Alst. p. 308, 361, and 518), Belgrade in Hungary captured by the Turks under Sûliman II. After voting assistance to king Louis of Hungary, the assembly at Norimberg, responding to the request of pope Adrianus VI., Either to convince Luther by sound argument, or enforce the emperor's decree, declared against Luther's doctrines, and urged convening a general Council, to amend the condition of the church.

"The same year" (Purchas, and Holmes 1610), Bermuda visited, if not discovered, by John Bermudez.

At this time (according to Encycl. Meth., and Holmes) Newfoundland containing as many as fifty houses, belonging to European settlers of different nations.

"1525 A. D." (Alst.), at Brussels, two Augustinian monks having declared, They would be guided in their faith solely by the Bible, burned alive.

At the close of this or beginning of the following year (art de verif. contin.), Kicab-Tanub succeeded by his son Tecum-Umam, now "fifteenth" king of Guatimala at Quiché.

"1524, Jan. 17th" (letter in soc. Hakluyt, and Churchill coll.), under instructions from the French king Francis, Janus Verrazzanus of Florence sailing from a rock near Madeira. Continuing Westward, he came upon a new country in "Lat. 34°," the coast of fine sand, everywhere low, and covered with immense forests, "palme" (*Chamærops palmetto*), "lauri" (*Persea Carolinensis*), "cipressi" (*Taxodium distichum*); the natives wearing a covering of "certe erbe che stavano pendenti á rami degli alberi" (*Tillandsia usneoides*) interwoven with cords of "canape silvestra" (*Apocynum cannabinum*), and having "genere è di legumi" (*Phaseolus vulgaris*): he also met with "molte vite" bearing grapes "suave e dolce" (*Vitis vulpina*), "rose silvestre" (*Rosa Carolina*), "viole" (*Viola pedata*), "gigli" (*Lilium superbum*), deer (*Cervus Virginianus*), stags (*Cervus wapiti?*), and hares (*Lepus Americanus*). After proceeding fifty leagues Southward without finding a harbour, he returned and followed the coast Northeast. North of an opening (probably the mouth of the Hudson), he met with "quercie" (*oaks*), "cipressi" (*Cupressus thuioides*), "pomi" (*Cratægus tomentosa*),* "luculliane" (*Cerasus serotina*), "prune" (*Prunus maritima*), and "lupi cervieri" (*Felis rufa*); he reached "Lat. 41° 40′," and speaks of an island about as large as Rhodes "di grandezza simile alla isola di Rodi." From this point, he followed close along the coast "one hundred and fifty" leagues, and "fifty" leagues beyond met with "abeti" (*Abies nigra*), "cipressi" (*Thuia Occidentalis*), and like indications of a cold climate. In "Lat. 50°" he left the coast, and as appears by the date of his letter, reached Dieppe in France on or before "July 8th."

Thuia Occidentalis of Northeast America. The *Canadian arbor-vitæ*, clearly the "cipressi" seen by Verrazzanus at the Northern termination of his voyage, — and the "cedres" seen by Cartier around Chaleur Bay; T. Occidentalis was observed by F. A. Michaux from "Lat. 49°" to 45° and along the Alleghanies to the rapids of the Potomac; by myself, from 48° on the St. Lawrence to 44° along the Atlantic and 43° in central New York; by Elliot, on the Alleghanies of Carolina; and according to A. Gray, grows Westward as far as Wisconsin. Transported to France in the reign of Francis (Dodoens 858, and Spreng.) the "arbre de vie de Canade" is mentioned by Belon in 1553; trees under cultivation by Robin in Paris were known to C. Bauhin (edit. Matthiol.); and T. Occidentalis was observed by Clot-Bey and Figari in the gardens of Egypt.

"April 25" (art de verif. contin.), Pedro de Alvarado with an army from Mexico entering Guatimala.

"Sept. 6th" (Castanh., and San Roman, C. Correa giving "7th"), earthquake in Hindustan, experienced off the port of Chaul by Vasco da Gama on his Third voyage arriving as viceroy. He died "Dec. 24th," and was buried in the cathedral at Cochim; — but the cathedral together with the city and harbour were destroyed by the English "in 1806" (Stanley edit. C. Corr. 429).

"Nov. 14th" (Francisco de Xeres, and Churchill coll.), sailing of Francisco Pizarro from the Pacific side of the Isthmus. Following the coast farther South than any before him, he reached the

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* *Cratægus tomentosa* of Northeast America. The *pear-thorn* is a small tree, its fruit probably the "pomi" seen by Verrazzanus after passing the opening and before reaching Lat. 41° 40′: — "pommes" brought by the natives, were seen by Cartier in Chaleur Bay, and "aubespines" with fruit as large as prunes, along the St. Lawrence: a "white thorne" that "affords hawes as big as an English cherrie, which is esteemed aboue a cherrie for his goodnesse and pleasantnesse to the taste," was known to W. Wood on Massachusetts Bay: C. tomentosa was observed by Pursh on the Chaudiere; by myself, from Montreal to Western Massachusetts; by Torrey, on the Hudson to Lat. 41°; by A. Gray, "common" in central New York, and received from "Michigan, Illinois, and southwestward." Transported to Europe, is described by Linnæus, and Jacquin hort. i. pl. 28.

Equator; and landing with most of his men, sent the ship back for supplies. On the return of the ship, he continued South; — and after much delay, again landing and sending for supplies, he was joined by other ships bringing James de Almagro "who was at the chief expense of this enterprize."

"Towards the end of the year" (Ovied. nat. hyst. f. 14, and Asher edit. Huds. p. xc), Esteuan Gomez, now in Spanish employ, examining the American coast "in 40° and 41° N.;" finding the natives larger than those of Terra Firma, clothed in "cueros" leather, and furs, including "zebellinos" sables. His "great river" "in the neighbourhood of the cape De Muchas Islas," — afterwards called by Spanish seamen "Rio de Gamas," is clearly the North or Hudson river (see Spreng.).

"The same year" (Alst.), Luther's followers including monks who had married and cast the images out of churches, a demand by pope Clemens VII. through his legate in the assembly at Norimberg, That the elector of Saxony should purge his province of Lutherans.

"1525, February" (Alst. p. 521), the Freneh defeated in Insubria, and their king Francis taken prisoner and carried to Charles V. in Spain. — He was released in the following year, leaving as hostages two sons; and deeming the conditions unjust, entered into a treaty with pope Clemens VII. and the Venetians.

"The same year" (Alst. p. 308), Rhodes captured from the knights of St. John by a Turkish fleet.

"The same year" (Steinschneid. iii. 27), the bible first printed in Hebrew "with perfect masora." Corrected by Jacob ben Chajjim of Tunis.

"On the first Sunday of Lent" (according to his own account), Cortes on his land-journey from the city of Mexico to Honduras leaving Aculan; a populous and extensive province under the rule of Apospolon. Having detected a plot for the destruction of the Spaniards originated by his prisoner Quauhtemotzin, the ex-emperor and his assistant were put to death. From Trujillo — he returned by sea, leaving "April 25th," and after visiting Havana "reached the port of Chalchicuela" (Vera Cruz) May 24th. While writing this fifth letter (dated "Sept. 3d, 1526"), a messenger from the Pacific brought news of the arrival of a ship from the "Malucco Islands."

Juniperus thurifera of Mexico? A tree more than twenty-five feet high (Daubeny); and the "aromatic resin extracted from the pine tree," used according to Cortes by the natives of Aculan for "incensing their idols," — may be compared! J. thurifera is known to grow in Mexico (Pers.): but is termed "incenso" by Montigiano (Targ.), "j. hispanica" by Miller, and Lamarck enc. ii. 626, and occurring in the "kingdom of Murcie and Anatolie" (Cosson iii. 129 and A. Dec.), has clearly been transported by European colonists from one continent to the other.

"The same year" (according to his own account), Oviedo in Hayti, writing his "Natural hystoria de las Indias;" in which he refers to his "General y natural istoria de Indias." He mentions (according to Sprengel) *Vitis Indica;* and *Quercus salicifolia*.

Anona squamosa of the West Indies and neighbouring portion of Tropical America. The *custard-apple* or *sugar-apple*, called in Mexico "ahate" or "ate" * (Hernand. 340 to 454); observed by

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* *Anona reticulata* of the West Indies. The *bullocks-heart* or "anon" was observed by Oviedo gen. hist. viii. 18 in the West Indies, its fruit resembling the "guanabano," yellow; — the "ananes" on Cuba by the Portuguese companion of De Soto 5; A. reticulata by Jacquin obs. 223, and Macfadyen, wild on the mountains of Jamaica. By European colonists, was carried to Southern Brazil, observed under cultivation by Martius; and Westward across the Pacific to the Philippines, called in Tagalo "anonas" (Blanco); to the neighbouring islands, observed under cultivation by Rumphius i. 136; to Anam (Lour.); to Burmah (Mason); to Hindustan, observed by Rheede iii. pl. 30 under cultivation in Malabar, by Roxburgh in Bengal and called "noona" (A. Dec.), by Graham "in gardens and about temples" in the environs of Bombay, and called "ram-phul;" to the Mauritius Islands (Boj.), and called by the French "cœur-de-bœuf" (A. Dec.).

Lepidium Virginicum of Tropical and Subtropical North America. A *wild peppergrass*, apparently the "mastuerço saluage" seen by Oviedo nat. hyst. 80 growing abundantly: — L. Virginicum was seen in the West Indies by Sloane pl. 123; by Humboldt, on the mountain near Caraccas; by Chamisso, at St. Catherine's in Brazil; by Baldwin, on Bermuda and at 31° in Florida; by Croom, at 30° 30′; by Chapman, in "waste places, very common;" by Drummond, near Covington in Louisiana; by E. James, near the Rocky mountains; by Michaux, in Illinois; by A. Gray, along "roadsides" in central New York; by Elliot, in South Carolina; by myself, in waste places from 38° to 43° along the Atlantic; and "a plant like Knavers-mustard, called New England mustard," was known to Josselyn rar. 54 before 1670. Transported to Europe, L. Virginicum is described by Morison hist ii. pl. 21, and Linnæus; and for many years has continued springing up spontaneously in the lazaretto at Bayonne (Godron, and A. Dec.).

Heliconia bihai of Tropical America. Herbaceous and banana-like; the "bihaos," whose leaves

Oviedo in the West Indies — (Marcgr. 94); by Sloane, P. Brown, and Macfadyen, wild on Jamaica; by Descourtilz, both wild and cultivated in the West Indies; by Splitgerber, perhaps indigenous in the woods of Surinam; by Martius, wild in the forest on the Lower Amazon. By European colonists, was carried to Southern Brazil (Vellozo, A. Saint-Hil., and Mart.); and Westward across the Pacific to the Philippines, where it is called in Tagalo "ates," in Bisaya "yates" (Blanco); to the neighbouring islands (Rumph. i. 139); to Anam and Tropical China (Lour.); to Burmah, called there "au-za" (Mason); to Hindustan, observed by Rheede iii. pl. 29 in Malabar, called there "atta-marum," in Hindustanee "ata," in Bengalee "loona" or "meba," in Tamil "sita-pullum" (Drur.), in the environs of Bombay "seeta-phul," now "very generally cultivated all over India," and naturalized, growing "without any care" (Graham, and Royle); to Eastern Equatorial Africa, observed by myself on Zanzibar; to Yemen, called there "s'ferdjel hindi" Indian quince (Forsk.); to Egypt, called there "keschta" coagulated milk (Hasselq., Forsk. p. 102, Del.), and according to Clot-Bey ripening fruit; to Western Equatorial Africa, occurring only under cultivation (fl. nigr. 204, and A. Dec.); and after the visit of Forster to the islands of the Pacific, observed by myself on the Taheitian, Samoan, and Tongan Islands, and in Southeast Australia.

Jatropha curcas of the Cape Verd Islands. A large thick-stemmed shrub called *physic-nut*; doubtless furnishing the "auellanos para purgar" seen by Oviedo nat. hyst. 80 growing on Hayti, but not on Terra Firma: — J. curcas was observed by Descourtilz in the West Indies, no Carib name given, by Ruiz and Pavon in Peru, by Marcgrave 97, and Martius, in Brazil, but in foliage and habit appeared to me at home on the Cape Verd Islands, especially as a corresponding species belongs to Southern Arabia, under the same Desert climate. Possibly without European intervention, was carried to Zanzibar, observed by myself springing up spontaneously around dwellings: to Hindustan, observed by Graham "a very common shrub in Bombay and about villages throughout the Concan," used "as a hedge plant;" is called in Telinga "napalam," in Bengalee "baghbarinda," and according to Roxburgh, oil is expressed from its seeds, and its "leaves warmed and rubbed with castor oil" are applied by the natives to promote suppuration: to Burmah, observed by Mason v. 509 "exotic," planted for hedges, and its juice dyeing linen black: to the Philippines, called in Tagalo "tuba," in Ylocano "tavatava," on Gilolo "casla," but according to the natives unknown in former times (Blanco): to China, its oil according to Lindley "boiled with oxyde of iron forms a varnish used by the Chinese for covering boxes;" its seeds or nuts are powerfully cathartic.

"1526 A. D." (Prior), Treveris publishing his Grete Herbal.

"March 10th," the Description of North Africa by Leo Africanus completed.

Erodium glaucophyllum of the Egyptian Desert. Called in Egypt "tummæjr" or "kabsjie;" the "habhasis" of Leo Africanus 5, may be compared: E. glaucophyllum was received from Egypt by Dillenius elth. pl. 124 (Pers.); and was observed by Forskal p. 123, and Delile, in the environs of Cairo, growing in the Desert.

"June 25th" (Alst.), meeting of the Diet at Spires. In regard to the restoration of the church, an invitation was extended to Charles V. to visit Germany; To see the condition of things, and procure the assembling of a general Council. And at "the close of August," the session terminated.

"Sept. 13th" (Churchill coll.), by Alonzo de Salazar, on his way from Mexico to the Southernmost Ladrone Islands, an island discovered and named by him "S. Bartholemew."

"The same year" (Churchill coll.), by Sebastian Cabot, now in the Spanish service, the La Plata river ascended "two hundred leagues" to the Paraguay branch. Continuing up this branch "thirty leagues," he met with "a people that tilled the ground, which he had not seen before," and was compelled by them to return (see Ilex Paraguayensis).

In this year (Churchill, and Ciez.), arrival of a ship, sent by the governor of Panama to bring back Pizarro and his companions. Pizarro drew a line on the sand, and permitted all who wished to leave him: "thirteen" only remained behind. With these "thirteen," Pizarro "ten or twelve days" afterwards reached Tumbez, where he heard of the city of Cuzco. Following the coast as far as Santa in "S. Lat. 9°," he returned Northward, — and after "three years" absence arrived at Panama.

"In this year" (Garc. de la Vega), "the very year" that Pizarro "with his thirteen companions" entered Peru (Ciez. lxxvii), death of the Inca Huayna Capac. He was succeeded by his eldest son Huascar; who at his father's request permitted another son Atahuallpa to rule the kingdom of Quito.

"1527 A. D." (art de verif.), Kasiawabara succeeded by his son Gonara, now dairo of Japan.

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according to Oviedo nat. hyst. 80 are used for covering dwellings, — is referred here by Sprengel: H. bihai was observed by Swartz obs. pl. 5 in the West Indies. Transported to Europe, is described by Linnæus, and Jacq. hort. 25.

Chamædorea gracilis of Caraccas. A *palm* ten feet high; described by Oviedo — (Spreng.); and known to grow in Caraccas (Jacq. hort. schoenb. ii. pl. 247–8, and Pers.).

"The same year." (Alst. p. 308), the Hungarian king Louis defeated and taken prisoner, and the city of Buda captured, by the Turks under Suliman II. The library of king Corvinus, reported to have been on this occasion burned, — has recently been discovered intact in Constantinople.

"May 6th" (Alst., and Blair), by the forces of Charles V., Rome captured, and pope Clemens VII. with the cardinals confined in the castle of St. Angelo. Henry VIII. of England and Francis, agreeing by treaty to send an army to liberate the pope, he was "after the seventh month" released.

"The same year" (Alst.), founding of the Sect of Anabaptists.

"1528, Jan. 26th" (Alst.), at Berne in Switzerland, the images removed from the churches and various religious ceremonies abolished. The example was followed in the neighbouring villages, and soon afterwards, at Constance, and Geneva.

"March" (Galvan.), Alvaro de Saavedra, sent by Cortes, arriving at Gilolo, finding "the sea calme and winde at will" all the way across the Pacific.

"April 12th" (Cabeza de Vaca, and Churchill coll.), arrival of the expedition under Pamphilo de Narvaez on the North shore of the Mexican Gulf (and clearly West of the Mississippi). "Forty *horses*" were landed; with which he and a party proceeded, leaving the ships to follow, to find a "harbor where they might settle a town." They met with "walnut trees" (*Juglans nigra* or *Carya olivæformis*), "laurels" (*Persea Carolinensis*), "others called liquid ambers" (*L. styraciflua*), "cedars" (*Taxodium distichum*), "savins" (*Juniperus Virginiana*), "ever-green oaks" (*Quercus virens*), "oaks, pines" (*Pinus tæda*) "and dwarf palmettos" (*Sabal Adansoni*), also an animal with a "pocket in its belly in which it carries its young" (*Didelphis Virginiana*), "rabbits" (*Lepus palustris*), "hares" (*Lepus Americanus*) "bears" (*Ursus Americanus*), "lions" (*Felis concolor*), "mallards" (*Anas* . . . .), "night-herons" (*Ardea nycticorax*), "very fine pastures for herds," and "*beans*" and "*pumpkins*" (cultivated by the natives). The ships were wrecked, when they built five boats, which were completed "Sept. 20th." These were also wrecked, and the party reduced to "three or four" persons, — who after travelling "some hundreds of leagues across the country," succeeded in reaching Mexico.

"The same year" (art de verif.), in Japan, the title "dai-seogûn" conferred by Gonara on Jositir, son of Josifar, and twenty-fourth in descent from Joritomo.

"1529, March 15th" (Alst.), another meeting of the Diet at Spires. A decree was adopted, Prohibiting further innovations in religion until the assembling of a general Council. Against this decree, the elector of Saxony and several other princes protested; and were afterwards joined by different cities in Germany and Switzerland; and hence the origin of the name "Protestants." The reformers now began to take measures for their own safety, and at the "close of November" met in consultation at Smalcald.

"April". (transl. Buckingham Smith), Cabeza de Vaca among the aboriginals West of the mouths of the Mississippi, ate *blackberries* (Rubus trivialis) all this month: the women only had any part of the person covered, employing for clothing a moss that grows on the trees (*Tillandsia usneoides*): in travelling, many of the canes (*Arundinaria macrosperma*) were broken, so that they often tore his flesh: he speaks of extensive and beautiful plains, and distinctly describes the *American bison* (Bos Americanus): the Cutalchiches used for knives, flints a palm and a half long, and were ignorant of time either by the sun or moon, neither reckoning by the month nor year, but understanding the different seasons and positions of the stars: the "pears" (*Opuntia*) were green and so milky that they burned our mouths. — Passing the Rio del Norte, he began to see mountains, on which are small pines the seeds of which are eaten,* and met with a different people: these wore a *cotton* shirt (Mexicans), which they soap with a certain root that exceedingly cleanses (Wislizenus says the root of a *Yucca* is used for soap): poison was procured from a certain tree of the size of the apple yielding milk from the twigs (*Maclura?*). — Near the coast by the way of towns through which we came, more than a thousand leagues of inhabited country to San Miguel on the Pacific; where he arrived after being alone with the aboriginals "nearly six years," ending "in 1533."

"May" (Galvan.), returning from Tidore Eastward, Saavedra "had sight of a land" in "2° S.," and ran along it "aboue fiue hundred leagues" (New Guinea), "the people blacke and of curled haire" — called "Papuas" by the natives of Maluco.

In "4° or 5° S.," Saavedra turned Northward and crossing the Equator discovered an island which he called "Pintadas," the inhabitants being all marked (tattooed): a number of canoes came out and commenced a fight with slings, but Saavedra merely ordered sail to be shortened, and proceeded slowly without doing them any mischief. "A little beyond" in "10° or 12° N.," he found "many

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* *Pinus flexilis* of the Rocky mountains. Its seeds from early times eaten by the natives — (R. Brown jun.): observed by E. James on the Rocky mountains at the sources of the Arkansas, from the base as far as perpetual snow; and Pike ap. 22 saw some pine timber to the north of Chihuahua.

small low islands full of palme trees and grasse" and anchoring in the midst called them "Jardim;" finding the natives brutish, without laws and without industry, "in maruailous feare of fire because they neuer saw any," living on fish and "cocos," wearing "white clothing which they make of grass" (Micronesians), and by means of shells scooping boats out of the trunks of *pines* drifted here "at certaine times of the yeere." After leaving Saavedra died, and the ship put back to Maluco.

"The same year" (Alst. p. 308), Vienna besieged by the Turks under Suliman II.

"In this year" (Spreng.), count Hermannus, a Novenaar, writing his Epist. on plants.

Leontodon autumnale of Northern Europe and Asia. The *fall dandelion* is called by Gipsies "morsus diaboli minor," in Hesse "summer dorn," and is included in the "apostematica" of count Hermann de Neuenare — (Trag. i. 81 to 87): A. autumnale is described also by Fuchsius 320 pl.; is termed "hieracium chondrillæ folio glabro radice succisa majus" by Tournefort inst. 470; and is known to grow from Lapland and Russia throughout middle Europe (fl. Dan. pl. 501, Engl. bot. pl. 830, Lam. fl. fr., Vill., and Wats.); was observed by Forskal around Constantinople. Westward, by Hooker on Iceland; was received by him from Newfoundland; and clearly by European colonists was carried to New England, where it has become naturalized, and frequent in grassy situations.

"1530, Apr. 8th" (Alst.), general Assembly at Augsburg, On account of the Turkish war and the religious dissensions in Germany. The Augustan Confession, written by Melanchthon and sanctioned by Luther, was submitted by the Protestants to the meeting: a "Refutation" was read; and Charles V. made an address, Requiring the Protestants to return to the Church. The session was prolonged; and after futile attempts at reconciliation, several princes left and formed treaties with the Protestant cities for mutual protection. In view of the approaching vote for "king of the Romans" by the elector of Saxony, a Protestant meeting was convened seven days beforehand, at Smalcald "Dec. 22d," and a general federation formed; letters being sent even to the kings of France, England, and Denmark.

"The same year" (Alst.), the Capucin Order of monks confirmed by pope Clemens VII. And by Charles V. (Blair), the island of Malta, given to the Knights of St. John.

"The same year" (Alst. p. 284), by king Francis, professors of languages instituted at Paris: one of whom, Franciscus Vatablus, was skilled in Hebrew.

"The same year" (Churchill coll.), sailing from the Pacific side of the Isthmus of the Second expedition of Francisco Pizarro. Following the coast South, "and falling upon the town of Quapel, he took a vast booty of *gold, silver*, and *emeraulds*."

"1531 A. D." (Ciez. lix), by Francisco Pizarro, founding of the city of San Miguel near the Northern boundary of Peru and the first city established in that country by the Spaniards. — Pizarro narr. f. 16 travelled inland to Caxamalca and Xauxa "in 1533."

"The same year" (Schomb. edit. Ralegh), the Orinoko ascended by Diego de Ordaz as far as the cataract of Atures.

"In this year" (Alst. p. 308), Vienna for the second time besieged by the Turks under Suliman II.

"June 4th" (Alst.), meeting of the Protestants at Frankfort. Swiss cities desiring to join the Federation, were excluded on alleged doctrinal differences.

"In this year" letter of Hieronym Tragus to his "amico et domino Otho Brunfelsio" of Mayence, in which he confirms the statement, That the "angelicam et astranciam" are undescribed plants. Brunfels at this time (Spreng., and Prior) writing his Novum Herbarium, enumerating "chamæpitys" iii. 36, *Veronica prostrata, Plantago crassa* i. 25, *Viola palustris* i. 137, *Leucoium vernum* i. 129, *Betonica stricta* i. 88, "urtica iners femina" i. 152, *Lamium-laevigatum, Mentha rubra* ii. 76, "cardo paris" iii. 35 *Carlina acaulis*, "cynoglossa minor" i. 176, *Myosotis palustris* (Gesn. ii. fig. 77); *Ophrys myodes* i. 105. — He published two volumes "in 1532," died "in 1534," and the third volume was published "in 1537" (Spreng.).

Astrantia major of the mountains of middle and Western Europe. An Umbelliferous plant, probably the "astranciam" of Brunfels alluded to in this letter; — A. major is known to grow on the Pyrenees, the mountains of middle Europe, and the Appenines as far as Tuscany (Scop., Pers., and Nees). Transported to Britain, was found in 1840–41, seemingly wild near Ludlow on the border of Wales (A. Dec.). The roots according to Lindley are "acrid and purgative."

Veronica spicata of Europe and the adjoining portion of Asia. Described by Brunfels i.i. 36 — (Spreng.); termed "v. spicata minor" by C. Bauhin pin. 247 (Linn.), and Tournefort inst. 144, and known to grow throughout middle Europe (Oed. fl. Dan. pl. 52, Engl. bot. pl. 2, and Pers.): observed by Linnæus in dry sunny situations in Sweden; by Sibthorp, and Chaubard, in the Peloponnesus.

Sisymbrium sophia of the Uralian plains. An annual called in Germany "welsomen" (Fuchs.); described by Brunfels iii. 170, — termed "seriphium germanicum" by Tragus 338 (Spreng.), "seriphium absinthium" by Fuchsius pl. 2, "s. annuum absinthii minoris folio" by Tournefort inst. 226, and known to occur in waste places and along walls from Denmark throughout middle Europe (fl. Dan. pl. 528, Engl. bot. pl. 963, Lam. fl. fr., and Pers.); was observed by Sibthorp, and Chaubard, in the Peloponnesus and other parts of Greece.

Trifolium hybridum of Europe and the adjoining portion of Asia. Described by Brunfels iii. 48 —(Spreng.); termed "t. orientale altissimum caule fistuloso flore albo" by Tournefort cor. 27, and Vaillant par. pl. 22, and known to occur in cultivated and fallow ground from Sweden to the Mediterranean (Micheli pl. 25, Ehrh. phyt. 26, and Pers.): observed by Linnæus by the roadside between Stockholm and Upsal, also at Abo in Finland; by Sibthorp, and Chaubard, in meads in the Peloponnesus. "T. nigrescens, pallescens," and "Michelianum" of Decandolle, are regarded by Chaubard as not distinct.

Medicago lupulina of Europe and the adjoining portion of Asia. Described by Brunfels iii. 48, —and Fuchsius pl. 819 (Spreng.), and Dodoens pempt. 576; termed "melilotus capsulis reni similibus in capitulum congestis" by Tournefort inst. 407; known to grow in Italy and throughout middle Europe as far as Denmark, and in Britain from "supposed superiority as fodder" called *nonsuch* (flor. Dan. pl. 992, Savi, Engl. bot. pl. 971, Smith, and Prior). Eastward, observed by Sibthorp, and Chaubard, in Southern Greece and Cyprus, and in cultivated ground around Athens and Constantinople. From Europe, carried by colonists to Northeast America, where it continues to grow along roadsides and in grass-grown clearings in our Northern and Middle States.

Scilla bifolia of Europe and the adjoining portion of Asia. Called in Britain *star-hyacinth* (Prior); termed "hyacinthus martius" by Brunfels i. 184, —described also by Lonicer—(Spreng. comm. Diosc.); termed "ornithogalum bifolium germanicum cæruleum" by Tournefort inst. 380; and known to grow from Britain throughout middle Europe (Lam. fl. fr., Scop., and Jacq. austr. pl. 117). Eastward, was observed by Sibthorp, Hawkins, and Chaubard, from the mountains of Crete and the Peloponnesus to Constantinople.

"1532, July 23d" (Alst.), in view of the Turkish invasion, agreement by the Assembly at Norimberg, To refer religious dissensions to a general Council to be convened by the pope. "Aug. 2d," the decision was approved by Charles V.: and in the Diet at Ratisbon, he pledged his influence with the pope, to induce him to convene a general Council; and in case of delay beyond the allotted time, the matter should be referred to a future Diet of the Empire.

"The same year" (Churchill coll.), in Mexico, by an armed expedition under Nunho de Guzman proceeding Northwest, the provinces of Culiacan and Cinaloa discovered and subdued; extending along the Pacific to "twenty-eight degrees of north latitude."

"In this year" (Garc. de la Vega ix. 33, and Markh.), under the pretense of journeying in state to render homage to the Inca, Atahuallpa arriving with an army within a few leagues of Cuzco defeated at Quepaypa the forces of Huascar, and took him prisoner. Atahuallpa, being of mixed blood and a native of Quito, could not lawfully inherit; but entering Cuzco he summoned all the Inca chiefs of the Empire, and getting them in his power, several hundred in number, put them to death.—(In the words of an aged Inca chief in conversation with Garcilasso de la Vega ix. 39, If Atahuallpa "had been an Inca, he not only would not have committed those cruelties and abominations, but he would not even have imagined them: for the tradition of our ancestors was to do harm to no man, not even to enemies.")

Atahuallpa was shortly afterwards captured by Pizarro; yet by an order from his place of confinement caused the Inca Huascar to be put to death (Markh. edit. Ciez.).

"1533, June 30th" (Alst.), by the Protestant meeting at Smalcald, the proposed convening of a general Council in some city in Italy, declined.

"The same year" (Alst. p. 308), Vienna for the third time besieged by the Turks under Suliman II.—And as before, unsuccessfully.

"In this year" (Markham edit. Ciez. 35), Carthagena on the Gulf of Darien, not far from the mouths of the Magdalena, founded by Pedro de Heredia.

"Aug. 29th" (Markham edit. p. 300), Atahuallpa put to death by Pizarro. Who now, having acquired control of the whole country, inaugurated Manco Inca at Cuzco.—Manco continued always hostile to the Spaniards, but was unable to recover Cuzco, and "in 1553" was succeeded by the pensioned Inca Sayri Tupac.

"In this year" (Spreng.), Cornelius Petrus of Leyden publishing his Annot. Diosc.,* mentioning *Veronica longifolia.*

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* *Ribes nigrum* of Northeast America. The *black currant* is mentioned by Cornelius Petrus—(Spreng.), Dodoens, and Dalechamp; is termed "ribes sylvestre" by Tragus (C. Bauh., and Willd.); and is said to grow wild "in some parts of Europe and Siberia" (fl. Dan., Pers., and Lindl.). Westward, "currants" were seen along Massachusetts Bay by W. Wood i. 5; and "black currents," which "are reasonable pleasant in eating," by Josselyn voy. 72; "R. floridum" is known to grow from Lat. 54° throughout Canada (Hook.); was observed by Pursh from Canada to Virginia; by myself, from 44° to 42° along the Atlantic; by Torrey, as far as 41° on the Hudson; by A. Gray, in "woods, common" in central New York; by Beck, near St. Louis on the Mississippi; and "R. recurvatum" by Michaux 110 "ad ripas Larorum juxta sinum Hudsonis" (Pers.).

Geranium rotundifolium of Europe and the adjoining portion of Asia. Described by Cornelius Petrus, — and Fuchsius 205 (Spreng.); termed "pes columbinus" by Dodoens pempt. 61, "g. aliud secundum" by Dalechamp hist. 1277, "g. folio malvæ rotundo" by C. Bauhin pin. 318, and Tournefort inst. 268, and known to occur in cultivated ground from Sweden throughout Europe (Engl. bot. pl. 157, and Pers.); observed by Linnæus in Sweden, frequent in cultivated ground; by Cavanilles iv. pl. 93, in Spain; by Sibthorp, and Chaubard, frequent in the Peloponnesus and on the Greek islands.

Epilobium tetragonum of Subarctic climates. Termed "chamænerion glabrum minus" by Tournefort inst. 303, — and known to grow from Sweden throughout middle Europe (fl. Dan. pl. 1029, Curt. lond. ii. pl. 23, Pers., and Wats.), also as far as Tauria (Bieb.): was observed by Brotero in Portugal; by Forskal, and Sestini, in the environs of Constantinople. Westward, by Hooker in Iceland, and received by him from Canada as far as 64°, from the Rocky mountains and Northwest coast; was observed by Mertens at 57° around Norfolk Sound on the Pacific. (See E. montanum.)

Epilobium hirsutum of Europe and the adjoining portion of Asia. Described by Cornelius Petrus — (Spreng.); termed "lysimachia purpurea" by Fuchsius pl. 277 (Gesn. ii. fig. 74), "l. siliquosa hirsuta magno flore" by C. Bauhin pin. 245, "chamænerion villosum magno flore purpureo" by Tournefort inst. 303, and known to grow along rills throughout middle Europe (Dill. giss. 131, fl. Dan. pl. 326, Curt. lond. ii. pl. 21, and Pers.): observed by Linnæus in Sweden; by Sibthorp, about Constantinople and on the Bithynian Olympus; and is known to occur in Algeria (Boiss., and A. Dec.).

"1534, March 30th" (Alst., Blair, and Nicol. p. 337), the Protestant Reformation adopted by Henry VIII. of England: and an Act passed, declaring, That the king should be reputed "Supreme head of the Church of England." In Paris and some other places in France, suspected Protestants were seized, and on conviction burned alive.

One hundred and seventy-fifth generation. May 1st, 1534, onward mostly beyond youth: the Jewish writers, Elia Levita, and Joseph Karo: the Greek writer Arsenius of Monembasia d. 1535: Pelegrino Brocardi, Alciatus, Petrus Apianus, Paulus Jovius, Conrade Heresbache, Hieronymus Fracastor, Sebastian Munster, and Georgius Agricola d. 1555 (Pouchet): the medical writers, Andreas Vesalius founder of the science of Human anatomy, Gabriel Fallopius, Paracelsus: the botanists, Io. Iaxava, Aloysius Mundella: other writers, Francis Guicciardin; cardinal Bembo; Ludovicus Vives; Clement Marot; Rabelais; J. George Trissino; Martin Bucer; Hieronymus Vida; Lilio Giraldi; archbishop Cranmer; John Leland; Peter Aretin; John Sleidan; Robert Stephens; Adrian Turnebus; Annibal Caro; Budeus of Paris; Polydor Virgil: the painters, Gulio Romano d. 1546, Hans Holbein d. 1554, Francesco Mazzuoli called Parmigiano d. 1540, Jacopo Palma il Vecchio b. 1510, Polidoro Caldara da Caravaggio d. 1543, Danielle da Volterra d. 1566.

"In this year" (palm-leaf ann. Jag., and W. W. Hunter, Stirling giving 1533), end of the Gangetic dynasty, Kathanya Deva slain by the prime minister Gobind Bidyadhar, who now became king of Orissa. — He disputed with the Muslims the possession of Rajmahendri, and reigned "seven years."

"May 10th" (edit. Michelant), arrival of Jacques Cartier with two ships of sixty tons each at Cape Bonavista in "Lat. 48½°" on the coast of Newfoundland. Following the coast Northward, he reached the entrance of the bay of "Chasteaulx" (Straits of Belleisle) on the "27th" and the harbour of "Rapont" in "Lat. 51½°," where he was detained until "June 9th." He entered the harbour of "Brest" on the "10th:" in the course of a boat-excursion Westward, passing numberless islets he found a river which he named "Sainct Jacques" and a large ship there from Rochelle, the captain having missed his way, and going on board returned in her to "Brest:" the coast was frequented by people painted with certain tawny colours, clad in skins of beasts and wearing feathers in their hair, who came from the Southward in *birch*-bark canoes to capture *seals*. On the "15th," leaving "Brest" with his own vessels he sailed Southward about "twenty" leagues to a cape named by him "Double," and ascertained that it formed part of the main land. On the "16th," he followed the coast Southwestward about "thirty-five" leagues. On the "17th," with a violent Northeast wind he sailed "thirty-seven" leagues Southwestward to a bay full of round islets like dovecots, a cape he called "Royal" (Anticosti) being "seven" leagues distant South a quarter Southwest. On the "18th" the wind being adverse and violent, he returned towards cape "Royal" seeking a harbour, and discovered a wide bay with the Southern shore low, situated in "Lat. 48°½:" the wind continued adverse until the "24th," when he discovered a cape in the Southeast which he named "sainct Jehan," making his position about "thirty-five" leagues Southwest of cape "Royal." On the "25th," the weather continuing unfavourable, he discovered three islets covered with birds, and "five" leagues farther West, an island about "two" leagues in length and breadth which he named "Bryon:" land-

ing on "Bryon," he found fields of "blé sauuaige" (*Triticum repens*) and of peas in full flower,* "prairies" with odoriferous herbs and "frassiers" (*Fragaria vesca* and *F. Virginiana*), and a forest of beautiful trees, one acre of the soil being worth all Newfoundland; a cape "four" leagues distant,

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* *Lathyrus maritimus* of the seashore of Subarctic climates. The *beach pea* ("pisum maritimum" of Linnæus) probably the "poys en fleurs" seen by Cartier on Bryon Island and around Chaleur Bay: — L. maritimus was observed by Lapylaie on Newfoundland; by myself, on the seashore of New England to 42°; by Torrey, and A. Gray, to 40° 40′ at the mouth of the Hudson; by Nuttall, on the shores of Lakes Erie, Huron, and Michigan; by Mertens, around Norfolk Sound; according to Hooker, grows about Interior salines from the Saskatchewan to California, the mouth of the Columbia, and along the Arctic Sea to Bering's Straits; and according to Decandolle, along the opposite Asiatic coast to Kamtchatka and Okhotsk. Eastward, was observed by Hooker on Iceland; and is known to grow on the European seashore from Archangel to nearly 50°, but seems wanting throughout Siberia (Morison ii. pl. 2, Pers., and A. Dec.). In the Southern Hemisphere, has been observed at a single point, by J. D. Hooker in S. Lat. 47° in Araucania.

Rosa blanda of Subarctic America. Probably the "rosses de Provins" seen by Cartier on Bryon Island: — R. blanda was received by Aiton from Newfoundland and Hudson Bay (Pers.); was observed by myself at 47° 30′ on the Lower St. Lawrence and on the summit of Whiteface mountain in Northern New York; according to Hooker, grows from Bear Lake Lat. 65° throughout Canada; and according to A. Gray, from "Vermont to Pennsylvania and Wisconsin, chiefly northward," the "petals light rose-colour."

Rosa lucida of Northeast America. The *low wild rose*, probably the "roses rouges" seen by Cartier around Chaleur Bay, — and "eglantine" seen by Gosnold on Elizabeth Island (near Martha's Vineyard): "plentie of single damaske roses verie sweet" were seen by Higgeson around Salem (hist. coll. i. 119); and "wild damask roses, single, but very large and sweet, but stiptick," by Josselyn 58 in Eastern New England: R. lucida is termed "r. humilis" by Marshall; is known to grow in Newfoundland (Morrison, Dec., and Hook.); was observed by myself from 47° near Quebec to 40° along the Atlantic; by A. Gray, "common" in central New York; by Pursh, from New York to Carolina; by Schweinitz, at 36° in Upper Carolina; by Elliot, in Chatham County, Georgia; by Croom, as far as 30° 30′; by Chapman, "Florida to Mississippi, and northward, mostly in dry soil, common;" by Beck, as far as the Mississippi near St. Louis. Transported to Europe, is described by Ehrhart ii., and Dillenius pl. 245.

Conioselinum Canadense of Northeast America. Umbelliferous and somewhat parsley-like, probably the odorous "persil" seen by Cartier on Bryon Island: — C. Canadense was observed by Michaux at the mouth of the St. Lawrence (Pers.); by myself, frequent from 46° 30′ to 47° 30′ on the Lower St. Lawrence; according to A. Gray, grows from "Vermont to Wisconsin northward, and southward in the Alleghanies;" and according to Chapman, on the "high mountains of North Carolina."

Fraxinus Americana of Northeast America. The *white ash*: "frainnes" were seen by Cartier before entering Chaleur Bay: — F. Americana was observed by F. A. Michaux from Canada and New Brunswick to the Genesse, becoming rare in Southern New York and Pennsylvania; by A. Gray, "common" in central New York; by myself, from 46° to 42° along the Atlantic; by Pursh, from Canada to Carolina; by Croom, near Newbern; by Elliot, in South Carolina; by Chapman, "Florida to Mississippi, and northward;" and by Short, in Kentucky.

Fraxinus viridis of Northeast America. The *green ash*, possibly the "frainnes" seen by Cartier before entering Chaleur Bay: — Drummond found no species of Fraxinus North of 54°: F. viridis was observed by myself from 47° 30′ on the Lower St. Lawrence to 42° along the Atlantic; by F. A. Michaux, in the Western portion of Pennsylvania, Maryland, and Virginia; and according to A. Gray, grows "near streams, New England to Wisconsin and southward."

Ulmus Americana of Northeast America. The *American elm* sometimes called *white elm* (A. Gray), a magnificent tree, probably the "ormes blans" seen by Cartier before entering Chaleur Bay: — the "broad-spreade elme whose concave harbours waspes" was seen by W. Wood in Eastern Massachusetts: Drummond found no species of Ulmus North of 54°: U. Americana was observed by F. A. Michaux from 48° 20′ to Nova Scotia, the extremity of Georgia, and the Western States; by myself, from 47° 30′ on the Lower St. Lawrence throughout New England, growing especially on river-flats, and most luxuriant North of Lat. 40°; by Pursh, from New England to Carolina; by Chapman, in "low grounds, Florida, and northward;" by Nuttall, on the Arkansas; and by Say, as far as 49° on Red river of Lake Winnipeg.

Ribes (*Grossularia*) *cynosbati* of Canada. The *prickly-fruited gooseberry*, probably the "grouaiseliers blans" seen by Cartier around Chaleur Bay: — G. cynosbati was observed by Michaux in

he named "Daulphin" as marking the commencement of the fertile country, and from the heavy tide coming from the Southeast, he inferred the non-existence of a passage between Newfoundland and "terre des Bretons." On the "27th," he followed the coast West-southwest about "fifteen" leagues. On the "28th," he continued "ten" leagues to a cape of red land which he named "St. Pierre;" about "four" leagues beyond was another cape, and "five" leagues from this, an island which he called "Allezay." The wind coming from the South a quarter Southwest, he saw no land until the evening of the 30th. On the "1st of July," he landed in four places to examine the odoriferous and beautiful trees, "cedres, iffs pins" (*Abies Canadensis*), "ormes blans, frainnes, sauldres" (*willows*), and several others, none however fruit-bearing, and in unwooded tracts "grouaiseliers rouges" (*Ribes rubrum*) and "franboysses" (*Rubus strigosus*). On the "2d," he had entered a wide bay in "Lat. 47½°;" and on the "3d," found the Northern shore high and mountainous, covered with trees, and among them "cedres" and "pruches" large enough for masts of ships of "three hundred" tons or more (*Thuya Occidentalis* and *Abies nigra*); a cape in the South he called "Esperance," in the hope of finding a passage: on "Monday the 6th," in the course of a boat-excursion, had an interview with the natives in "forty or fifty" canoes; and on the 7th, trade was established, exchanging knives, bits of iron, and other articles for skins of beasts: finding that there was no passage, he named the bay "Chaleur;" and on "Sunday the 12th," sailed Eastward about "eighteen" leagues to cape "de Pratto," and anchored. "Five or six" leagues Northward was a river, which he entered on the "14th," and where he was detained by bad weather until the "25th;" visited by about "forty" canoes containing men, women, and children, more than "two hundred" in all, who had come to catch *mackerel*, and in language, manners, and costume, differing from the natives last seen; the men wearing only a small skin cincture with larger skins thrown over them, and having the head shaved with the exception of a long lock which is tied down with leather thongs; in their own country, which they leave only in the fishing season, grow "prunes," also "figues, noix" called "daheya" (*Juglans cinerea*), "poires, pommes" (*Cratægus tomentosa*), and other fruits, "febues" called "sahe" (*Phaseolus vulgaris*), and "groz mil comme poix ainsi que au Bresil" (*Zea mays*). On the "25th," the wind fair, he left the river and followed the coast East-northeast "twenty" leagues to where it turned Northwest. Continuing along the coast, on the "28th" he reached a cape in "Lat. 49¼°," and named it "St. Loys;" and on the "29th," reached land in "Lat. 50°." On "Saturday August 1st," he perceived other land in the North and Northeast, mountainous in the distance; following this Northeast, and on the "5th," having made in all only "twenty-five" leagues, he passed over in boats to land in sight in the South (Anticosti); on regaining the ships, a council was held, and it was decided to return to France. The wind becoming favourable, he followed the Northern land East-southeast "twenty-five" leagues to a low cape, where natives came on board without hesitation, stating that a captain Thiennot was there and had laden his ships with fish; the cape was therefore named "Thiennot." The direction of the coast changing, he sailed East-northeast, and on the 8th, saw Newfoundland between the "Granches" and cape "Double." On the "9th," he entered Blanc Sablon; and on the "15th," sailed thence for Saint Malo in France, where he arrived "Sept. 5th."

"In this year" (Ciez. xl.), the city of Quito founded by Sebastian Belalcazar.

"In this year" (Spreng.), publication at Cologne of the Botanologicon of Euricius Cordus. — He died before the close of the year (Winckler).

Gnaphalium uliginosum of Europe and the adjoining portion of Asia? Described by Euricius Cordus — (Spreng.), Rudbeck cat. 19 (Smith ed. fl. lapp), termed "g. longifolium humile ramosum capitulis nigris" by Ray angl. iii. 181, "elichrysum aquaticum ramosum minus capitulis foliatis" by Tournefort inst. 452, "filago palustris capitulis nigricantibus supina" by Ruppius jen. 157, and known to occur from Lapland and Russia throughout Europe (fl. Dan. pl. 859, Engl. bot. pl. 1194, Pers., and Wats.), also in Northern Asia (Ledeb.), but not on Caucasus. (A. Dec.): observed by Linnæus in Lapland and Sweden, chiefly in dried up pools by the wayside; by Sibthorp, in the Peloponnesus and around Constantinople; and was received by A. Richard from Abyssinia. Probably by European colonists was carried from one continent to the other; was observed by Hooker in Iceland; by myself, frequent in New England, but chiefly in the same situations as in Sweden; by Short, at Big-bone lick in Kentucky; was received by Torrey and A. Gray fl. ii. 427 from Newfoundland and California.

"1535, January" (Alst.), by king Francis, solemn supplications in the churches of Paris, To

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Canada; by myself, from 47° 30′ on the Lower St. Lawrence to 43° along the Atlantic; by A. Gray, "common" in central New York, and "especially northward;" by Pursh, in Canada and on the Alleghanies; by Chapman, on "mountains of North Carolina, and northward;" and was received by Hooker from Lake Huron. Transported to Europe, is described by Linnæus, and Jacquin hort. ii. pl. 123.

appease the Divinity; and on his journey home, six Protestants at different places brought forward and burned alive. Having in consequence rendered himself odious in Germany, Francis excused himself, asserting, That the persons in question "under the pretence of religion had been plotting against the state." "Dec. 6th," a Protestant meeting at Smalcald, delegates from Henry VIII. of England being present.

"Jan. 6th" (Ciez., and Markham edit. p. 250), the city of Lima founded by Francisco Pizarro.

"The same year" (Maunder), by the Spaniards under Almagro, the Peruvians driven out of Chili. — After "three years," the Spaniards in turn expelled through a general rising of the natives.

"The same year," the Peruvians of Cuzco found by A. E. de Guzman to have "lances, arrows, darts, *slings*," and "ayllas;" the latter "consisting of three round stones sewn up in leather, and each fastened to a cord a cubit long" (transl. in soc. Hackl.). — This singular and very efficient weapon called "*boleros*" by the colonists, continues in use as witnessed by myself among the Spanish herdsmen of Patagonia.

"The same year" (Churchill coll.), by Peter de Mendoza, a Spanish colony established at Buenos Ayres on the La Plata river.

"Aug. 15th." (edit. D'Avezac), after passing the Straits of Belleisle, arrival at Assumption Island (Anticosti) of Jacques Cartier with three ships on his second voyage. Returning to the Northern shore of the Bay, on the "19th" he anchored among seven high islands and named them "ysles Rondes." Proceeding up the great river (St. Lawrence) under the guidance of two natives (carried to France on his First voyage), "Sept. 1st" he entered the "Saguenay." Returning to the main river, he met with fishes as large as "merhoux" but entirely white (*Delphinapterus beluga*), living between the sea and fresh water, and called by the natives "adhothuys." On the "6th," he reached an island where were numbers of "grandes tortues" (*Chelonura serpentina*), and named it "ysle es Couldres" from the "noisilles" (*Corylus rostrata*) found in the forest. On the "7th," he reached fourteen islands, the beginning of the province of "Canada" (given in the vocabulary as the general name for town): the largest of these islands, ten leagues in length, he called "ysle de Bacchus" (now Orleans) from "vignes" called "ozaha" (*Vitis cordifolia*) first found here; among the forest-trees are enumerated, "chaisnes" (*Quercus rubra*), "hourmes, pins" (Strobus), "fresnes, noyers" called "quaheya" (*Juglans cinerea*), "pruniers" (*Prunus Americana*), "yfz" (*Abies Canadensis*), "sedres" (*Thuya Occidentalis*), "aubespines" with fruit as large as prunes (*Cratægus tomentosa*), and others, while underneath grew "chanure" as fine as that of France (*Apocynum*). He was visited by the chief Donnacona; and on the "14th," found a secure place for his vessels not far from the native town of Stadacone (the site of Quebec). On the "19th," taking his smallest vessel and two boats, he continued up the river; and until the "28th," proceeded without interruption through a fine country full of beautiful trees, including (in addition) "pruches" (*Abies alba* and *A. nigra* and *A. balsamea*), "boulx" (*Betula papyracea*), "sauldres" (*Salix* sp.), and "oziers" (*Salix* sp.); birds also being numerous, as "grues" (*Grus Canadensis*), "signes, oultardes" (. . . .), "cannes, alouettes" (*Sturnella Ludoviciana*), "faisans" (*Tetrao*), "perdrix" (*Colinus*), "merles" (*Turdus migratorius*), "mauuis, teurtres" (*Columba Carolinensis*), "chardonnereulx" (*Linaria*), "serins" (*Linaria*), "linottes, rossignolz, passes solitaires," and others: he also met with "raz sauuaiges" that live in the water (*Ondatra zibethicus*) and are as large as "connyns." On the 29th, leaving his vessel in a lake-like expanse (Lake St. Peter), he proceeded up the river in boats; and "Oct. 19th," reached Hochelaga, a native town at the foot of a mountain which he called "mont Royal" (Montreal): the town was circular in form and very populous, the chief or Agouhanna wearing a fillet of "poil de Herissons" (*Hystrix Canadensis*). He subsequently heard of a country in the Southwest, devoid of snow and ice, and producing "oranges" (*Diospyrus Virginiana*) "almandes, noix, prunes, & aultres sortes de fruicts," the natives continually warring with each other, but clothed in skins like themselves; Donnacona had been a moon in canoes in this direction to where were growing "canelle" called "adhotathuy" (*Sassafras officinale?*), and "giroffle" called "canonotha" (*Laurus benzoin?*). Returning down the river, the ships near Stadacone were enclosed by ice in the "middle of November." In further describing the country along the river, the following additional quadrupeds are enumerated, "cerfz" called "aionnesta" (*Cervus rangiferinus*), "dains" called "asquenondo" (*C. Virginianus*), "hours" (*Ursus Americanus*), "liepures" called "sourhamda" (*Lepus variabilis*), "connins" (*L. Americanus*), "martres" (*Mustela*), "regnards" (*Vulpes fulvus*), "loueres" (*Canis lupus?*), "bieures" (*Castor fiber*), "chatz sauuaiges" (*Felis Canadensis*), and "escureux" called "caiognem" (*Sciurus*): among birds, "oyes sauuages blanches" (*Anser*) and "grises" (*A. Canadensis*), "cannardz" (*Anas* sp.), "ramiers" (*Columba migratoria*), and "tarins" (. . . .): and among fishes, "macquereaulx, mulletz" (. . . .), "bars, sartres, grosse anguilles" called "esgneny," "lepelan" as good as in the Seine (*Osmerus eperlanus?*), "lamproys" called "zysto," and "saulmons" called "ondaccon," and in the fresh water "brochetz, truytes, carpes, braumes," and others: the natives keep *dogs* "noirs & blancs" called "agayo," cultivate "bled" called "ofizy" (*Zea mays*),

have also "febues" called "sahe" (*Phaseolus vulgaris*) "de toutes couleurs, non de la sorte des nostres," and "poix" (small-seeded var. of do.), "gros melons" (*Cucurbita maxima*), "courges" (*Lagenaria vulgaris*), "grosses concombres" (*Cucurbita polymorpha* var. *verrucosa*), and an herb which they dry in the sun and place lighted in a little horn "cornet" of stone or wood to draw in the smoke (*Nicotiana rustica*). In "December," both natives and French were attacked with scurvy, many dying — until in "April" a remedy was pointed out by the natives in the leaves and bark of a tree called "ameda" (*Pinus strobus* according to D'Avezac). "April 15th," the ice broke up. Having lost "twenty-five" of his companions, Cartier abandoned one of his ships, and "May 6th" with the two remaining sailed down the river. On the "21st" he reached the passage between Honguedo and (Anticosti) previously unknown, and Cape "de Prato," the beginning of the Bay of "Challeur;" on the "1st of June," Cape "de Lorraine" in "Lat. 46½°" (island of Cape Breton); on the "16th," Cape "de Raze;" in a harbour near this Southeastern extreme of Newfoundland he left one of his ships, and on the "6th of July" reached St. Malo in France.

"1536, June 1st" (Alst. p. 533), in England, queen Ann Boleyn?, wife of Henry VIII. beheaded.

"July 7th" (Alst.), letter to Protestants from Charles V.; declaring, That he would not make war against any one on account of religion, nor would he excite commotion in Germany.

"In this year" (Winckl., Spreng., and Prior), Jean Ruel or Ruellius publishing his Natura Stirpium.* — He died in "1537."

Jacaranda ovalifolia of Tropical America. A Bignoniaceous tree furnishing the *rosewood* of commerce (Royle ind. resourc.), the "lignum rosaceum" described by Ruel i. 23 and iii. 96 as heavy and knotty, from an arborescent shrub growing in the New World. — The material continues to be largely exported for ornamental woodwork.

"In this year" (Spreng. and Winckler), Antonius Musa Brassavolus of Venice publishing his Exam. Simplic. — He died "in 1555."

Convolvulus (*Batatas*) *Imperati* of the seashore of the West Indies and Florida, and as far as the Azores, Canaries, and the Mediterranean. A prostrate species, the "brassica marina" of Brassavolus, — according to Sprengel: B. Imperati is described also by Morison i. pl. 7, Barrelier pl. 856, and Cyrill. i. pl. 5; was observed by Delile on the Mediterranean shore of Egypt; is known to grow also on the seashore near Naples (Pers.), and on the Canaries and Azores Islands (Vahl, Wats., and A. Dec.). Westward, "B. littoralis," regarded as probably identical, was observed by Plumier i. pl. 90 in the West Indies; by Michaux, in Florida and Georgia; by Baldwin, from 29° to 31°; by Elliot, on the seashore of South Carolina; by Chapman, in "drifting sands along the coast, Florida to South Carolina." The genus Batatas being American, seeds may have floated in the Gulf stream to germinate on the opposite shore of the Atlantic.†

"In this year" (Spreng.), Carolus Stephanus publishing his Libell. Hortens. — He died "in 1564."

"In this year" (Galvan.), by direction of Cortes, Fernando de Grijalva and Alvarado crossing the Pacific under the Equator arrive at the islands producing cloves, but the natives would not allow them to land, referring them to Antonio Galvano commanding the castle on Ternate.

During his stay on Ternate, Galvano visited the summit of the island throwing out fire, and on

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* *Triticum* (*Agropyrum*) *caninum* of Subarctic climates. Called in Britain *hound grass* or *dog grass* or *dog's-tooth grass*, in France "chien-dent" (Ainsw., and Prior); in which we recognize the "dentem canis" grass of Ruel ii. 62, — eaten by dogs according to Tabernæmontanus: T. caninum is described also by Morison viii. pl. 1, and Hudson; is known to occur along woods and hedges from Lapland to Switzerland and in Siberia (Pers., Kunth, and Wats.). Westward, was observed by Hooker in Iceland; by myself in New England, only in cultivated ground; by A. Gray, "sparingly naturalized in fields," and besides indigenous, "woods and banks, Western New York to Wisconsin, and northward;" according to Hooker, grows from Lake Winnipeg to the Saskatchewan and the Columbia river.

† *Guettarda speciosa* of the Malayan archipelago and Tropical islands of the Pacific. A Cinchonoid tree of medium size called in Malabar "ravapoo," in Tamil "puneer-marum" (Drur.); and the tree bearing "flowers at the sunne set, which fall down as soon as they be growne," seen by Galvano on Ternate, — may be compared: G. speciosa was observed by myself throughout the coral-islands of the Pacific, and submaritime around the high islands of the Feejeean and Samoan groups. Westward, is known to grow on Java (Pers.); was observed by Roxburgh in "Coromandel in gardens;" by Drury, in Travancore, its fragrant flowers "come out in the evening and have all dropped on the ground by the morning," an odoriferous water "very like rose-water" distilled from them by the natives; was observed by Rheede iv. pl. 47 in Malabar; by Lush, in the Bombay district at Dapooree (Graham).

the way found a stream of water "so extreme cold that he could not suffer his hand in it." — He left the island before "January 1545," and the last date in his History of maritime discoveries is "1550." Returning to Portugal, he was kept in a hospital "seventeene yeeres until the hower of his death" (Francis de Sousa).

The *honey-guide* (. . . .), a South African bird noted for indicating deposits of wild honey by flying from tree to tree, described to Galvano 43 by a Portuguese who had visited Sofala.

About this time (see G. de Tassy i. 385), the sect of the Sikhs founded, and their sacred book called the "Adi Granth" written by Nanak Schah.

"1537 A. D." (Alst. p. 217), Ferdinand, brother of Charles V., made king of Hungary.

"Jun. iv. non." (addit. art de verif.), Bull from pope Paulus III., prohibiting the *enslavement* of American tribes; hitherto practised by the colonists "sub prætextu quod fidei catholicæ expertes existant," under the pretence of not being Catholics. — The order was received by the viceroy of Peru in 1551.

"Early in 1538 A. D." (Markham edit. Ciez. p. v and 47), from Uraba on the Gulf of Darien Pedro Vadillo crossing the mountains proceeded up the valley of the Cauca to its source at Popayan. Cieza de Leon, after passing five years in America, now at the age of nineteen accompanying the party. — He returned to the Cauca in the service of Jorge de Robledo, was present at the founding of Antioquia in "N. Lat. 7°," and commenced writing his journal higher up the river at Cartago.

"In this year" (Galvan.), Marcos de Missa, a Franciscan monk, proceeding from Mexico Northward through Culuacan "came to the province of Sibola, where he found seuen cities" (pueblos) "of which he related marvels: and the farther he went, the richer he found the countrie of gold, siluer, precious stones, and sheepe" — (the *bighorn*, Ovis).

"Near the end of March" (Alst.), Protestant meeting at Brunswick. Christian III. of Denmark received into the Federation: and admission sought by the marquis of Brandenburg, and by the duke of Prussia.

"The same year" (Alst.), origin of the Sect of Antinomians: and their doctrines opposed by Luther. For the Protestant refugees from Belgium and France, a church set apart at Argentinensis, under the charge of Calvin. — Who continued there some years.

"The same year" (Kobell ii.), by volcanic agency near Naples, Monte Nuovo, a new mountain "four hundred and forty feet" in height, raised up in the space of "seven days."

"In this year" (Spreng.), Symphorianus Campegius of Lyons publishing his Campo elysio Galliæ.

"Friday, May 30th, 1539" (W. B. Rye edit. De Sot. 7), Ferdinando de Soto landing with "two hundred and thirteene horses" at the port of Spirito Santo on the West side of Florida. At the end of "two leagues," on "Sunday, June 1st," he reached the native village of Ucita, the chief's house "neere the shore upon a very hie mount, made by hand for strength." A Spaniard named John Ortiz, left behind by Narvaez, unexpectedly making his appearance, friendly communication was opened with the natives. Gallegos "with fifty horsemen and thirty or forty footemen" was sent "thirty leagues" Northward to the village of Paracossi, chief of the Florida tribes. De Soto arriving with most of his men, all now proceeded "towards the west," crossed a river where were "low palme trees like those of Andaluzia" (*Sabal Adansoni*), and finding at every village "some beetes" (*Chenopodium ?*) which were eaten "sodden with water and salt," reached Cale, but the town was deserted. Leaving "Aug. 11th," after gathering "maiz," on a "seven daies journie" for Apalache, where Narvaez built "barkes" and left the country, De Soto was opposed by the natives and only on "Tuesday, Oct. 27th," reached Anaica Apalache; the sea being "ten leagues" distant. A young man, taken prisoner, said he came from Yupaha, a country "farre off toward the sunrising," governed by a woman and where gold was mined. — "Wednesday, March 3d," De Soto departed Northward for Yupaha, "with maiz for sixtie leagues." "Wednesday, 21st," he reached Toalli, and from this "towne" forward the houses instead of being "thatched with straw" were "covered with reeds in manner of tiles," were "verie cleanly, some of them had walles daubed with clay;" the men wore "deeres skins" "well corried," and "of the same leather they make shooes." On the "4th of April," he "passed by a towne called Altamaca;" and on the "10th" came to Ocute. Leaving on the "12th," he passed through the town of a chief named Cofaqui, and came to the province of a chief named Patofa, to "a fat country, beautifull, and very fruitfull;" whereas the country all the way from Spirito Santo "is a barren land, and the most of it groves of wild pine trees" (*Pinus tæda*, and *palustris*). Turning now Eastward, on the "26th" he was within a "two daies journie" of Cutifa-Chiqui (according to native tradition Silver Bluff on the East bank of Savannah river, in Barnwell district): after passing "through countries of divers languages," the people now understood the Yupaha lad, and as he had asserted were governed by a woman: the "woods are thin, and ful of walnut trees" (*Carya sp.*), "and mulberrie trees" (*Morus rubra*); and at the town "a dagger and beades" were found, that had been left by Aylon in the haven "two daies journie"

distant. Leaving "May 3d," and turning Northwest De Soto in "seven daies" came to Chalaque (Cherokee), the country for "an hundred leagues" being subject to the above-mentioned woman; thence in "five daies," to Xualla; thence in "five daies," passing "very rough and hie hilles, to Guaxule;" thence "in two daies journie came to a towne called Canasagua;" thence after journeying "five daies," to Chiaha "June 5th," where he found much "fat of beares" in "gourds" (*Lagenaria*), "great store of oile of walnuts" (*Carya*), and "a pot full of honie of bees" (*Bombus*), was received in a friendly manner, and rested "thirtie daies." Thence "in seven daies" to Coste "July 2d:" two Spaniards sent with natives "toward the north" to "province named Chisca," where was said to be "a melting of copper" and of a softer "metall of the same colour," brought back "an oxe hide" covered with "haire like a soft wooll" (*Bos Americanus*), having been taken "through a countrie so poore of maiz and so rough, and over so high mountaines, that it was impossible for the armie to travell that way." Leaving "July 9th," De Soto came to Coça (Coosa) on the "26th," the country "greatly inhabited," and "in the fields many plum trees, as well of such as grow in Spaine" (*Prunus umbellata*), "as of the countrie" (*P. Chicasa*), "and wild tall vines that runne up the trees" (*Cissus indivisa*), also "low vines with big and sweet grapes" (*Vitis vulpina*). Leaving "Aug. 20th," he came to Tallise "Sept. 18th," and after resting "twenty daies" proceeded to Tascaluca (the chief according to Biedma having always near "a man whose duty it was to keep off the flies," *Musca domestica*); and on "Monday, Oct. 18th," came to Mavilla (Mobile), a walled town "sixe daies journie" from the port of Ochuse, where Maldonado was in waiting. Without communicating, he captured the town, defeating the natives, and on "Sunday, Nov. 18th," departed Northward and Westward. After travelling "five daies" to "a province called Pafallaya," thence to the town of Cabusto near a great river; thence "five daies," and across another river, to Chicaça, "a small towne of twentie houses," arriving "Dec. 17th." Suffering ensued from cold, for "it was now winter and it snowed before" his people could "make themselves houses."

"In this year" (Major edit. Zen. p. lvii), Olaus Magnus Gothus, exiled archbishop of Upsal, publishing at Venice a map of the three Scandinavian kingdoms: — "in 1557," he annexed the map to the Gothic History by his brother Johannes Magnus.

"In this year" (Spreng., and Winckler), Joh. Roderic de Castello Blanco or Amatus Lusitanus publishing his enarat. in Dioscor., enumerating *Empetrum album*. — He was born in Portugal, lived in Antwerp, and published subsequent editions "in 1553 and 1554."

Lygeum spartum of the more Southern Mediterranean countries. A grass with very large glumes described by Amatus Lusitanus 471 — (Spreng.), and known to grow in Spain (Pers.): observed by Delile on the Mediterranean shore of Egypt.

"In this year" (Winckl., and Spreng.), Hieronym. Tragus publishing his New Kreuterbuch, enumerating "quinquefolium" *Potentilla verna*, "quinquefolium quartum" pl. 507 *Potentilla alba* (Schmied ed. G. ii. p. 61), "rapunculum-sylvestre" *Phyteuma spicata*, "heraclea" *Stachys sylvatica*, *Valeriana dioica* f. 23, *Cyperus flavescens* f. 259, *Rumex acetosella* 119, *Stellera passerina* 203, *Pedicularis sylvatica* f. 96, *Genista sagittalis* f. 230, *Hypericum humifusum* f. 27, *H. pulchrum* f. 28, *Hypochoeris maculata* f. 105, *Inula Germanica* f. 185, *Achillea nobilis* f. 180, *Gymnadenia odoratissima* f. 297, and *Aspidium spinulosum* f. 207; — a second edition "in 1552," and died "in 1554."

Genista Germanica of Europe and the adjoining portion of Asia. Called in Germany "erdpfrymen" or "klein streichblumen" (Fuchs.); and the "genistella" of Tragus — is referred here by Sprengel: G. Germanica is described also by Fuchsius pl. 220; is known to grow from France Eastward (Lam. fl. fr., Sleicher, and Pers.); and was observed by Chaubard in the Peloponnesus.

Crepis tectorum of Europe and the adjoining portion of Asia. Described by Tragus 101 — (Spreng.); termed "hieracium secundum" by Tabernæmontanus 491, "h. chondrillæ folio hirsutum" by C. Bauhin pin. 127, "hieracioides vulgatissima pæne glabra annua folio longo dentato" by Vaillant act. 1715, and known to occur throughout Northern and Middle Europe (Ray angl. iii. 165, fl. Dan. pl. 501, and Pers.): observed by Linnæus in Sweden, frequent in arid situations and on the roofs of houses, a weed also in gardens, and very variable in form; by Chaubard, at a village on Taygetus.

Centaurea montana of the mountains of Southern Europe. Described by Tragus f. 84 — (Spreng.), and Barrelier pl. 389; termed "ciano maggiore" by Matthioli (Targ.), by Barrelier pl. 389, "cyanus montanus latifolius" by Tournefort inst. 445, "c. seusana" by Villars, "c. Triumfetti" by Allioni, and known to grow on mountains from Southern France to Austria (Jacq. austr. pl. 371, Bertol., and Pers.): observed by Villars, in Dauphiny; by Allioni, on mount Cenis; by Waldstein and Kitaibel, in Hungary; by Sibthorp, and Chaubard, in the Peloponnesus. In Britain, has escaped from cultivation in two widely-separate localities (Wats., and A. Dec.).

Bupleurum falcatum of middle and Western Europe. Described by Tragus 163 * — (Spreng.),

* *Stellaria graminea* of Northern climates. Described by Tragus 124, — and Dodoens p. 563 (Spreng.); termed "s. arvensis" by Hoffmann; and known to grow from Switzerland throughout

and Linnæus (Steud., and A. Dec.), and known to be frequent in calcareous soil throughout middle Europe (Jacq. austr. pl. 158, Moench, Hoffm., and Pers.): in Britain, was first observed "in 1832" in Essex (Engl. bot. pl. 2763), regarded however by Babington as probably indigenous, having escaped notice from its small size and scarcity. "B. petiolare" found by Lapeyrouse on the Pyrenees, is regarded as perhaps not distinct (Steud.).

Xylosteum vulgare of Europe and the adjoining portion of Asia. A flowering shrub termed "halimus" by Tragus — (Spreng.), "chamæcerasus dumetorum fructu gemino rubro" by Tournefort inst. 609, "lonicera xylosteum" by Linnæus, and known to grow from about the centre of France (A. Dec.) on the mountains of middle Europe: observed by Sibthorp on mount Parnassus. Cultivated for ornament, it has become naturalized in Britain (Bromf.), and perhaps as far as Denmark (fl. Dan. pl. 808).

Digitalis ambigua of the mountains of middle Europe. Termed "campanula flore luteo" by Tragus — (Spreng.), "d. lutea magno flore" by C. Bauhin herb. mss. (Dec., and A. Dec. 636), "d. ochroleuca" by Jacquin, and "d. grandiflora" by Lamarck (Steud.): observed by J. Bauhin hist. ii. 813 around Montbelliard, and according to P. F. Bernard continues to grow there (A. Dec.); by Pollich, and Roth, in Germany (Steud.).

Euphorbia exigua of Europe and the adjoining portion of Asia. A diminutive annual described by Tragus 112 — (Spreng.): observed by J. Bauhin in cultivated ground in central Europe, and so continues to the present day (A. Dec.); termed "tithymalus sive esula exigua" by Tournefort inst. 86, "e. retusa" by Cavanilles pl. 34 (Steud.), and known to occur from Spain and Montpellier to Denmark (fl. Dan. pl. 592, and Pers.): observed by Sibthorp, and Chaubard, one of the most frequent plants in cultivated ground from the Peloponnesus to Constantinople. In Britain, was already in cultivated ground in the days of Ray (Curt. lond. 4. pl. 36, and A. Dec.), of course exotic.

Euphorbia dulcis of the mountains of Southern Europe and the adjoining portion of Asia. Described by Tragus 112 — (Spreng.): termed "tithym. hirsutus montis Pollini" by Bobart — (Pers.), "t. montanus non acris" by Tournefort inst. 86, and known to grow on the mountains of middle Europe (Jacq. austr. pl. 213, and Pers.): observed by Haller 1052 in Switzerland (Davall); by Sibthorp, on the mountains of Greece and Asia Minor. In Britain, has escaped from cultivation in Moray county in Scotland (Wats., and A. Dec.).

Gomphrena globosa of Interior Brazil. The *globe amaranth* or *bachelor's button* is called in Japan "sennitsko" (Thunb.), in Tagalo "buqningan" (Blanco), in Burmah "ma-hnyo-ban" (Mason), in Sanscrit "amlana" or "umlana" (Roxb., and Pidd.), in the environs of Bombay "jafferee goondee" (Graham), in Yemen "aschek u maschuk" loving and beloved, or "zant habbeschi" or "sirr habbeschi" (Forsk.), in Egypt "ambar" (Del.), at Constantinople "mĕnthĕna" (Forsk.), in Spain "perpetuas" (Blanco): the "circæa" of Tragus 579 — is referred here by Sprengel: G. globosa was supposed by Breynius cent. i. pl. 51, and Commelyn hort. i. pl. 85, to have been brought from the East Indies: was seen by Blanco on the Philippines; by Thunberg, in Japan, here and there and often in vases; by Loureiro, under cultivation in China and Anam; was brought to Amboyna before the days of Rumphius v. pl. 100 "from Java," but on Java was seen by Blume only under cultivation; occurs also on Timor (Spanoghe), and Ceylon (A. Dec.); was observed by Mason "exotic" in Bur-

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middle and Northern Europe as far as Lapland, the Faroe Islands, and Greenland (fl. Dan. pl. 414 and 415, Pers., and Wats.). Eastward, is known to grow in Siberia (Wats.). Farther East, is known to grow from Unalascha to the Columbia river, and from Lat. 64° to 54° in central North America (Hook.); was observed by Beck near St. Louis; by Muhlenberg, in Pennsylvania; by A. Gray, in "grassy places, common" in central New York; and by myself along the Atlantic from Lat. 43° to 40°. By European colonists, was carried to Southeast Australia, where it has become naturalized, even in the Interior (Th. Corder in phyt. for 1845, and A. Dec.).

Allium vineale of Northern Europe? Described by Tragus 285 — (Spreng.): observed in Switzerland, by Haller 1221, — and Schleicher; by Thuillier near Paris (Steud.); and is known to occur in pastures and cultivated ground in Britain and Germany (Pers.). Was observed by Pursh in Northeast America; and according to A. Gray is "naturalized" in "moist meadows and fields, near the coast, June." The "A. Purshii" of Don seems not distinct.

Polypodium dryopteris of Subarctic climates. Called in Britain by "modern botanists" *oak fern* (Prior): described by Tragus f. 204 — (Spreng.); termed "filix pumila saxatilis" by Clusius hist. ii. 212, "f. ramosa minor pinnulis dentatis" by C. Bauhin pin. 358, "dryopteris" by Dillenius giss. 103, and known to grow throughout Northern Europe (. . . .): observed by Linnæus in woods in Sweden. Westward according to A. Gray, grows in "rocky woods, common northward" of central New York; was observed by myself around the base of the White mountains, in the upland forest; by Mrs. Horner, as far as 42° 30′ along the Atlantic (Robinson).

mah; by Rheede x. pl. 37, in Malabar; by Graham "common in every garden" around Bombay, its flowers worn by the native women "in their hajr;" by Forskal, in Yemen and Egypt, and at Constantinople; clearly by European colonists was carried to Northeast America, where it continues a favourite in gardens. In Tropical America, was observed by P. Browne around towns on Jamaica in 1789; by Descourtilz, also in the West Indies, but no Carib name given; by Aublet, in Guayana; by Martius, indigenous along the Yapura river in Interior Brazil: attracting the attention of Catholic colonists by the suitableness of its flowers for garlands, was probably carried across the Pacific in the first voyages of the Spaniards to the Philippines.

Chenopodium hybridum of Central North America? The *stramonium-leaved goosefoot*, the "fourth solanum" of Tragus 304, — according to Sprengel: C. hybridum is termed "c. stramonii folio" by Vaillant paris. pl. 7, "c. angulosum" by Lamarck; is known to occur in waste and cultivated ground from Sweden and Britain to Switzerland and Russia, fetid (Curt. lond. pl. . . ., Pers., and Wats.). Westward, was observed by A. Gray "common" in central New York; by Short, in Kentucky; by E. James, at Council Bluffs on the Missouri; by Nuttall, at the confluence of the Arkansas and Verdigris; and according to Watson occurs on the Hawaiian Islands.

Orchis variegata of the Mediterranean countries. Described by Tragus 296 — (Spreng.); observed by Haller 1275 pl. 30 in Switzerland, also by Allioni, and known to grow in France (Pers.): described also by Jacquin coll. ii. 267 and rar. pl. 599; and observed by Sibthorp, and Chaubard, in the Peloponnesus. "O. acuminata" observed by Desfontaines ii. pl. 247 in Algeria, is regarded by Chaubard as not distinct.

Briza media of Europe and the adjoining portion of Asia. The "ægilops" of Tragus p. 670 — is referred here by Sprengel: B. media is also described by Linnæus; is termed "gramen paniculatum majus locustis magnis candicantibus tremulis" by Tournefort inst. 523; is known to grow throughout middle Europe as far as Denmark, and in Britain on account of its trembling spikelets is called *quaking grass* (flor. Dan. pl. 258, Engl. bot pl. 340, and Prior). Eastward, was observed by Sibthorp on Cyprus and around Constantinople. From Europe, was carried by colonists to Madeira, where I found it abundantly naturalized in all open situations; to Northeast America, occurring along the Atlantic in grass-grown clearings and wild sunny situations; and to Southeast Australia and the Hawaiian Islands, appearing to me in both localities naturalized.

Asplenium Septentrionale of Northern Europe and Asia. A fern — termed "filix saxatilis tragi" by Lobel ic. 47, "f. s. corniculata" by C. Bauhin pin. 358, and Tournefort inst. 542, "acrosticum parvum septentrionale" by Petiver 742, and known to grow throughout Northern Europe (Engl. bot. pl. 1017): observed by Linnæus in Sweden, frequent in clefts of rocks; by Sibthorp, on the Bithynian Olympus.

"1539 to 1540 A. D." (Churchill coll.), Francisco de Ulloa sailing along the West coast of Mexico and "back of California," as far as "cape Engano in 30° N."

"1540 A. D." (Churchill coll.), passing Cape Engano, John Rodriguez Cabrillo continued along the coast as far North as "thirty-five degrees twenty minutes," anchoring at intervals: beyond Cape Galera, he entered a harbour and called it Port of Possession, "trading with the natives, who go naked, have their faces painted in chequers, and are all fishermen" (aboriginal Californians). Thence he "sailed to the northward as far as forty-four degrees."

"The same year" (Churchill coll., & Galvan.), in Mexico, a party under Francis Vasquez de Cornado journeying from Culiacan Northeast in a direct course "two hundred leagues," met with "beasts almost as bigge as horses, they haue very great hornes" (Ovis, the *bighorn*); "abundance of cows" (Bos, the *American bison* or buffalo); "pinhoes" (*Pinus flexilis*); "nozes" (*Corylus Americana*); "amoras" (*Morus rubra*); "ameixas" (*Prunus Chicasa*); "melaas" (*Cucurbita*); "huuas" (*Vitis Arkansana?*); "also flax growing wild" (*Linum perenne*).

"The same year" (Churchill coll.), in South America, Orellana leaving Peru, descended the river Amazon to its mouth, and thus crossed the continent.

"The same year" (Alst.), the Jesuit monastic Order founded by Ignatius Loyola, and confirmed by pope Paulus III.

"1541 A. D." (Alst.), end of the chronicle of Alexander Scultetus.

"In this year" (Humb. cosm. ii), printed letter of Copernicus renewing the ancient theory of the Universe, That the sun is the centre around which the Earth and other planets revolve. — The printing of his book "De revolutionibus" was completed "in 1543," a few days before his death on the "24th of May."

Phallus impudicus of Europe and the adjoining portion of Asia. A fungus called in Belgium "ongers eyeren" devil's eggs, and by the poet Hadrianus Junius "phallum" — (Dod. pempt. iii. 5. pl. 25): P. impudicus is termed "boletus phalloides" by Tournefort inst. 562, "ph. fœtidus" by Sowerby pl. 329; was observed by Sibthorp near Athens; and is known to grow as far as Britain (Schæff. iv. pl. 196 to 198, and Curt. lond. iii. pl. 72).

"February" (Maunder), after conquering part of Chili, the city of Santiago at the base of the Andes founded by Pizarro. He was assassinated at Lima by thirteen conspirators "Sunday, June 26th" (Markh. edit. p. 139).

"Tuesday, March 8th" (Portuguese narrat. 20, W. B. Rye edit.), in the night, the town of Chicaça burned by the natives: some of De Soto's men, losing their clothing, "invented the weaving of certaine mats of drie ivie" (*Berchemia volubilis*); and of "ash trees in those parts" (*Fraxinus quadrangulata*) "they made as good lances as in Biscay." Leaving "Apr. 25th," he "lodged at a small towne called Alimamu;" and after three or four days' preparation, "travelled seven daies" through "marishes and thicke woods" to Quizquiz. Removing thence to another town "halfe a league from Rio Grande" (the Mississippi), he found the river "almost halfe a league broad" and "of great depth," and there came down "continually many trees and timber:" the natives here brought "loaves made of the substance of prunes, like unto brickes" (*Diospyros Virginiana*); and after "thirtie daies" delay in building barges, he crossed the river (probably below the Arkansas). Continuing "through great townes of Aquixo, which were all abandoned for feare," and one "day till sunset" wading in water, after a "three daies journie" came "to the first towne of Casqui" (. . . .), a higher and dryer country, and the woods "verie thinne:" in the fields were trees bearing walnuts, soft shelled and "like unto acornes" (*Carya olivæformis*). Traversing the Casqui country in about four days, he came to "a lake like a brooke, which falleth into Rio Grande" and which was bridged by the natives, and on "Wednesday, June 19th," entered the town of Pacaha, where he rested "fortie daies." A "great lake" (bayou) "came neere unto the wall," and "from the lake to the great river was made a weare by the which the fish came into it." "Thirtie horsemen and fiftie footemen" were sent "seven daies journie" to "the province of Caluça;" "thence forward toward the north" according to the natives "the country was very ill inhabited" and "very cold, and that there were such store of oxen" (*Bos Americanus*) "that they could keep no corne for them, that the Indians lived upon their flesh." Returning now over the bridge, De Soto "tooke his journie toward Quigaute," a "hundred leagues" "toward the south;" arrived there "Aug. 4th," the town being "the greatest that was seene in" the whole country. Thence northwest, "forty leagues" to Coligoa, "on the bank of a meane river." Thence "toward the south," more than "five daies," to the "scattered" town of Cayas, where he "rested a moneth;" the horses drinking "of a lake of very hot water, and somewhat brackish" (hot springs and salines at the sources of the Washita), and the natives by evaporation procuring *salt*. Thence "toward the south, a day and a halfes journie," to Tulla: thence "toward the south-east" about "eighty leagues" and "over very rough mountaines (Ozark hills) to Autiamque; where he remained "three moneths," unable to travel "for cold, waters, and snow." John Ortiz, the only interpreter, died at Autiamque. — Leaving "Monday, March 6th," De Soto on the "29th" came to Nilco, on the same river (Red river) that "passed by Cayas and Autiamque, and fell into Rio Grande:" sending "a captaine with fiftie men in sixe canoes downe the river," De Soto followed by land, and on "Sunday, Apr. 17th," came to Guachoya, where he proposed to build "brigantines," but after naming Luys de Moscoso de Alvarado as his successor, died "May 21st." Leaving on "Monday, June 5th," Alvarado proceeded West, proposing "to go by land" to Mexico, and "July 20th" encamped between Amaye and Naguatex (Nacodoche); but "in the beginning of October," at a river called Daycao, "a hundred and fifty leagues" from the Mississippi and on the border of the country traversed by Cabeça de Vaca, he decided to return to Nilco. Leaving Nilco "in the beginning of December," he proceeded direct to the Mississippi at Minoya, and built brigantines; calking them with "tow of an hearb like hempe" called "enequen" (*Apocynum cannabinum*), as well as with "the flaxe of the countrie" (*Linum Virginicum*), and making cables "of the barkes of mulberrie trees" (*Morus rubra*). Of other plants met with, "Where there be mountaines there be chestnuts" (*Castanea Americana*) "somewhat smaller then" ours; a fruit "like unto peares riall," growing "on a plant like ligoacan" and having "a verie good smell and an excellent taste" (*Asimina triloba*), is planted by the natives "through all the countrie;" there groweth also "in the open field" a "fruit like unto strawberries, close to the ground, which hath a verie good taste" (*Fragaria Virginiana*): of animals, "wild hennes as big as turkies" (*Meleagris gallipavo* wild); and "certaine blacke birds bigger than sparrows and lesser than stares" (*Molothrus pecoris*). The brigantines being finished, Alvarado left "July 2d, 1543," on the same day "with the helpe of ores" floated past Guachoya, and at the end of "seventeene daies, which may be two hundred and fifty leagues," came to the sea. Following the coast Westward, he arrived "Sept. 10th in the river of Panuco" with "three hundred and eleven" men surviving, and proceeded to the town and church.

"Aug. 23d" (D'Avezac edit.), arrival of Jacques Cartier on his Third voyage at his former station in the St. Lawrence near Stadacone; in advance of Roberval or Jean-François de la Roque, who had been appointed lieutenant-general of Canada, Hochelaga, Saguenay, and the surrounding provinces. After sending back two of his ships, "Sept. 2d," Cartier proceeded up the river to examine the rapids above Hochelaga; and returned to winter at a fort constructed "four leagues" from the first one and called Charlesbourg.

"In this year" (Schmied. p. vi), Gesner at Montpellier collecting and communicating plants to Rondelet, one of the professors there.

"1542, end of May" (D'Avezac edit.), hearing nothing of Roberval, Jacques Cartier decided to return. Approaching the Straits of Bellisle, he met Roberval with two ships; but refused to turn back, and continued his voyage home to France. Roberval proceeded to the St. Lawrence, — where he passed the winter and remained as late at least as "July 22d, 1543."

"The same year" (Spreng.), arrival of Girolamo Benzoni of Milan in the West Indies. He met with the "guanauano" (*Anona muricata*) pl. 59 on Hayti; the "mamei" (*Mammea Americana*), and "guaiaua" (*Psidium guayava*), on both Hayti and Terra Firma; distinctly describes *chiggers* (Acarus), and a tree producing "zucche" of which the aboriginals make vases (*Crescentia cujete*) pl. 102; — speaks of the Peruvians carrying in their mouths an herb called "coca" (*Erythroxylon coca*), and having a root called "pape" (*Solanum tuberosum*); and returned to Europe in 1556. His narrative was published in Venice in 1565.

"In this year" (Humb. cosm. ii. note 425), one of the Hawaiian Islands discovered by Gaetano. And outlines of New Holland in the "Hydrography" of Joh. Rotz.

"In this year" (Galvan.), ships sent by Antonio de Mendoça, viceroy of Mexico, sailing along the Western coast of America came to a place called Sierras Neuadas "in 40° N.;" where "they saw ships with merchandises, which carried on their stems" alcatrazes and "other birds of gold and silver," and "seemed to be of the Isles of Japan, or of China, for they said that it was not aboue thirtie daies sailing unto their country."

"The same year" (Churchill coll., and art de verif.), Antony de Mota, Francis Zeimoto, and Antony Peixotto, three Portuguese merchants, driven by storms past China to the "Islands of Nipongi or Nifon," now first visited by Europeans; and settled there. The islands are by the Chinese "called Cipon, and by us Japan."

"The same year" (Alst. p. 259), by order of Suliman II., the walls of Jerusalem rebuilt, and pipes laid for supplying the city with water.

"In this year" (Spreng., and Prior), Leon. Fuchsius of the Tyrol publishing his Historia Stirpium, enumerating *Daucus gingidium* 786, *Stachys recta* 769, *Turritis Loeselii* 592, "chamaestyrax" *Satyrium nigrum* (Gesn. ii. fig. 66), *Veronica teucrium* 872, *Galium sylvaticum* 281, *Epilobium roseum* 491, "veronica femina" 167, *Linaria spuria*, *Digitalis lutea* 894, "ervum sativum" 572, *Lathyrus annuus*, *Colutea Orientalis* 446, *Trifolium campestre* 819, "buphthalmum" 144, *Pyrethrum inodorum*, "satyrium trifolium" *Habenaria bifolia*, *Urtica Balearica* 106, *Salix rubra* 334, *Polygonatum verticillatum* 586. — He died "in 1565."

Ranunculus auricomus of Subarctic climates. Described by Fuchsius 156 — (Spreng.); termed "r. primus sylvestris" by Dalechamp 1028, — "r. nemorosus vel sylvaticus folio rotundo" by Tournefort inst. 285, and known to grow as far as middle Europe (C. Bauh. pin. 178, fl. Dan. pl. 665, Curt. lond. ii. pl. 41, and Pers.): was observed by Linnæus frequent in Sweden; by Sibthorp, in woods on mount Hæmus and around Constantinople; by Bieberstein, on Caucasus; by Gmelin, throughout Siberia, and by Thunberg, in Japan. Westward, by Sabine in Greenland, and is known to grow in Labrador (Wats.). "R. affinis, ovalis, brevicaulis," and "cardiophyllus," growing along the Arctic Sea from Melville Island to Cape Mulgrave in Northwest America, also on the alpine portion of the Rocky mountains and as far South as Lake Huron, are regarded by Hooker as perhaps not distinct.

Ranunculus arvensis of Barbary? Described by Fuchsius 157,* — and Delechamp 1030; termed "r. sylvestris tertius" by Dodoens pempt. 427, "r. arvensis echinatus" by Bauhin hist. iii. 859, and Tournefort inst. 289, and known to occur in cultivated ground throughout Europe (fl. Dan. pl. 219, Curt. lond. vi. 36, and Pers.): observed by Linnæus in cultivated ground as far as Scania in Sweden; by Boiss., in Spain; by Moris, in Sardinia; by Gussone, in Sicily; by Sibthorp, and Chaubard, in cultivated ground from the Peloponnesus to Constantinople; by Bieberstein, in Russia and the Crimea; by C. A. Meyer, Southeast of Caucasus; but by Munby, in wild situations in Algeria (A. Dec.).

Nasturtium sylvestre of Europe and Northern Asia. Termed "eruca sylvestris" by Fuchsius

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* *Anemone ranunculoides* of Northern and middle Europe. Yellow-flowered, described by Fuchsius 162 — (Spreng.), and Linnæus; termed "a. nemorosa lutea" by Crantz (Steud.), and known to grow in the Scandinavian peninsula, Denmark (fl. Dan. pl. 140), Holland (prodr. fl. bat. 4), and here and there in Northern France (Lam. fl. fr.) as far as Paris and the departments of the Somme (Pauquy) and Eure (Breb.). Regarded by Watson as exotic in Britain and only naturalized, being first noticed by Hudson "in 1778;" seems unknown in Ireland (Mackay), the Channel islands and the department of Calvados (A. Dec.).

263, — "e. s. minor luteo parvoque flore" by C. Bauhin pin. 98, "sisymbrium palustre repens nasturtii folio" by Tournefort inst. 226, and known to grow in moist places throughout middle Europe (fl. Dan. pl. 931, Curt. lond. iii. pl 41, and Pers.), also in Tauria, Persia, and China (Dec., and Wats.): observed by Linnæus in Sweden; by Sibthorp, in marshy places on mount Hæmus. In the Southern Hemisphere is known to occur in Australia (Dec., and Wats.), possibly transported there by Malayans or Chinese. Clearly by European colonists, was carried to Northeast America, observed by C. J. Sprague in Newton near Boston (A. Gray).

Trifolium montanum of Europe and the adjoining portion of Asia. Termed "t. pratense album" by Fuchsius 818, — and Bauhin hist. ii. 379, "t. majus primum" by Clusius hist. ii. 245, "t. montanum album" by C. Bauhin pin. 328, and Tournefort inst. 405, and known to grow throughout middle Europe (Rivin. tetrap. pl. 12, fl. Dan. pl. 1172, and Pers.): observed by Linnæus in Sweden, abounding on arid hills; by Sibthorp, on the mountains of Crete.

Hypericum montanum of Europe and the adjoining portion of Asia. Termed "ascyrum" by Fuchsius 74, — "h. elegantissimum non ramosum folio lato" by Bauhin hist. iii. 383, and Tournefort inst. 255, and known to grow on the mountains of Northern and middle Europe (Col. ecphr. i. pl. 74, fl. Dan. pl. 173, Engl. bot. pl. 173, and Pers.): observed by Linnæus on the mountains of Sweden; by Sibthorp, and Chaubard, in the Peloponnesus.

Hypericum hirsutum of Europe and the adjoining portion of Asia. Described by Fuchsius 74 — (Spreng.); termed "h. majus sive androsæmum Matthioli" by Ray hist. 1000, "h. villosum erectum caule rotundo" by Tournefort inst. 255, and known to grow on the mountains of Northern and middle Europe (Columna ecphr. i. pl. 74, Moris. ii. 5. pl. 6, Curt. lond. iii. pl. 49, and Pers.): observed by Linnæus on the mountains of Sweden as far as Upsal; by Sibthorp, in the Peloponnesus.

Diplotaxis tenuifolia of Europe and the adjoining portion of Asia. Called in Britain *wall-rocket* (Prior); described by Fuchsius 539 — (Spreng.), and already in the days of Gerarde 192 common upon old walls (Sm. fl., and Bab.): termed "sinapi erucæ folio" by Tournefort inst. 227, "eruca sylvestris" by Blackwell pl. 266, "sisymbrium tenuifolium" by Linnæus, "brassica muralis" by Hudson, and known to grow along walls and among rubbish throughout middle Europe (Lam. fl. fr., and Pers.): observed by Sibthorp around Constantinople. Suspected by Watson to be exotic in Britain, perhaps on insufficient grounds (A. Dec.).

Brassica erucastrum of the West Mediterranean countries. Described by Fuchsius pl. 262, — and known to grow among rubbish in Southern Europe (Pers.): observed by Villars, in Dauphiny (Steud.); by myself, on Malta.

Veronica agrestis of Europe and the adjoining portion of Asia; termed "alsine media" by Fuchsius 22 — (Spreng.), and the "alsine foliis trissaginis" of Tabernæmontanus hist. 1089, and "a. chamædryfolia flosculis pediculis oblongis insidentibus" of C. Bauhin pin. 250, are referred here by Linnæus: V. agrestis is known to occur in cultivated and fallow ground throughout middle Europe (Tourn. inst. 145, and Curt. lond. i. pl. 1); was observed by Linnæus in Sweden; by Sibthorp, in shaded and cultivated ground on the Bithynian Olympus. By European colonists, was carried to Northeast America, observed in "sandy fields, rare" (A. Gray) in our Middle States, and in "cultivated ground" in our Southern States (Chapm.).

Blitum virgatum of the Uralian and Tartarian plains. Described by Fuchsius 174 — (Spreng.), and Morison iii. 5. pl. 32; termed "morocarpus foliosus" by Moench; observed by Pallas trav. i. 583 on the Lower Yaik; and known to grow in Tartary (Pers.). In Britain, has been found in one locality, near Edinburgh (Wats.), clearly exotic; occurs also here and there in Holland and the neighbouring countries (A. Dec.), and is perhaps exotic also near Narbonne and in Spain (see Pers.).

Teucrium botrys of Western Europe. An annual termed "chamaedrys femina" by Fuchsius 870 — (Spreng.); known to grow in stony calcareous soil in Normandy (Breb., Hard., Ren., and Lecl.), occurring also in cultivated ground (Pers.); observed by Moench in Germany (Steud.). In Britain, of late years has been found from time to time near Boxhill in Surrey (Wats.), but is regarded by A. Decandolle as probably exotic; and perhaps also exotic in Holland (prodr. fl. bat.).

Stachys Germanica of Europe and the adjoining portion of Asia. Called in Britain *woundwort*, its soft downy leaves being substituted for lint (Prior); described by Fuchsius 766 — (Spreng.); termed "s. major germanica" by Tournefort inst. 186, "s. lanata" by Crantz, and known to grow in woods from Denmark throughout middle Europe, occurring also about cultivated ground (fl. Dan. pl. 684, Jacq. austr. pl. 319, and Pers.): was observed by Sibthorp in sunny situations in the Peloponnesus. In Britain, though unknown to Gerarde, is regarded by Ray as indigenous; an opinion doubted by Watson on account of the few and wayside localities, but the plant according to A. Decandolle is more frequent on neighbouring portions of the continent.

Orchis sambucina of Europe and the adjoining portion of Asia. Described by Fuchsius 557 — — (Spreng.); termed "o. pannonica octava" by Clusius hist. i. 269, "o. palmata sambuci odore" by C. Bauhin pin. 86, and known to grow in mountainous situations throughout middle Europe (Tourn.

inst. 435, fl. Dan. pl. 1232, Jacq. austr. pl. 108, and Pers.): observed by Rudbeck elys. ii. pl. 213, and Linnæus, as far as Stockholm; by Sibthorp, and Chaubard, in the Peloponnesus.

Orchis pyramidalis of Europe and the adjoining portion of Asia. Described by Fuchsius 554—(Spreng.); termed "o. purpurea spica congesta pyramidali" by Ray angl. iii. pl. 8, "o. militaris montana spica rubente conglomerata" by Tournefort inst. 432, and known to grow throughout middle Europe (Jacq. austr. pl. 266, and Pers.): observed by Bergius in Gothland (Linn.); by Decandolle, in France; by Segnieri pl. 15, in the environs of Verona; by Sibthorp, and Chaubard, from the Peloponnesus to Constantinople.

"In this year" (Schmied, and Winckl.), after his Medicam. succiduor. "in 1540," Enchirid. plant. "in 1541," Gesner publishing his Cat. plant. latine, graece, germanice, et gallice.

"October" (Galvan, and Churchill coll.), from Mexico, sailing West, Ruy Lopez de Villalobos at the end of "a hundred and eighty leagues" discovered "two desart islands" in "eighteen degrees and a half of latitude," named by him "S. Thoma and Anublada. Eighty leagues further, they saw another, and called it Roca Portida. Seventy-two leagues beyond it, they found an Archipelago of small islands inhabited by a poor people" (Tarawan coral-range?).

"1543, Jan. 6th," they "passed by ten other islands, which for their pleasantness they called the Gardens, all of them in about nine or ten degrees of latitude" (Micronesian or Caroline Islands). And "Feb. 2d" saw land, that proved an island "three hundred and fifty leagues in compass," "a small island near" possessing *China-ware*, *musk*, *amber*, *civit*, *benjamin*, *storax*, other perfumes, also some *gold*. "July 3d" (Stanley edit. De Morga 15 and 394), a protest by "D. Jorge de Castro, governor of Ternate and the Moluccas," against Villalobos for having come with ships "to Mindanao and other Moluccas islands" beyond the prescribed meridian line of demarcation between the possessions of Spain and Portugal. The protest was received "Aug. 9th," and Villalobos replied, That the island where he then was "was within the Spanish limits," and that "he was getting his ships ready to seek another settlement further off from Maluco." The Portuguese governor "Sept. 2d" again requested Villalobos "to leave the island of Mindanao, which he had confessed he had no right to enter;" mentioning also "that according to report he had sent a ship" back to Mexico (in this century a vessel was wrecked on the Hawaiian Islands, and a peculiar Hawaiian head-dress has been conjectured to be modelled after a Spanish helmet; in fact agrees in outline with the helmet figured in the portrait of Legazpi published by the Hakluyt Society edit. De Morga); Villalobos replied "Sept. 12th" that "the islands of Maluco were known by name, and it was known what a different thing it was to trade with countries or to subject them;" he also "begged of the governor, as their sovereigns were brothers, not to give occasion for quarrels." The fleet of Villalobos "was broken up;"—this collection of documents was drawn up "Feb. 7th, 1544" by "Graviel Rebello, judge for the deceased;" and some of the Spaniards "who remained went away from Maluco through Portuguese India, and returned to Castile." There is "no trace of any protest by the Portuguese against the" Spanish occupation of the Philippines "in 1564."

"In the spring" (D'Avezac edit.), sailing from St. Malo of Jacques Cartier on his fourth voyage; under instructions from the king to search for the remains of Roberval's expedition. He was absent "eight months;" and the country on the St. Lawrence was abandoned by the French government—for more than half a century.

"In this year" (Sieb. eluc. Vries p. 4), one of the Bonin Islands seen by the navigator Bernado de Torres, and named by him Malabrigo.

"In this year" (Spreng.), Valerius Cordus, son of Euricius, enumerating *Anthericum liliago*, "philyrina" *Phillyrea media* v. 24, "coralloides altera" *Dentaria pinnata* (Gesn. ii. fig. 2), "damasonium calliphyllon" ii. 108 *Serapias palustris* (Gesn. ii. fig. 59), "hippion" 221 *Gentiana Bavarica* (Gesn. ii. fig. 83), "moschatella" f 172 *Adoxa moschatellina*, *Cytisus Austriacus* f. 187, "pseudocytisus" f. 188 *Cytisus nigricans*, "ixopus" f. 104 *Lactuca saligna*, "corruda" *Asparagus amarus*, "tulipa turcarum" hist. 213 *Tulipa Gesneriana* (Linn. sp. pl.).—He died "in 1544," and his writings were published by Gesner "in 1561."

Lythrum hyssopifolium of Europe and the adjoining portion of Asia. A small annual called in Britain *grass-poley*, the name "grase-poley" being first given it by Cordus—(Prior, and Willd.): L. hyssopifolium is described also by Gesner, Camerarius, C. Bauhin, Barrelier pl. 773, and Ruppius; is termed "salicaria hyssopi folio latiore" by Tournefort inst. 253; is known to grow throughout middle Europe (Engl. bot. pl. 292, and Jacq. austr. pl. 133); and was observed by Sibthorp, and Chaubard, frequent in moist places in Greece as far as the Peloponnesus. By European colonists, was carried to Northeast America, observed by myself naturalized in Eastern Massachusetts, often among grass, also by Short in Kentucky; to Austral Africa, and to Australia (Dec.).

Epipactis latifolia of Europe and the adjoining portion of Asia. Termed "alisma quorundam" by Cordus ii. 150—(Gesn. ii. pl. 61), "helleborine latifolia montana" by Tournefort inst. 436, "serapias latifolia" by Linnæus, and known to grow in woods from Denmark throughout middle Europe

(fl. Dan. pl. 811, Engl. bot. 269, and Pers.): observed by Haller pl. 40 in Switzerland, by Hoffman ii. 182 in Germany; by Sibthorp, and Chaubard, in woods in the middle region of the Peloponnesus.

Saxifraga cotyledon of Arctic Europe and alpine summits farther South. The "aizoon serratum" of Valerius Cordus 92, — and Gesner ii. fig. 27, may be compared: S. cotyledon is described by Matthioli 787, and Dalechamp 1195 (Spreng.); is termed "s. pyramidalis" by Lapeyrouse fl. i. pl. 11; was observed by Hooker on Iceland; by Bieberstein, on Caucasus; is known to grow in Lapland, Norway, and Sweden (Fries), on the Pyrenees (Lapeyr.), and on the Swiss Alps (Koch, and A. Dec.).

"The same year" (Royle resourc. Ind.), a *botanic garden* first established at Pisa.

Hibiscus (*Ketmia*) *trionum* of Equatorial Africa. A flowering annual known in Egypt as early perhaps as this year: — observed by Forskal in Yemen (but no locality given), by him, and Delile, in Lower Egypt. Farther North, was brought from Venice to Germany, and seeds were sent from Nurimberg to Tragus ii. pl. 143 some years before 1552, and about the same time was seen growing in Italy by Matthioli iv. pl. 63; is described also by Lobel, and Parkinson; is termed "ketmia vesicaria vulgaris" by Tournefort inst. 101; "h. africanus" by Miller; is known to occur as a weed in Carniolia and Italy (Scop., and Pers.); and was observed by Sibthorp, and Chaubard, in cultivated ground from the Peloponnesus to Cyprus. By European colonists, was carried to Northeast America, where it continues in gardens and from its quickly fading corolla is called *flower-of-an-hour*, has also been found springing up spontaneously (A. Gray).

"In this year" (Spreng.), the Franciscans, Bartholem. Urbevetanus and Angelus Palla Iuvenatiensis, publishing Commentaries on Mesue.

Onopordon acaulon of the Mediterranean countries. The "corona fratrum" of Barptolomæus Urbeueteranus and Angelus Palea, — is referred by Dodoens pempt. v. 5. 5 to a many-headed stemless thistle observed by him in Spain, its vernacular name being a translation of the above: O. acaulon is termed "carduus orientalis acaulos incanus et tomentosus dentis leonis folio" by Tournefort cor. 31; was observed by Sibthorp, and Chaubard, in the Peloponnesus, frequent and on the plain of Modon very troublesome. "O. Pyrenaicum," observed among the Pyrenees by Lapeyrouse (Dec. fl. fr.), is regarded by Chaubard as not distinct.

"1544, June 10th" (Alst.), at Spires, end of the session of the Diet; after a visit from Charles V., who promised, That the general Council should be convened in Germany.

"The same year" (Steinschneid. iii. 27), the Hebrew Pentateuch translated into Jewish-German by Michael Adam, assisted by Paul Fagius. — The Translation was revised by Jehuda ben Moses Naphtali sixteen years afterwards, and with subsequent additions "became, and in some parts of Poland and Russia continues to be a favourite book with women;" having "produced a lasting effect upon the Jews."

As early as this year (G. de la Vega, Herrera, and Acosta iv. 6 to 8), the silver mine of Potosi, "in S. Lat. 21° 40′" and at the elevation of "seventeen thousand feet" on the Andes, discovered by a native named Hualpa.* For some time he secretly worked the vein, — but at length communicated his discovery to the Spaniards, who commenced operations "in April 1545," as appears by register.

"1545, Dec. 13th" (Blair, and Nicol.), after years of delay, the Twenty-first general ecclesiastical Council convened at Trent by pope Paulus III. — The Council continued in existence eighteen years, until its concluding session "Dec. 3d, 1563."

Nasturtium amphibium of Northern Europe and Asia. The "cleoma" herb of Octavius Horatianus, growing in wet places and resembling "sinapi" — (Dod. pempt. iii. 4. 5), may be compared: N. amphibium includes the "sisymbrium a. aquaticum" and "s. a. terrestre" of Linnæus; is termed "s. a. heterophyllum" by Baumgarten, "s. roripa" by Scopoli, "eruca aquatica" and "radicula lancifolia" by Moench; was observed by Brotero i. 564 in Northern Portugal; by Scopoli, in Carniolia; is known to grow throughout middle and Northern Europe (fl. Dan. pl. 984, and Pers.); also on Caucasus (Bieb.); and was observed by Thunberg in Japan.

"1546, Jan." (Targ.), Montigiano publishing his Translation of Dioscorides, enumerating "guaraguasco femmina" *Verbascum nigrum*, "symphito petreo" *Coris Monspeliensis*, "terzanella" *Anagallis Monelli*.

Athamantha libanotis of middle Europe. Umbelliferous, termed "libanotide" by Montigiano — (Targ.), "l. Riviñi" by Baumgarten, "l. montana" by Allioni; described also by Gesner hort.

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* *Polylepis tomentella* of the Peruvian Andes. A graceful Sanguisorboid shrub or small tree called by the natives "queñua" (Markh.); and Hualpa in chase of deer climbing the steep part of the hill by catching hold of these shrubs, one of them gave way, disclosing native silver: — P. tomentella is described by Weddell; was observed also by Markham edit. 368 to 388 on various parts of the Peruvian Andes.

247 (Spreng.); and known to grow from Sweden to the Pyrenees, Switzerland and Carniolia (Pluk. alm. pl. 173, Engl. bot. pl. 138, Jacq. austr. pl. 392, Scop., Pers., and A. Dec.).

Mentha viridis of Europe and the adjoining portion of Asia. Called in Britain *spear-mint* or *spire-mint* from its spiry not capitate inflorescence (Prior), in France "menthe aiguë" (Nugent), and termed "menta domestica" by Montigiano — (Targ.): "spear-mint" is enumerated by Josselyn among the plants introduced by European colonists into New England; M. viridis was observed by Clayton 167 in Virginia; by myself from 45° North of the White mountains to 40° near Philadelphia, chiefly in wet places along roadsides; by A. Gray, in "wet places, common" in central New York; by Walter, on the Santee in South Carolina; by Michaux fl. ii. 2, in moist places in Georgia and termed "m. tenuis" (Pers., and Chapman). Eastward, is described by Dodoens pempt. 95 (Linn. sp. pl.), Ray, and Dillenius, but is regarded by Watson as exotic and only naturalized (A. Dec.); is known to occur seemingly wild in France, Switzerland, and Germany (Crantz, and Pers.); was observed by Chaubard in cool moist places in the Peloponnesus. Clearly by European colonists was carried to the Canaries, South America, and Austral Africa, and "oil of spearmint" and "spearmint water" are employed medicinally as "aromatic and carminative" (Lindl.): the use of the fresh leaves in preparing drinks called "julaps" is well known in North America.

"July 16th" (Alst.), in Germany, beginning of open war between Charles V. and the Protestants.

"The same year" (Spreng.), arrival of Petrus Belon in the East, on his visit to Constantinople and Egypt, meeting with *Aristolochia baetica*, *Caucalis Orientalis*, *Ephedra* altissima.

Diospyrus lotus of Northern China. The *false lote-tree* is called by the Turks "trebison chormasi" (. . . .); and the "cerasus trapezuntina" brought from Trebizond according to Belon, — is referred here by C. Bauhin: D. lotus was first planted at Padua by Fallopius, who supposed it to be guaiacum (Gerarde emend.); was received from Constantinople through Busbecke by Matthioli 211; is termed "guaiacana" by Tournefort inst. 600; is described also by Lobel, Cæsalpinus, Camerarius, Dalechamp, and Pallas pl. 58; has become well known throughout the Mediterranean countries (Pers.); was observed by Forskal p. xxvi, and Sibthorp, in gardens at Constantinople. Farther East, by Bunge, wild on the mountains of Northern China.

*Cerasus lauroc*erasus of the East Mediterranean countries. A *cherry-laurel*, called in Greece "thaphnōĕlthĕs" (Sibth.); seen by Belon in the East — (Spreng.), and "in 1576" introduced from Trebizond into Europe by Clusius — (Linn., Pers., and Daubeny): described also by Camerarius hort. pl. 23; termed "lauroc*erasus*" by Tournefort inst. 628; observed by Sibthorp in the Peloponnesus; and continuing under cultivation as far as Britain, where it is called simply *laurel* (Prior). Its leaves bark and seeds according to Lindley contain "prussic acid, which exists in great abundance in the distilled water: this is a deadly poison."

Mimosa (*Prosopis*) *agrestis* of Palestine. A twisted thorny shrub observed by Belon near Rama, — by Sieber near Joppa (Spreng.).

Thuya Orientalis of the mountains of Middle and Eastern Asia. The *Chinese arbor-vitæ* clearly "thuia" congeneric with the "arbre de vie de Canade" was seen by Belon in Crete, and apparently wild on the Taurus mountains along the Eastern border of Asia Minor: — T. Orientalis is described by Linnæus, and Lamarck ill. pl. 787; and is enumerated by Clot-Bey as planted for ornament in the gardens of Egypt. Eastward, was observed by Loureiro ii. p. 580 in Cochinchina; is known to grow in China (Pers.); and was found by Thunberg in Japan, abounding on mount Fakon and called "konote gassiiwa" or "fi no ki." By European colonists, was carried to the environs of Bombay (Graham); and to Northeast America, where it has become frequent in gardens, hardly however exceeding the dimensions of a shrub.

"1547 A. D." (Steinschn. iii. 30), *valves in the veins* discovered by Amatus Lusitanus.

"In the Sixteenth century" (Pouchet), the *diamond* first employed for *cutting glass*.

"1548, May 15th" (Alst., and Blair), by Charles V., the Interim book granted to the Protestants; a formula of religion to be used pending the sessions of the Council of Trent.

"In this year" (Prior), W. Turner publishing his Names of plants, enumerating *Ruta angustifolia*:* — he published his Herbal "in 1551," and died "in 1568" (Spreng.).

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* *Spartina stricta* of the seashore of Northern Europe. Called by Turner *cord-grass* from seeing the inhabitants of East Friesland "make ropes of that rishe, and thache their houses also wyth the same" — (Prior): S. stricta with "pubescent spikes and pungent leaves" is described by Roth, is known to grow on the seashore of France and Britain (Pers), and was observed by Brotero as far as Portugal (Steud.; compare A. Dec. g. b. 1052).

Lycopodium alpinum of the mountains of middle Europe. Called in Britain *heath-cypress* (Prior), a name "hethe cypres" given by Turner pl. who found it growing among heath on mountains above Bonn in Germany.

Atriplex portulaccoides of the seashore of Europe and the Mediterranean countries. Called in Britain *sea-purslane* (Prior), a name "see porcelline" given by Turner pl. who found the plant on Porbek Isle and frequent on the seashore of Friesland: — A. portulaccoides is described also by Plukenet alm. pl. 61; is termed "a. maritima angustissimo folio" by Tournefort inst. 505; continues on the seashore of Britain (Engl. bot. pl. 261, and Pers.); was observed by Sibthorp, and Chaubard, on the maritime rocks of Samos and other Greek islands; by Forskal, and Delile, along the Mediterranean shore of Egypt, near Rosetta and on islets within Lake Menzaleh.

Asperula arvensis of Europe and the adjoining portion of Asia. Described by Turner — (Spreng.), and Dodoens pempt. pl. 355; termed "gallium arvense flore cæruleo" by Tournefort inst. 115, "a. ciliata" by Moench, and known to occur in cultivated and especially calcareous soil in middle Europe (Pers.); was observed by Sibthorp, and Chaubard, in cultivated ground from the Peloponnesus to the Greek islands. Has recently made its appearance in Britain, in three widely-separated localities (Wats., and A. Dec.).

"September," Cieza de Leon lxviii. passing through the valley of Pacasmayu to join soldiers from Popayan on their way to Truxillo, Lima, and Xauxa, to chastise the rebellion. — "In 1549," he proceeded as far as the silver-yielding province of Charchas; and returning to Lima, "finished writing his notes on the 8th of September 1550, and sailed for Spain;" where he died "about 1560" (Markham introd. p. ix.).

"In this year" (Markham edit. p. 227), after holding the office of bishop of Lima eight years, Fray Geronimo Loayza now "the first archbishop." — He held three autos-de-fé at Lima, in one of which John Millar of Flanders was burned as a Lutheran, prior to the introduction of the *Inquisition* "in 1569:" at the first auto-de-fé under the Inquisition "in 1573," a Frenchman was burned as a heretic, Loayza dying "in 1575."

"The same year" (Hakluyt iii. 131, and Holmes), the first act of the English parliament relating to America, Prohibiting exactions from fishermen visiting Newfoundland. Sebastian Cabot; returning in this year to England, urged the possibility of a Northeast Passage; giving rise to the commercial association of "Merchant Adventurers," and the freeing of English commerce from the yoke of the Hanse Towns. — The association continues in existence (Asher edit. Huds.).

"1549 A. D." (Univ. hist. xxxix. 217, and Holmes), the city of Bahia or St. Salvador founded by the Portuguese: being "the first European settlement in Brazil." Joannes Stadius anchored "in this year" at St. Catharine, — and "in 1554," left the harbour of "Rio de Ienero," called "Ganabara" by the natives (De Bry).

As early as this year, Lucas Ghini corresponding with Matthioli. — He died "in 1556" (Spreng.).

"August 15th" (art de verif., and Thunb. trav. iv. 30), arrival in Japan of the first Christian missionary, the jesuit François Xavier; bringing three Japanese, whom he had converted at Goa.

"1550, February" (Alst.), in France, edict of Henri II., Against judges who should be too remiss in convicting persons of Protestantism.

In or about this year (Neal, and Holmes), refusal of bishop Hooper "to be consecrated in the popish habits:" the beginning of the controversy that led to the Puritan separation from the Church of England.

"April 22d" (Schmied. p. xii), letter from Gesner to his friend Io. Kentmann.

"In this year" (biogr. univers.) Adam Lonicer publishing botanical writings, enumerating . . . . — His Stirp. Histor. is quoted by Matthioli comm. 108, his Krauterbuch was published "in 1573" (Spreng.), and he died "in 1586."

"In this year, one year more or less" (G. de la Vega ix. 17), the ox-plough introduced at Cuzco, G. de la Vega * at this time a boy being present: the natives flocking from all quarters to witness the novel spectacle, and concluding, "That the Spaniards were too idle to work, and that they forced those great animals to do their work for them."

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* *Anona cherimolia* of Peru. The *chirimoya:* the "fruit in the country of the Antis" called by the Spaniards "manjar blanco" from resemblance "in colour and taste," of "the size of a small melon," having within "some small black pips which are not good to eat" contained in a "highly esteemed" pulp, "sweet and just the least bit acid, so as to increase its luscious flavour," — may be compared: A. cherimolia was observed by Feuillée iii. pl. 17, and myself, under cultivation in Peru; but is indigenous I was assured by Mr. Matthews in ravines towards the Equator. By European colonists, was carried to Venezuela and New Granada (Humb. and Bonpl.); to Brazil (Mart.) and the mountains of Jamaica (Macfad.); to the Cape Verd Islands and Guinea (fl. Nigr., and A. Dec.); and "in 1833" to the environs of Bombay (Graham).

"The same year" (A. Dec. geogr. bot. p. 874), arrival of Garcias at Goa.

"In the middle of the Sixteenth century" (Kobell iv.), in Bohemia, staining glass with cobalt ores, discovered by Christopher Schürer of Platten. — This stained glass pulverized, forms the pigment sold under the name of "*smalt* or cobalt-blue."

"In the days of their ancestors" (according to the account of the natives to Dillon ii. p. 112, Hale ethnogr. Expl. Exp.), Tikopia Island invaded by "five large canoes from Tongatabu, the crews of which committed great ravages."

"1551, February" (art de verif.), arrival of the jesuit François Xavier at court in Meaco: after "fifteen days," he returned without obtaining audience; and "Nov. 20th," left Japan for the Indies. On reaching his destination, and sending three of his colleagues, jesuits, to Japan, — François Xavier left Malacca for China, and died "Dec. 2d 1552" at the isle of Sancian on the coast of Quantong.

"In this year" (Schmied.), letter from Gesner to Benedict. Aretius; and Aretius sending plants to Gesner, including "anckenballen damasonii aliqua species" 235 *Cypripedium calceolus* (Gesn. ii. fig. 63). — He died "in 1578."

Dentaria pentaphyllos of the mountains of middle Europe. Termed "wilder senff foliis quinis" by Aretius as sent to Gesner ii. fig. 1, "d. digitata" by Lamarck; described also by Matthioli 684 (Spreng.), and Gouan ill. 42; and known to grow on the mountains of Switzerland (Pers.).

As early as this year (Matthiol. comm. D. ii. 163), Anguillara corresponding with Matthioli, also enumerating "fior di velluto" *Celosia castrensis*.

"1552 A. D." (Alst.), in Germany, Augsburg captured, and other successes of the Protestants.

"The same year" (Robertson ii. 388, and Holmes), discovery of the rich *silver* mines in Mexico.

"1553 A. D." (Pauth. 407), the coasts of China infested by Hoang-tchi; a pirate chief commanding a fleet of "a hundred sea-going vessels."

"May 10th" (Asher edit. Huds., and Churchill. coll.), sailing of Hugh Willoughby in command of the first Northeastern Expedition sent out by the "Merchant Adventurers." "Aug. 14th," he discovered land in "72° N," (Nova Zembla): and "after losing the company of his other two ships," entered the harbour of Arzina in Lapland: there were "no inhabitants, but thinking to have wintered there," all on board "were frozen to death." Of the other ships, one commanded by Richard Chancellor succeeded in getting to the inhabited Bay of St. Nicholas or the White Sea, "being the first ship" (since the days of Other) "that ever came upon" the North coast of Russia.

"July 6th" (Alst., and Nicol. 337), death of Edward VI. of England, after naming a successor; vainly attempting to exclude his sister Mary, who was a Catholic.

"October" (Alst. p. 391 and 557), at Paris, many Protestants burned alive. And at Geneva, Michael Servetus burned alive by the Protestants; for maintaining "nullam esse in deo realem generationem aut distinctionem" there is no real generation nor distinction of persons in God.

"The same year" (Alst.), end of the chronicle of Johannes Funccius.

As early perhaps as this year (see Spreng.), Anguillara travelling throughout Italy, Corsica, Sardinia, Illyria, Sclavonia, the Greek islands and Crete, meeting with *Atriplex veneta* on the strand of the Adriatic, *Cytisus spinosus* on Corsica 62, "caccialepre" of the Italians 109 *Mulgedium perenne*, *Bunium Copticum* 130, *Centaurea crocodilium* 141, *Ranunculus philonotis* 178, *Nepeta nepetella* 202, "doricnio" 270 *Dorycnium herbaceum*, *Cynanchum acutum* 274, "poligala" 290 *Polygala flavescens*.

Arum tenuifolium of the Mediterranean countries. Observed by Anguillara not far from Rome, as well as in Dalmatia and the Peloponnesus, and communicated to Matthioli pl.: — described also by Clusius hist. ii. pl. 74 (Spreng.); and known to grow in Southern France near Montpelier (Pers.).

Iberis umbellata of the West Mediterranean countries. Called in Britain *Candy-tuft* or *Candy-mustard* (Prior) from supposed Cretan origin, in Italy "tlaspi a mazetti" (Lenz); described by Anguillara p. 171 (Spreng.); observed by Lenz wild in Italy; known to grow also in Spain and as far as France (Pers.). By European colonists, was carried to Northeast America, where it continues under cultivation as a garden flower.

As early at least as this year (. . . .), Lopez de Gomara writing.* — His work was published in Spanish at Antwerp in "1554."

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* *Mimosa pudica* of Tropical America. The *sensitive plant* described by Lopez de Gomara — (C. Bauhin), and Martinus del Barco (Barcia, and Spreng.), received also by Commelyn hort. i. pl. 29 from Brazil. Farther West, was carried by Polynesians to the islands of the Pacific, observed by myself a frequent weed on the Taheitian, Samoan, and Tongan Islands; by C. Acosta, and myself, throughout the Malayan archipelago; by Mason v. 432 to 771, "exotic" in Burmah and called "hteka-yung," cultivated by the natives, but besides naturalized; by Gardner (bot. mag. 1848), a weed on Ceylon; by Roxburgh, in Hindustan; by Graham, "in gardens common" around Bombay and called "lajalu" or "lajuck." By European colonists, was carried to Northeast America, where it continues in greenhouses, and according to Chapman, has become "partially naturalized in some localities" in our Southern States.

Myrospermum toluiferum of the Caribbean terminus of the South American Andes. The tree yielding *balsam of Tolu*, mentioned by Lopez de Gomara — (Spreng.) ; growing on the "mountains of Turbaco near Carthagena, and extremely common in the high savannahs of Tolu" (Lindl.), and seen wild by Humboldt and Bonpland vi. 375. From transported specimens, described by Miller dict. 1, and Woodville. The product according to Lindley is a "warm sweet fragrant solid stimulant balsam," used in "coughs, chronic pulmonary complaints and on account of its flavour."

"1554, January" (Alst.), arrival in England of an embassy from Charles V., seeking the hand of queen Mary for his son Philip. The proposal was resisted by the people and many of the nobility, even to insurrection: which proving unsuccessful, the queen's half-sister Elizabeth was imprisoned on suspicion.

"July 25th" (Nicol. p. 337, compare Alst.), marriage of Philip and queen Mary. Many persons in consequence of the national change in religion, seeking refuge in Denmark and afterwards in Germany.

In this year (Tourn. trav. iii. 257), Astrakan on the Caspian acquired by the Russians.

"In this year" (Spreng.), after the Italian edition of his commentaries on Diosc., Matthioli publishing a more complete edition, enumerating *Astragalus hamosus* 641, *Cirsium Monspessulanum* 817, *Mercurialis tomentosa* 634, *Muscari moschatum*, *Potentilla nemoralis* 674, *Santolina squarrosa* 513, *Tanacetum annuum*, "fava salvatica" *Vicia Narbonensis*, "lunaria maggiore" *Hippocrepis unisiliquosa*, "nardo italiano" *Lavandula dentata*, "pentafillo bianco" *Potentilla multifida*, "salcio detto Vinchi" *Salix amygdalina*, *Ornithopus scorpioides* 895, *Saxifraga nivalis* (Bauh. hist. iii. 684), *Salvia triloba* 711 (Gesn. ii. fig. 23), *Saxifraga cuneifolia* (Gesn. ii. fig. 37), *Cortusa Matthioli* 698, "phyteuma" *Campanula persicifolia*, *Czackia liliastrum* 607, *Hyoscyamus Scopolia* 753, *Plantago Wulfenii* 54, "buglossum alterum flore nigro" 826 *Lycopsis pulla*, "verb. secundum" 800 *Verbascum pulverulentum*, "myriophyllum alterum" 812 *Hottonia palustris*, "meum" 24 *Athamantha Matthioli*, *Meum mutellina* 25, *Torilis nodosa* 404, "caucalis" 298 *Torilis Helvetica*, "ligusticum primum" 547 *Laserpitium peucedanoides*, "seseli aethiopicum" 550 "*Laserpitium libanotis*, "epipactis" 806 *Astrantia epipactis*, *Linum maritimum* 334, *L. tenuifolium* 334, *Silene saxifraga* 694, *Cotyledon serrata* 787, "cnеorum Theophrasti" 872 *Saponaria ocymoides*, "ledum" 160 *Cistus ledum*, "aconitum quintum" 765 *Ranunculus Gouani*, "ran. quartum" 458 *Anemone narcissiflora*, "ran. sextum" 459 *Trollius Europaeus*, "aconit. quartum" 764 *Aconitum Pyrenaicum*, "aconit. septimum" 765 *Aconitum volubile*, "stachys prima" 605 *Sideritis Syriaca*, *Orobanche elatior* 409, "draba lutea" 430 *Erysimum junceum*, "geran. quintum" 623 *Geranium reflexum*, "securidaca minor" 641 *Trigonella polycerata*, *Lactuca quercina* 400, *Cacalia alpina* 823, "cirsium" 817 *Saussurea alpina*, "conyza minor" 629 *Pulicaria odora*, "asarina" 370 *Tussilago alpina*, "absinthium marinum primum" 509 *Artemisia coerulescens*, "helichrysum" 753 *Chrysanthemum Italicum*, "alisma" 666 *Doronicum plantagineum*, "alterum" 762 *D. Austriacum*, "aster atticus alter" *Buphthalmum spinosum*, "arum" 448 *Arum proboscideum*, *Quercus pseudosuber* 181, "nymphaea parva" 644 *Hydrocharis morsus-ranae*.

Sedum dasyphyllum of Europe and the adjoining portion of Asia. Termed "sempervivum minus femina" by Matthioli 785 — (Spreng.), "s. minus folio circinato" by Tournefort inst. 263, — and known to grow on rocks from the department of Calvados to the Mediterranean (Wachend. ultr. 391, Lam. fl. fr., Pers., and A. Dec.): observed by Sibthorp on the rocks of Crete and mount Parnassus. In Britain, is first noticed by Dillenius "in 1724," and is regarded as exotic, confined to walls and the close vicinity of gardens (Wats., and Bromf.), but occurs both on walls and calcareous rocks near Cork in Ireland (Mackay, and Power).

Ligusticum Peloponnense of the mountains of middle Europe, from Carniolia to the Cevennes in France. The "seseli peloponnense" of Matthioli 551 — is referred here by Sprengel: L. Peloponnense is described by Linnæus, and Scopoli; and is known to grow in woods on the above-mentioned mountains (Jacq. austr. v, pl. 13, Hacq. carniol. pl. 5, Lam. fl. fr., and Pers.); but farther South, has not been observed in Greece; and according to Clot-Bey and Figari, has only recently been introduced into Egypt.*

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* *Cerasus* (*Laurocerasus*) *Lusitanica* of America? Described by Matthioli 197 — (Spreng.), Miller pl. 196, and Dillenius elth. pl. 159. Received from Portugal (but evergreen cherries, Laurocerasi, have been observed by myself indigenous only in America); C. Lusitanica is termed "lauro della Pensilvania" by Gallizioli (Targ.), and the descriptions by Aiton and others agree with *L. Caroliniana*.

Ledum palustre of Subarctic climates. The "rosmarinum sylvestre" of Matthioli 576 — (Spreng.), mixed in beer, and sent from North Germany by I. A. Cortusus and A. C. Nissa to Dodoens pempt. ii. 3. pl. 5, clearly corresponds: L. palustre is described also by Linnæus; is known to grow in

Achillea Aegyptiaca of the East Mediterranean countries. The "absinthium seriphium ægyptiacum" of Matthioli 511 — is referred here by Sprengel: A. Aegyptiaca is termed "ptarmica incana pinnulis cristatis" by Tournefort cor. 37 and voy. i. pl. 87 as seen by him in the East; was observed by Sibthorp on the mountains of Southern Greece and in Cyprus; and farther East, is known to grow around Astrakan (Pers.).

Catananche coerulea of the West Mediterranean countries. Described by Matthioli p. 847, — Dodoens 638 (Spreng.), and Linnæus, and known to grow in Southwestern France and Barbary (Lam. ill. pl. 658, and (Pers.): observed by Valle on Corsica (Spreng.).

Moluccella lævis of Middle Asia. A Labiate annual: the "melissa Constantinop." of Matthioli 602 — (Spreng.), further described by Caesalpinus xi. 24 as exotic in Italy, clearly corresponds: M. lævis is termed "molucca lævis" by Tournefort inst. 187; is known to occur in Syria (Sabb. hort. iii. pl. 45, and Pers.); and was observed by Sibthorp in cultivated ground in the environs of Smyrna.

Dracocephalum Moldavicum of Siberia. The "melissa moldavica" of Matthioli 603 — is referred here by Sprengel: D. Moldavicum is also described by Linnæus, and Lamarck ill. pl. 513; has been long cultivated in gardens; and according to Clot-Bey and Figari, has recently by the way of France been introduced into Egypt. In its wild state, D. Moldavicum is known to grow in Siberia (Pers.).

Juncus bufonius of Europe and Northern Asia. The "holostium" of Matthioli 687 — is referred here by Sprengel: J. bufonius is termed "j. palustris humilior erectus etiam repens" by Tournefort inst. 246; was observed by Savi in Italy; by Desfontaines in Barbary; by Brotero in Northern Portugal; and is known to grow along roadsides and in places subject to overflow throughout middle and Northern Europe as far as Lapland and Iceland (Hook., Pers., and Wats.). Eastward, was observed by Sibthorp, and Bory, frequent in moist situations in Greece; by Delile, on islands in the Nile; is known to grow in Abyssinia (A. Rich.); was observed by Bieberstein around Caucasus; and by Gmelin, throughout Siberia. From Europe, was perhaps carried by colonists to Northeast America, where it abounds along roadsides, and was observed by Lapylaie on Newfoundland, by Drummond at Cumberland house in Lat. 54°, and by Nuttall on the Arkansas; to New Granada, Chili, and Monte-Video (Kunth); to Austral Africa (Drège, and E. Mey.); to Southwest Australia (Preiss, Lehm., and A. Dec.); and to New Zealand (J. D. Hook.).

Aceras anthropophora of Europe and the adjoining portion of Asia. Called in Britain *man orchis* or *green-man orchis* (Prior): termed "test. quintum" by Matthioli 636 — (Spreng.) "o. flore nudi hominis effigiem repræsentans, fœmina" by Tournefort inst. 433, and known to grow throughout middle Europe (Curt. lond. vi. pl. 66, Vaill. pl. 31, and Pers.): observed by Haller pl. 23 in Switzerland; by Sestini, in the environs of Constantinople (Sibth.).

Allium Victorialis of Europe and the adjoining portion of Asia. Termed "anguinum" by Matthioli 422 — (Spreng.), "a. montanum latifolium maculatum" by Tournefort inst. 383, and known to grow from France throughout middle Europe (Blackw. pl. 544, and Pers.): observed by Lecoq and Lamotte in central and Southern France, by Thurmann on the Jura, by Godron in Lorraine, by Grabowski in Silesia (A. Dec.); by Jacquin pl. 216, in Austria; by Sestini, in the environs of Constantinople.

"In this year" (Spreng., and Winckler), Andr. Lucana publishing annotat. in Diosc., and sending plants to Matthioli, including *Digitalis thapsi*.

"In this year" (Schmied. p. xxvii, and Spreng.), Franc. Calceolarius, an apothecary of Verona, in company with Anguillara and Aldrovandus, ascending mount Baldo, "6860 feet" in elevation (Sternb.), meeting with *Campanula saxatilis*, *Selinum lineare*, *Anemone Bulaensis*, and *Arnica Wulfeniana*.

Rhododendron chamaecistus of the Austrian Alps. The "rhododaphne alpina Aldrovand." of Gesner i. pl. clxxxi — may be compared: R. chamaecistus is known to grow on mount Baldo and in Austria (Jacq. pl. 217, and Pers.).

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marshes throughout Northern Europe (Pers.); and was received by Decandolle from Alsace on the Upper Rhine. Eastward, was observed by Gmelin throughout Siberia to Kamtchatka: and farther East, by Chamisso on Chamisso Island and at Kotzebue Sound; by Mertens, at Norfolk Sound in 57°; by Parry, at Duckett Cove in Eastern Arctic America (Hook.).

Chenopodium glaucum of Europe? A *goosefoot* with leaves white-mealy underneath, the "atriplex sylv." of Matthioli ii. 362 — according to Spreng. præf.; described also by Bauhin hist. ii. pl. 473; termed "c. concatenatum" by Thuillier paris. 125; and occurring in waste places from Denmark throughout middle Europe (fl. Dan. pl. 1151, and Pers.). By European colonists, was carried to Austral Africa (E. Mey., and A. Dec.); to Northeast America, observed by D. Murray in Roxbury near Boston, by Bromfield around Philadelphia, and by Porter around Lancaster Penns., (but no specimens seen by A. Gray).

Saxifraga adscendens of Subarctic Europe and mountain-summits farther South. Observed by Calceolarius on mount Baldo — (Spreng.); by Linnæus, and Fries, in Scandinavia; by Ledebour, in Esthonia; by Lapeyrouse on the Pyrenees; by Koch, on the Swiss Alps; by Poech, from the Tyrolean Alps to mount Viso (A. Dec. 433); by Grisebach, at "seven thousand feet" on the mountains of European Turkey; and is termed "s. controversa" by Sternberg.

The same year (Mason ii. 28), arrival in Pegu of the first missionary, Bonferrus. — He remained three years only.

1555, "Feb. 6th" (S. F. Haven in archæol. Amer. iv. 265), in consequence of the discoveries beyond Cape North, a *Trading company* chartered in England by Philip and Mary; under the name of the "Muscovy" or "Russia company." — In 1556, the title was changed to "the Fellowship of English merchants for the discovery of new trades;" the corporation continues in existence.

"February" (Alst.), in England, many persons of distinction, Protestants, burned alive. — Reminiscences of "bloody Mary" have not disappeared from the mind of the English people to the present day.

"The same year" (Pauth. 407), the coast of Tche-kiang in China invaded by the Japanese, hitherto regarded as a tributary nation. After landing, to the number of "four thousand," the Japanese were defeated and sought refuge in their ships. — In the following year, they returned "ten thousand" strong, but were again repelled. And after an interval of "seven" years, a third attempt proved in like manner unsuccessful.

"Aug. 20th" (Schmied.), Gesner ascending mount Pilate, near Lucerne, meeting with "gentiana punicea" ii. fig. 92 *G. purpurea*, "sedula montana pulchra" tab. fig. v *Saxifraga sedoides*, "sedi minoris genus floribus luteis maculosis" *Saxifraga autumnalis*. He published an account of his excursion before the close of the year, together with his Rar. et admirand. herb.

The *Canary bird*, Fringilla Canaria first mentioned by Gesner in this year, — and first figured by Aldrovandus (Beckm.). The bird was brought from the Canary Islands; and as kept in cages, has become familiarly known among civilized nations; having doubtless been sometimes transported into Egypt.

"The same year" (Vega 388, and Holmes), the culture of the *grape* having been successfully introduced into "the city of Chili," the historian Vega sent by his father Garcilasso de la Vega, to distribute bunches to different houses.

"The same year" (Maunder), Humaioon succeeded by his son Ackbar, now emperor of Northern Hindustan.

Fritillaria meleagris of the Uralian plains. Called in Britain *guinea hen* or *checquer lily* or *fritillary* from "fritillus" dicebox (Prior), and about the middle of the Sixteenth century transferred into gardens — (Beckm.): described by Dodoens pempt. 233; observed by Pallas trav. iv. and v. wild on the Lower Volga; has become naturalized in France, England, Holland, and as far as Sweden (Blakst. in Huds. fl. 144, fl. Dan. pl. 972, Bromf., and A. Dec.).

Fritillaria Persica, of Central Asia. Brought about the middle of the Sixteenth century from Persia — (Clus. rar. ii. 2, and Beckm.): termed "lilium persicum" by Dodoens pempt. 220 (Spreng.), and Lobel hist. pl. 86; described also by Linnæus, and Redouté lil. pl. ; and occasionally cultivated in the gardens of Europe and Northeast America.

"1556, July" (Hakl., and Churchill coll.), arrival of Stephen Burrough in a small vessel at Nova Zembla or the "new land." He here learned how to shape his course for the river Ob: but on reaching the Straits of Weygats, "found no passage, and the summer season being almost spent, returned to Colmogro" in Russia. — After wintering here, the farther prosecution of the voyage was countermanded.

"Sept. 15th" (Alst.), departure for Spain of Charles V., leaving the government of Belgium to his son Philip; and of Germany, to his brother Ferdinand, with letters requesting the electors to make Ferdinand emperor.

"The same year" (De Bry.), arrival of Lerius in Brazil: where the only plants common to Europe were "portulaca" (*P. oleracea*), "ocymo" (*O. Americanum*), and "filice" (*Pteris aquilina*). Among other novelties, he describes according to Sprengel *Cerbera ahovai*, "hatich" *Ipomoea platanifolia*, and *Zamia furfuracea*.*

"1557 A. D." (Spreng.), Quakelbeen, physician to Busbequius, writing from Constantinople to Matthioli.

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* *Amyris balsamifera* of the West Indies. A tree seen by Lerius 202 in Brazil, — according to Sprengel: A. balsamifera was observed by Sloane pl. 168, and P. Browne 208, on Jamaica. From transported specimens, is termed "lucinium" by Plukenet alm. pl. 201, is described also by Linnæus.

Æsculus hippocastanum of Central Asia. The *horse-chestnut* made known in this year through a description sent by Quakelbeen from Constantinople to Matthioli — (Spreng.): is described also by Clusius, Parkinson th. 1402, and Rivinus; is termed "hippocastanum vulgare" by Tournefort inst. 612; and continues under cultivation for ornament throughout middle Europe; was observed by Hawkins in Greece, on the mountains Pelion and Pindus (Sibth.). By European colonists, was carried to Northeast America, where it continues planted for ornament in our Northern and Middle States, but does not succeed in the Latitude of Egypt in our Southern States.

Not later than this date (Spreng.), Iul. Cæs. Scaliger endeavouring to refute Hieron. Cardanus, in regard to novel plants in America described by Oviedo and Monardes. — Scaliger died "in 1558."

Fragaria Chiloensis of Northwest America. A dioecious *strawberry* bearing very large fruit, and called in Chilian "quelghen" (Molin.): "in this year" according to G. de la Vega viii. 11 the fruit called "chili" arrived at Cuzco, having "a very pleasant taste" and growing "on very low shrubs almost trailing on the ground," with "little grains outside like the fruit of an arbutus, and is the same size, not round, but rather long, in the shape of a heart," — may be compared. Farther South, the best quality of fruit of F. Chiloensis comes according to Molina from the Chilian provinces of Puchacay and Huilquilemu. The plant was carried by Frezier "in 1712" from Conception to Europe (Pers.); is described by Miller . . . , and Dillenius elth. pl. 120; and from Europe was carried to the West Indies, requiring according to Descourtilz "to be sown with other kinds under penalty of sterility."

"1558, Jan. 8th" (Blair), Calais re-captured from the French. Who were commanded by the duke of Guise, minister to Henri II.

"The same year" (Alst. p. 493), a remarkable comet. And the abdication of Charles V., his brother Ferdinand becoming emperor of Germany and Italy.

"Nov. 17th" (Alst., and Nicol.), queen Mary of England succeeded by her half-sister Elizabeth. The Protestants now restored to power, and an act of Parliament Forbidding obeying the pope.

"The same year" (art de verif.), Gonara succeeded by his son Ookimatz, now dairo of Japan.

"The same year" (Holmes), in Peru, the Inca and his wife "in rich attire and costly liveries" baptized at Cuzco: the historian Vega being present.

"In this year" (Asher edit. Huds. p. xcvi), the mouth of the Straits (afterwards called Hudson's) known to the Portuguese, as appears from maps.

"In this or the following year" (Yule cath. i. p. cxliii), Anthony Jenkinson and the two Johnsons visiting Bokhara by the way of Russia.

"1559 A. D." (Alst.), Protestants persecuted by queen Mary of Scotland.

"In this year" (Spreng., and Winckler), Bartolomeo Maranta publishing his Method. cogn. simplic. — He published his Nov. Herb. "in 1571."

"The same year" (Spreng.), arrival of Guilandinus in Egypt. — Where he remained during a portion of the following year.

"1560, March" (Blair), in France, the conspiracy at Amboise, initiating civil war against the "Huguenots" — (another name for Protestants).

"The same year" (Alst.), by Philip, now Philip II. of Spain, many foreigners especially Spaniards introduced into Belgium. — And after two years, notwithstanding the remonstrances of the Belgians, three new archbishops and several bishops introduced by pope Pius IV.

"In this year" (Schmied.), letters from Gesner to Io. Fabricius, and J. Bauhin.

"In this year" (Markh. edit. p. viii), Polo de Ondogardo, corregidor of Cuzco, writing on the Peruvians.

"In this year" (narrat. i. to ix, and Markh.) Garcilasso de la Vega leaving Peru, at which time there was no *coined* money in the country. — He commenced writing in Spain, continued writing "in 1604," and died "in 1616."

"1561, September" (Alst.), the general Council of Trent revived by pope Pius IV.

"In this year" (Spreng.), Anguillara, after receiving information in Crete from Robertus Constantinus, publishing his Simplicib.; enumerating *Caucalis grandiflora* 217. — He died in "1570."

"In this year" (Schmied. and Spreng.), Gesner editing the botanical writings of Valerius Cordus, publishing his Hort. germ., and preparing drawings for his botanical work, enumerating "juncus idaeus vel petraeus" ii. fig. 16 *Juncus trifidus*, "chamaecerasus bergkriesse" ii. fig. 43 *Xylosteum alpigenum*, "satyrii species quam monorchin dixeris" ii. fig. 64 *Herminium monorchis*, "calathiana autumnalis" ii. fig. 88 *Gentiana ciliata*, "pentaphyllum alpinum aureum" ii. 97 *Potentilla cinerea*, "lapathi genus sylvestre minus" hort. f. 263 *Potamogeton serratus*, "nummularia sylvatica" hort. f. 268 *Lysimachia nemorum*, *Thalictrum tuberosum* ad Cord. f. 98, *Artemisia Austriaca* ad Cord. f. 107, *Chrysanthemum corymbosum* ad Cord. f. 140, *Asplenium Germanicum* ad Cord. f. 127.

Epilobium palustre of Northern climates. — Described by Tabernaemontanus vi. 1238 (Spreng.);

termed "chamænerion Gesneri" and "lysimachia siliquosa tertia" by Clusius hist. ii. 51, "lysimachia siliquosa glabra angustifolia" by C. Bauhin pin. 245, "chamænerion angustifolium glabrum" by Tournefort inst. 303, and known to grow from Lapland throughout middle Europe (Engl. bot pl. 346, Pers., and Wats.): observed by Linnæus in Lapland and Sweden; by Pallas, at 67° on the Oby; and by Sibthorp on the Bithynian Olympus. Westward, by Hooker in Iceland, and received by him from Canada as far as 64° and the Rocky mountains; was observed by Michaux at Hudson Bay and Lake Mistassiny; by myself, frequent in New England; by Nuttall, as far as Philadelphia (Dec.); by Pursh, from Pennsylvania to Virginia; and according to Chapman, grows on the "mountains of North Carolina."

Saxifraga aizoon of Subarctic climates. Described by Gesner, ii. fig. 28,—Barrelier pl. 1310, Morison 12. pl. 9, Plukenet phyt. pl. 221, and known to grow on the Pyrenees and Swiss Alps as far as Austria (Jacq. austr. pl. 438, Lapeyr., Pers., and A. Dec.); was observed by Fraas in Greece. Westward, by Colmaster in Labrador (Pursh); and was received by Hooker from the Saskatchewan; by A. Gray, from "Upper Michigan and Wisconsin," and observed by Blake on Willoughby mountain in Vermont.

Saxifraga cespitosa of the Arctic region and mountain-summits farther South. Termed "sedulum quod moschatella alpina lutea" by Gesner ii. fig. 31,—"sedum tridactylites alpinum minus" by Bauhin prodr. 131, and C. Bauhin pin. 284, "s. tridactylites alpina minor et villosa" by Tournefort inst. 252, and known to grow in Lapland and on the mountains of middle Europe as far as Switzerland (Engl. bot. pl. 794, Lapeyr., and Wats.); observed by Sabine on Spitzbergen (Hook.); by Linnæus, on the mountains of Lapland; by Seguieri pl. 9, not far from Verona; by Sibthorp, on Delphi mountain in Greece; by Bieberstein, on Caucasus. Westward, is known to grow in Greenland as far as Igloolik, also along the Arctic Sea to Kotzebue Sound (Hook.); was received by Pursh from the Northwest coast.

Saxifragra stellaris of the Arctic region and mountain-summits farther South. The "sedulum alpinum quartum" of Gesner ii. fig. 36—may be compared: S. stellaris was observed by Linnæus fl. pl. 2. in Lapland, and is known to grow as far as the mouth of the Lena (Dec.) and Lake Baikal (Ladeb.); also from Sweden to Southern Ireland and Wales (Fries, and Mackay), on the Pyrenees, at "seven thousand feet" on the Sierra Nevada (Boiss.), on mount Rotundo in Corsica (Gren. and Godr.), on the Swiss Alps, and mountains of the Black forest (Koch), of Transylvania (Baumg.), and of Thrace and Macedonia (Griseb., and A. Dec.). Westward, was observed by Hooker on Iceland, and received from Spitzbergen, Greenland, and Labrador.

Solanum pseudo-capsicum of "Madeira." Transported to Europe, described by Gesner hort. f. 282—(Spreng.), Dodoens pempt. 718, and C. Bauhin pin. 61: cultivated for its ornamental bright-red cherry-like berries, and has become naturalized at the base of the Pyrenees (herb. Req., Dun., Dec., and A. Dec.); was observed by Chaubard in the Peloponnesus, escaped from cultivation; by Delile, in the gardens of Egypt; but according to Persoon is wild on Madeira. By European colonists, was carried to Northeast America, where it continues in greenhouses; to Austral Africa, and thence to the environs of Bombay (Lush, and Graham).

"1562, Apr. 30th, Thursday" (transl. Hackit in soc. Hakl.), under instructions from (the French admiral Coligny), Jean Ribault with a colony of Protestants arriving on the American coast not far from "29° 30′." In the morning "on the first of May," he entered with boats a great river (the St. John's): the natives naked, having "the fore part of their body and armes" painted with "azure, red and blacke," and trimming themselves with an "herbe like unto mosse, whereof the cedar trees, and all other trees, bee alwayes couered" (*Tillandsia usneoides*): they presented "mulberies" (*Morus rubra*), "raspis" (*Rubus villosus*), "and such other fruites as they founde ready by the way:" in the forests were "palme trees" (*Chamærops palmetto*), "cypresse" (*Taxodium distichum*) "and cedars" (*Cupressus thuyoides*), "bayes ye highest and greatest" (*Laurus Carolinensis*), "grapes" (*Vitis vulpina*) the vines growing "to toppes of okes" (*Quercus prinus*) "and other trees that be of a wonderfull greatnesse and height;"—also "walnut trees" (*Juglans nigra*), "hasell trees" (*Corylus Americana*), "cheritrees, very faire and great" (*Cerasus serotina*); the natives brought "rootes like vnto rinbabe, which they haue in great estimation, and make thereof a potion of medecine" (. . . .), also "some small spices like vnto vire" (*Benzoin odoriferum*). Sailing thence Northward, finding "euery where the highest and greatest firtrees y^t^ can be seene" (*Pinus palustris* and *P. tæda*), "very well smelling, and where out might bee gathered, with cutting the only bark, as much rosen, turpentine, and frākēsence, as men would desire," on "the 27th" he entered with his ships port Royall, finding it "one of the fayrest and greatest hauens of the worlde:" here were many "pepertrees, the pepper yet greene and not ready to bee gathered" (Celtis?); and leaving Albert de la Pierria, the first of "thirtie" volunteers, "gentlemen, souldiers, and marriners," he departed "June 11th."—Dissensions afterwards arising among the colonists, some were slain, and those remaining built a small vessel, calking it with the "kind of mosse" growing on trees (*Tillandsia usneoides*), and abandoned the country (Holmes, and J. W. Jones in soc. Hakl.).

"In this year" (Spreng.), Matthioli residing as court physician at Prague and after the Valgrisische edition of his comm. Diosc. with small figures "in 1560," publishing an edition in Bohemian with large figures. He left Prague for Vienna "in 1565," and died at Triest "in 1577."

"The same year" (Maunder), surrender and execution of Tupac Amaru, last Inca of Peru; the Spaniards now acquiring complete possession of the whole country.

"In this year" (Spreng.), Andr. Marini and Petr. Aut. Micheli publishing comment. in Mesue.

1563 A. D. (Schmied.), letter from Gesner to Felix Platerus.*

"In this year" (Schmied. ed. ii. 11), Gesner preparing drawings for his botanical work, including "bumma d'chiaun" ii. fig. 45 *Xylosteum caeruleum*, "periclymenum alpinum nigrum" ii. fig. 48 *Xylosteum nigrum*, "schoen blaue bergblümle" ii. fig. 32 *Saxifraga oppositifolia*, "wildschellkraut" ii. fig. 25 *S. rotundifolia*, "orminum luteum klibkraut" ii. fig. 25 *Salvia glutinosa*, "sedum aut phylli genus flosculis albis" ii. fig. 30 *Saxifraga caesia*, "tufelsangesicht vocatum flore purpureo" ii. fig. 67 *Ophris aranifera*, "gentianellae berggilgele secunda" ii. fig. 84 *Gentiana verna*, *G. punctata* ii. fig. 92 b; "quinquefolium alpinum album" ii. fig. 98 *Potentilla caulescens*, "chamaenerion aliud" ii. fig. 71 *Chamaenerium angustissimum*, *Veronica bellidioides* 4. f. 32 lign., *V. peregrina* 4. f. 33 lign., *Salvia ceratophylla* 12. f. 104 lign, *Triticum junceum* t. 2. f. 17, *Phleum Boehmeri* and *P. Michelii* t. 3. f. 19, *Centranthus angustifolius* t. 9. f. 74, *Globularia cordifolia* t. 6. f. 51, *Scabiosa integrifolia* f. 52, *Crucianella maritima* 16. f. 136, *Plantago maritima* 3. f. 26 lign., *Plantago Bellardi* pl. 3. f. 28, *Androsace villosa* opp. 9. f. 76 aen., *Primula marginata* opp. 9. f. 77 aen., *P. minima* 8. f. 69 aen., *P. integrifolia* 8. f. 67 aen., *Convolvulus lineatus* 9. f. 73 lign., *Specularia speculum* 9. f. 76 lign., *Gentiana Pannonica* t. 11. f. 99, *Armeria scorzoneraefolia* 7. f. 55 lign., *Statice reticulata* t. 18. f. 158, *Allium moly* 11. f. 98 lign., *Tofieldia palustris* 17. f. 145. 3 lign., *Daphne villosa* t. 21. f. 182, *Rhododendron ferrugineum* 21. f. 181 lign., *Silene catholica* 18. f. 156 lign., *Gypsophila repens* 11. f. 93 aen., *G. fastigiata* 12. f. 107 lign., *Cerastium alpinum* t. 11. f. 96, *Arenaria verna* t. 11. f. 98, *Trianthema pentandra* 17. f. 150 lign., *Euphorbia verrucosa* 14. f. 122 aen., *E. serrata* 14. f. 123 aen., *E. segetalis* t. 15. f. 131, *E. amygdaloides* t. 13. f. 112, *E. sylvatica* t. 13. f. 113, *Geum reptans* t. 16. f. 137, *Dryas octopetala* opp. aen. 3. f. 22, *Capparis ovata* t. 16. f. 144, *Cistus linearis* 3. f. 25 aen., *C. albidus* 2. f. 22 aen, *Helianthemum halimifolium* 3. f. 26 aen., *H. guttatum* 3. f. 27 aen., *H. thymifolium* 16. f. 143 lign., *Thalictrum foetidum* 17. f. 148, *Anemone palmata* 16. f. 139, *Ranunculus falcatus* 16. f. 136 lign., *Teucrium Achaemenis* 12. f. 107 lign., *Stachys hirta* 10. f. 84 aen., *Nepeta tuberosa* 12. f. 102 lign., "pulegium angustifolium" 12. f. 274 lign. and 10 f. 89 aen., *Mentha cervina*, *Phlomis herba-venti* t. 10. f. 33, *Pedicularis foliosa* 9. f. 77 lign., *P. incarnata* 9. f. 78 lign., *Lepidium perfoliatum* 13. f. 110 lign., *Draba aizoides* 13. f. 110 lign., *Biscutella coronopifolia* 13. f. 114, *Myagrum rugosum* 13. f. 115 lign. and 14. f. 125, *M. perfoliatum* 14. f. 124, *Sisymbrium vimineum* 13 f. 111 aen., *Matthiola sinuata* 13. f. 111 lign., *Cheiranthus litoreus* 13. f. 111, *Genista Lusitanica* 14. f. 122 lign., *G. Anglica* 14. f. 123 lign., *Corydalis capnoides* 9. f. 81 aen., *Fumaria spicata* 9. f. 81, *Hippocrepis multisiliquosa* 14. f. 126 lign. and 1. f. 3 aen., *Astragalus viciaefolius* 15 f. 127 lign., "poterium Rauwolf" 13. f. 119 lign., *Astragalus erianthus*, *a. eriocephalus*, *Ulex nanus* 1. f. 2 aen., *Lathyrus setifolius* t. 2. f. 11, *L. angulatus* t. 2. f. 12, *Hedysarum coronarium* 1. f. 7 aen., *Trigonella polycerata* t. 2. f. 10, *Lotus peregrinus* 15. f. 130, *L. hirsutus* 1. f. 6 aen., *Trifolium tomentosum* t. 15. f. 135, *Medicago murex* 21. f. 185 lign., *M. tornata* 21. f. 186 lign., *M. laciniata* 1. f. 9 aen., *Lactuca augustana* 7. f. 57, *Picridium Orientale* 7. f. 58 lign., *Picridium albidum* 7. f. 63 lign., *Sonchus dichotomus* 7. f. 56, *Hieracium villosum* 4. f. 52 aen., *Onopordum rotundifolium* 7. f. 57, *Cacalia albifrons* t. 8. f. 71, *Artemisia glacialis* 3. f. 28 aen., *A. mutellina* 6. f. 47 lign., *Gnaphalium luteo-album* 8. f. 68 lign., *Tussilago discolor* t. 4. f. 42, *Inula tuberosa* t. 8. f. 67, *Arnica bellidiastrum* 8. f. 64 lign., *A. glacialis* 4. f. 53 aen., *Senecio Carniolicus* t. 5. f. 38, *Chrysanthemum maritimum* t. 5. f. 39, *Achillea nana* t. 4. f. 38, *Zoega leptaurea* t. 7. f. 63, *Centaurea scabiosa* 5. f. 41 lign., *C. splendens* 5. f. 42 lign., *C. muricata* 5. f. 43 lign., *Goodyera repens* 12. f. 103 aen., *Ceratophyllum submersum* 16. f. 138 aen., *Pteris Cretica* 2. f. 12 lign., *Aspidium Halleri* 18. f. 155 aen.

Alyssum maritimum of the West Mediterranean countries. A Cruciferous plant called in the gardens of Britain *sweet alison* (Prior); figured by Gesner 14. f. 120 — (Spreng.); described by Tournefort inst. 217 (Smith in Sibth.), termed "clypeola maritima" by Linnæus, and known to grow on the Mediterranean shore of France, Spain, and North Africa; observed by Chaubard at Nisi in Greece; by Brotero on the seashore of Portugal; and received by Watson from the Azores. Much cultivated in the gardens of Britain, and escaping has become naturalized from the beginning of the

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* *Ranunculus glacialis* of the Arctic region and mountain summits farther South. — Termed "r. montanus purpureus calyce villoso Felicis Platerii" by Bauhin hist. iii. 846, "r. alpinus roseus albus calyce hirsuto" by Rudbeck lapp. 99; observed by him, and Linnæus, in Lapland; by Scheuchzer alp. pl. 20, in the alpine portion of Switzerland.

Century at various points on the Southern shore of the island (Ait. ed. 1, Curt. mag. pl. 101, Engl. bot. pl. 1729, and Wats.), occurs also more adventive near Aberdeen (A. Dec.).

Gypsophila muralis of middle Europe and the adjoining portion of Asia. Figured by Gesner t. 11. f. 95 — (Spreng.); termed "cariophyllus minimus muralis" by C. Bauhin pin. 211, "lychnis annua minima flore carneo lineis purpureis distinctis" by Tournefort inst. 338, and known to grow from Lapland throughout middle Europe (Mentz. pl. 7, Dill., and Pers.): observed by Linnæus in sandy roads in Lapland and Sweden; by Sibthorp, on the Bithynian Olympus.

Myriophyllum verticillatum of Northern climates. Called in Britain *water-milfoil* (Prior); figured by Gesner 16. f. 144 aen. — (Spreng.); observed by Gmelin from the Yaik to the Angara, by Bunge in Northern China, by Ledebour in middle Siberia and around Caucasus (A. Dec.); and known to grow from Subarctic Sweden to Switzerland (fl. Dan. pl. 1046, Engl. bot. pl. 218, and Wats.); was observed by Brotero in Northern Portugal; by Desfontaines, and Munby, in Barbary. Westward, by Hooker on Iceland; and is attributed to North America by Michaux, Nuttall, and others. Probably by European colonists was carried to Chili, observed there by C. Gay fl. ii. 387.

Onobrychis sativa of middle Europe and the adjoining portion of Asia. Called in Britain *sainfoin* or *French grass* or "fœnum Burgundiaeum" (Prior), in Bretagne "foin français," in other parts of France "sainfoin" or "esparcette," its cultivation beginning in the Sixteenth century (A. Dec.): O. sativa is described by Gesner, — Lobel pl. 335, Thalius, and C. Bauhin (Willd.); is known to grow wild in Italy (Scop., and Lenz), Southern France, and Germany (Jacq. austr. pl. 352, and Pers.); and its cultivation was introduced into Britain before 1578, as appears from Lyte. Eastward, was observed by Bory in the Peloponnesus; is known to grow wild in Southern Russia and as far as Caucasus (Ledeb., and A. Dec.); and according to Clot-Bey, has been recently introduced into Egypt. By European colonists, was carried to Northeast America, where an attempt at cultivation near Salem did not prove altogether successful, and the plant after a few years disappeared.

Xeranthemum Orientale of the Tauro-Caspian countries. Figured by Gesner 8. f. 68 lign., — and the "jacea pusilla incana" of Lobel hist. pl. 545 is referred here by Sprengel: described also by Willdenow, and Desfontaines; and known to grow in Armenia (Pers.).

Erigeron alpinum of Polar climates and mountain-summits in lower latitudes. Figured by Gesner t. 4. f. 45 — (Spreng.); termed "asteri montano purpureo similis vel globulariæ" by J. Bauhin hist. ii. pl. 1047, — "aster atticus cæruleus minor" by Tournefort inst. 481, "a. m. p. s. v. g. calyce villoso" by Scheuchzer alp. 329, "a. m. omnium minimus foliis oblongis floribus albis" by Vaillant act. 1720, and known to grow in Lapland and Scotland, also on the Pyrenees and mountains of Switzerland and Carniolia (Pers., Dec., and Hook.): observed by Linnæus, frequent on the mountains of Lapland; by Pallas, at 67° on the Oby; by Sibthorp, on the Bithynian Olympus. Westward, by Hooker in Iceland, and received from the Arctic shore of America; was observed by Sabine, in Greenland; by Colm in Labrador (Pursh); is known to grow in Russian America (Wats.), and though not seen by Lapylaie in Newfoundland, was found by Goldie not far from Quebec (Hook.). In the Southern Hemisphere, by J. D. Hooker at the Southern extreme of America. "E. uniflorum" is regarded as not distinct.

Veronica triphyllos of Europe and the adjoining portion of Asia. Described by Gesner 16. f. 140 aen. — (Spreng.); termed "alsine parva erecta folio alsines hederaceæ sed rutæ modo divisa" by Lobel pl. 464, "a. triphyllos cærulea" by C. Bauhin pin. 250 (Linn.), "v. verna trifido vel quinquefido folio" by Tournefort inst. 145: is known to grow throughout middle Europe (Riv. pl. 96, Oed. Dan. pl. 627, and Pers.); was observed by Linnæus on the margin of fields as far as Scania in Sweden; by Sibthorp pl. 10, in open ground in Thrace and on the Bosphorus towards the Black Sea.

Veronica scutellata of Northern climates. The "gratiola minima" of Gesner i. fig. 87 — may be compared: V. scutellata is described by J. Bauhin hist. 780; is termed "anagallis aquatica angustifolia scutellata" by C. Bauhin pin. 252, "veronica aquatica angustiore folio" by Tournefort inst. 145 (Linn.), and is known to grow throughout Northern Europe and Asia: was observed by Linnæus in Lapland and Sweden, by Watson on the Orkney Islands (A. Dec.), by Oeder 209 in Denmark, by Ledebour in Finland and Russia, by Gmelin throughout Siberia, by Decandolle in France, by Savi in Etruria, and by Desfontaines, and Munby, in Algeria. Westward, was observed by Hooker in Iceland; by Michaux, in streams flowing into Hudson Bay; by myself, along the Atlantic as far as 42° 30′, by Nuttall to 40° near Philadelphia, and by Beck 261 in Virginia; by Drummond at 54° on the Saskatchewan, near Fort Cumberland.

Gentiana prostrata of alpine summits from Austria to East Siberia, the Rocky mountains, and Cape Horn. The "gentianellae alpinae species prima" of Gesner ii. fig. 85 — may be compared: G. prostrata was observed by Haenke on the summits of the Salsburg Alps (Jacq. coll. ii. pl. 17); is known to grow on mountains near Caucasus (Koch), on the Altaian mountains as well as in East Siberia and on Unalaska (Ledeb.); was observed by Chamisso on the seashore at Bering Straits; was received by Hooker from the summits of the Rocky mountains in "52°," and from the East side

of the Chilian Andes in "35°;" was observed by J. D. Hooker along the sea-margin at Cape Negro in Southern Chili, and in the Straits of Magellan (A. Dec.).

Juncus uliginosus of Europe and the adjoining portion of Asia. A rush termed "juncus ramulosus" by Gesner ii. fig. 12, — "gramen junceum folio articuloso cum utriculis" by C. Bauhin prodr. 12, "j. foliis articulosis floribus umbellatis cum utriculis" by Tournefort inst. 247, and known to grow in wet places throughout middle Europe (Sibth. oxon. 115, Smith fl. brit. 380, Engl. bot. pl. 801, and Pers.); observed by Sibthorp frequent in the marshes of Greece.

Ophrys arachnites of Europe and the adjoining portion of Asia. Called in Britain *spider orchis* (Prior): termed "orchis larvatus .... foliis tribus superioribus ex fusco albicantibus" by Gesner ii. fig. 68, — "orchis araneam referens" by Tournefort inst. 434, and known to grow throughout middle Europe (Pers.): observed by Vaillant pl. 30 in the environs of Paris; by Haller pl. 24, in Switzerland; and by Sibthorp, in the Peloponnesus.

Plumbago Europæa of Peru? Called in France "dentelaire" from having been used to remove toothache (Lindl.), in Greece "lĕpithōhōrtōn" (....), in Illyria "curcurida;" figured by Gesner 10. f. 83 — (Spreng.); known to Pena as found around Rome (T. Johnson in Ger. emend. 1254); described also by Columna ecphr. 161; termed "erba di S. Antonio" by Cæsalpini, and Micheli (Targ.), "p. quorundam" by Tournefort inst. 141; observed by Forskal, Sibthorp, and Chaubard, frequent along roadsides from the Peloponnesus to Asia Minor and the Greek islands; but the genus is essentially Tropical, foreign to the Mediterranean countries, and according to Persoon, P. Europæa is found also in Peru. The plant according to Lindley is "very acrid," recommended as "a kind of potential cautery," and in decoction "as a stimulating wash."

Potamogeton pusillus of all climates. An aquatic figured by Gesner 17. f. 147 — (Spreng.); observed by Vaillant pl. 32 in the environs of Paris — (Pers.); by Bieberstein around Caucasus; and known to grow from Lapland and Russia to Ireland and Switzerland (Wats.), also on the Canary Islands (Kunth en.), and in Guinea (fl. nigr.). Westward, was observed by Hooker on Iceland; according to Watson, grows in British America and the United States; and according to A. Gray, is "rather common northward." In the Southern Hemisphere, was observed by Gay fl. in Chili (A. Dec.).

Allium descendens of the Mediterranean countries. Figured by Gesner 11. f. 96 lign. — (Spreng.); described by Rudbeck elys. ii. pl. 160; — and according to Persoon growing in Switzerland: was observed by Sibthorp abounding on various Greek islands as far as Cyprus and the shores of Caramania.

Allium nigrum of the Mediterranean countries. Figured by Gesner 11. f. 97 lign. — (Spreng.); observed by Desfontaines i. in Algeria; by Gouan pl. 16 near Montpelier; by Jacquin i. pl. 10, in Austria; by Sibthorp, and Gittard, from the Peloponnesus to Cyprus. "A. magicum" observed by Sauvages 18 near Montpelier, and described by Linnæus, is regarded by Chaubard as not distinct.

Ornithogalum Arabicum of Madeira or Barbary. Figured by Gesner 11. f. 95 lign. — (Spreng.); also described by Besler v. pl. 12, — and Rudbeck elys. pl. 130; known to occur on Madeira and in Barbary (Pers.), and received by Linnæus fl. pal. from Egypt (Del.).

"Dec. 3d" (Alst., and Nicol. 206 and 264), concluding session of the Council of Trent. — In the beginning of the following year, the Council and its proceedings were confirmed by pope Pius IV.: closing the series of general ecclesiastical Councils.

"1564 A. D. = 43d year of the 'kia-tsing' of Chi-tsoung II." (Chinese chron. table), beginning of the Seventy-first cycle.

"The same year" (Talvi i.), by Ivan IV., often called Ivan II., *printing* introduced into Russia, and an edition of the "Apostle" issued. *Schools* were also established by Ivan IV. in all the cities of his dominions.

"June 25th" (Hakluyt iii. 323 to 336, and Holmes), arrival in Florida of Laudonniere with a colony of French Protestants, at the river of May (St. John's) situated "in thirtie degrees and better" (J. Hawkins). Not above two leagues "from the mouth," he built a fort and named it Caroline; in honour of the reigning king of France, Charles IX.

In the country around (De Bry edit.), J. Le Moyne remarked "quercus" (*Q. virens, Q. falcata, Q. aquatica,* and *Q. nigra*), "aquifolia" (*Ilex opaca*), "pruna fructu eleganti" (*P. Chicasa*), and "exigui quidam fructus" called by the French "bleves" (*Vaccinium?*).

"In this year" (De Morga 16), under instructions "to endeavour to pacify" the natives of the Philippines, "reduce them to submission," and "to receive the holy Catholic faith," Miguel Lopez de Legazpi from Mexico arriving at the island of Sebu. He was "peacefully received," but the natives afterwards seeking to kill him, were "conquered and subjected." Seeing what had taken place, the natives of neighbouring islands voluntarily tendered their submission; and in one house was found "a carved image of Jesus," held in great reverence, and supposed to have "remained there from the fleet of Magellan."

In this year (Schmied. vit. G. p. xxxvii), Gesner writing to Theodorus Zwingger, receiving plants from Cortusi, and preparing drawings for his botanical work, including "gentianæ species rara" tab. fig. i *Swertia perennis*, "anonymos" i. fig. cxvii *Lobelia Dortmanna*, "glaux a quibusdam dicta" i. fig. 8 *Dorycnium Monspeliense*, "alga marina" i. fig. 147 *Ruppia maritima*, "anemone montana" i. fig. 18 *A. alpina*, *Colchicum fasciculare* i. fig. cxci. — He died "Dec. 13th, 1565."

"1565, March 1st" (Sieb. elucid. Vries p. 98), letter of the jesuit Aloisius Froes from Meaco in Japan, describing an extensive region three hundred leagues distant inhabited by "sylvestrium hominum" (Ainos), having the whole body hairy and a great beard and moustaches which they lift with a stick when about to drink; are bold in war and much feared by the Japanese, and when wounded wash the part in salt water, which is their only remedy; have no "sacra" religious ceremonies, only that they are accustomed to venerate heaven. — In Ortelius's theatrum orbis published in "1570," the island North of Japan is termed "Satyrorum Insulam."

"September" (Hakl., and Holmes), arrival at Fort Caroline of Pedro Melendez, with full power from Philip II. of Spain "To drive the Huguenots out of Florida, and settle it with good Catholics." The French were massacred, Laudonniere and a few others escaping in a boat: and three forts were built on the river of May, and strongly garrisoned with Spanish soldiers.

"1566 A. D." (art de verif.), Suliman II. succeeded by Selim II., thirteenth Turkish sultan. Who wrested Cyprus from the Venetians before the close of the year (Alst. p. 308); also, Tunis and Guleta in Barbary from the Spaniards, and Wallachia from the Hungarians.

"August" (Alst.), throughout almost all the cities of Belgium, the images removed from the churches and demolished: initiating open war against Philip II. of Spain.

"The same year" (Alst.), end of the chronicle of Gilbertus Genebrardus.

"The same year" (addit. art de verif.), a red stone called "Ilimpi," used by a Peruvian to paint his face before going to war, procured by Henrique Garces, a Portuguese. This led to the discovery of the *quicksilver* mines of Huancavelica.

"In this year" (Schmied. ed. G. i. 57), Wolph, assisted by Thomas Penneius of London, commencing the publication of the botanical work of Gesner.

"1567 A. D. = 'loung-king,' 1st year of" Mou-tsoung or "Mou-tsoung-tchouang-ti, of the Ming" or Twenty-third dynasty (Chinese chron. table). He modified the ancient law, Prohibiting a magistrate from acting in his own province; and granted some exceptions in favour of mandarins of the Second order (Pauth. p. 408).

"July 24th" (Nicol. p. 382), queen Mary of Scotland deposed; and the accession of her son James VI.

One hundred and seventy-sixth generation. Sept. 1st, 1567, onward mostly beyond youth: the Jewish writer As. de Rossi: the Arab writers, Shems-eddin Basrawi, Abdalcader: the Greek writers Emmanuel Gluzonius d. 1596, Maximus Margounius d. about 1601: Beza, Petrus Canisius, John Knox, Radzivil, Josephus Scaliger; Robertus Stephanus, Michael Neander, Frideric Sylburg; J. Genesius; Paul Manutius; Castelvetro; Frederick Commandin; Hieronymus Wolfius; Ronsard; George Buchanan; Peter Ramus; Osorius; James Cujas; Ciaconius; Pancirolus; Carolus Sigonius; Henry Stephens; Bodinus; Montagne; Francis Hotomanus; Riccoboni; Peter Pithou; Philip Sidney; Melvill James: the poets, Camoens, Torquato Tasso, and Edmund Spenser: the Slavonic writers, Truber, and A. Bohorizh: the painters, Paul Veronese d. 1588, Giacomo Robusti called Tintoretto d. 1594: the architect Palladio: the musician Orlandus de Lasso.

"1567-8 A. D. (= A. H. 975," Blochmann and W. W. Hunter), Muslim conquest of Orissa, by Afghans from Berar and Bengal. Mukund Deva; the last independent king was slain in battle before Jajpur; and the sacred city of Puri, including the temple of Jagannath, was captured and plundered by Kala Pahar.

"1568, Feb. 23d (= 25th Shaban A. H. 975." of Abul Fazl, Orient. transl. lond.), the fortress of Chaitur in the Rajput country captured by Akbar, emperor of Northern Hindustan. Matchlocks, artillery, mining with gunpowder, and war *elephants* were employed in the reduction.

In this year (= "11th year of Ookimatz," art de verif.), the title "dai-seogun" conferred by Ookimatz on Josijtira, son of Jositir.

"The same year" (Blair), defeat at Glasgow of the army of the ex-queen Mary of Scotland; and her withdrawal into England.

"In this year" (Winckler), after his Cruydeboeck "in 1563," Frument. Hist. "in 1566," Dodonæus or Dodoens publishing his Coronar. Hist., enumerating *Hieracium umbellatum*, *Campanula rapunculoides*, and *Chenopodina maritima*.*

* *Celosia coccinea* of Tropical America. An annual, transported to Europe, termed "amaranthus purpureus" by Dodoens. 185 — (C. Bauhin, and Willd.); described also by Linnæus. Westward, "C. purpurea" of A. Saint-Hilaire, observed in Brazil; is regarded by Steudel as probably identical.

Tropæolum minus of the Peruvian Andes. Transported to Europe, is termed "nasturtium indicum" by Dodoens — (C. Bauhin, and Willd.); is described also by Monardes 348, Lobel hist. 338, and Linnæus; and under cultivation as a garden flower has become doubled; was observed by Forskal in gardens at Constantinople. Westward, is termed "nasturtium peruinum" by Hernandez, as seen by him in Mexico.

Pennisetum typhoideum of Tropical America? A reedy *millet*, called in France "millet à chandelles" (Del.), in Greece "phragkŏkĕghri" (Fraas), in Egypt included under the general name "dokhn" (Clot-Bey), in Nubia called "herneh" (Del.), in Hindustanee "bajara" (D'roz.), in the environs of Bombay "bajree" (Graham): transported to Europe, is described by Dodoens pl. — and termed "panici americani" by Clusius rar. ii. 216: harvested spikes were observed by myself in various Mediterranean countries, and the living plant by Fraas 311 under cultivation in Greece; by Clot-Bey, in Egypt; by Delile, at the first cataract of the Nile, and sown generally in the country of the Blacks, but in Equatorial Africa was seen by Grant only along the Indian Ocean; by myself, under cultivation at Muscat. Farther East, was received by Plukenet alm. pl. 32 from "Indiæ orientalis;" was observed by Roxburgh i. 283 in Hindustan; by Graham, in the environs of Bombay "extensively cultivated and forms a very important article of food to the natives;" and varieties hardly more than a foot high, bearing a short ovoid spike, were observed by myself under cultivation on the Deccan. Westward from the Mediterranean, was observed by N. A. Ware in Carolina, Georgia, Alabama, and Florida; by Croom, under cultivation in Florida; and according to Chapman, is "commonly cultivated" with *Setaria Italica* "as green food for cattle."

"April" (Hakl., and Holmes), arrival in Florida of a retaliatory expedition under Dominique de Gourgues, fitted out at his own expense. The three forts at the river of May were captured, and the Spanish soldiers were all put to death. The affair was however disavowed by Charles IX, and no further attempts were made by the French, to establish settlements in that portion of America.

"The same year" (Hakl., Purch., Holmes, and Major edit. De Morga 64), a fleet under Alvaro de Mendaña sent from Peru Westward. A cluster of islands was discovered in "eleven degrees south latitude," was named "Solomon Islands," and the principal island "St. Christopher."

"1569 A. D." (Alst.), by Maximilian II. emperor of Germany and Italy, futile intercession in favour of the Belgians.

As early as this year (Asher edit. Huds. p. xcvi), the inland sea (now called Hudson's Bay) discovered: — delineated in Ortelius's atlas published "in 1570."

"1576 A. D." (Alst.), end of the chronicle of Onuphrius Panvinius.

"In this year" (Markham edit. laws of the Incas p. 3), Sebastian de Artaun appointed bishop of Cuzco, to whom Christoval de Molina dedicates his Fables and rites of the Incas. His writings — formed the base of the History by Miguel Cavello Balboa, commenced at Quito "in 1576," and finished "in 1586."

"In this year" (Spreng., and Winckl.), Lobel of Belgium publishing his Stirp. nov. advers., enumerating *Frankenia pulverulenta* 196, *Polypodium lycopodioides*, *Hypecoum pendulum* 330, *Pedicularis tuberosa* 326, *Potentilla subacaulis* 209, *Suffrenia filiformis* adv. 227, *Crocus reticulatus* ii. 497, "gramen avenaceum rariori grano dauicum" ii. 465 *Melica uniflora*, *Scabiosa* (*Cephalaria*) *alpina* 233, *Plantago albicans* 18, "polygonum montanum niveum" adv. 180 *Paronychia capitata*, "saxifraga Anglorum" 351 *Angelica carvifolia*, "laserp. massiliense" 313 *Laserpitium Gallicum*, "peucedani facie pusilla planta" 331 *Pimpinella dioica*, "limonium maritimum" 123 *Statice oleaefolia* 123, *Haemanthus coccineus* 2. 503, *Pancratium amoenum* 2. 502, *Crinum Americanum* 2. 501, *Aphyllanthes Monspeliensis* 190, *Frankenia laevis* 180, *Sideritis scordioides* 225, "verbascum sylvestre" 241 *Phlomis Italica*, "thlaspi minus umbellatum" 75 *Iberis pinnata*, "althaea" 294 *Lavatera olbia*, "lagopus" 384 *Trifolium angustifolium*, *Lotus siliquosus* 385, *Medicago marina* 383, "medicae spec. secunda" 383 *M. turbinata*, "stoechas citrina altera" 203 *Serratula dubia*, *Carthamus carduncellus* 374, *Balsamita ageratifolia* 2. 509, "tertium anglicum" 202 *Gnaphalium sylvaticum*, "minor Narbonensium" 147, "aster montanus hirsutus" 148 *Inula montana*, *Senecio artemisiaefolius* 333, "herbariorum anthemis chrysanthemos" 343 *Anacyclus aureus*, "cotula s. parthenium maritimum" 345 *Anthemis maritima*, "chameleon non aculeatus" 367 *Centaurea* (*Leuzia*) *conifera*, "jacea humilis serpens" 235 *Centaurea pullata*, "spina alba" 369 *Echinops strigosus*, *Liparis Loeselii* 2. 506, *Typha media* 41, "terebinthus minor" 411 *Pistacia reticulata*.

Caryolopha sempervirens of the West Mediterranean countries. Described by Lobel adv. 247 — (Spreng.); observed by Gerarde only under cultivation in Britain, termed "anchusa sempervirens" by Linnæus, and known to grow in Spain (Pers.) and Piedmont (All.). In Britain, between 1690 and 1724, made its appearance in one locality in Kent (edit. Dillen); two additional localities are mentioned by Hudson "in 1778;" localities in six different counties are mentioned by J. E. Smith "in 1800," and in eleven "in 1824;" and "in 1849," Watson mentions the plant as occurring along hedges and roadsides in seventeen of the eighteen districts into which he divides Britain (A. Dec.).

Radiola millegrana of Europe and the adjoining portion of Asia. A diminutive plant of the flax tribe called in Britain *flax-seed* (Prior); termed "herba turca" by Lobel adv. 180 — (Spreng.), "polygonum minimum s. millegrana minima" by C. Bauhin pin. 282, "radiola vulgaris serpillifolia" by Ray angl. iii. pl. 15, and known to grow from 63° 26′ in Norway to the Mediterranean (fl. Dan. pl. 178, Engl. bot. pl. 893, Pers., and A. Dec.): observed by Linnæus in Sweden, in places subject to inundation; by Vaillant pl. 4; near Paris; by Brotero, in Portugal; by Lemann, on Madeira; by Boissier, near Cadiz, Gibraltar, and Tangier; by Schousboe, in Morocco; by Moris, on Sardinia and Corsica; by Gussone, on Sicily; by Gaudin, near Bale; by Schrank, near Salzbourg; by Baumgarten, in Transylvania; by Sibthorp, on the Bithynian Olympus.

Seseli glaucum of Europe and the adjoining portion of Asia. Termed "caucalis Anguillarae" by Lobel adv. 325 — (Spreng.), "fœniculum sylvestre glauco folio" by Tournefort inst. 311, described also by Morison iii. 9. pl. 2, and known to grow from Carniolia to France (Pers.): observed by Crantz, and Jacquin austr. pl. 144, in Austria; by Sibthorp, on hills around Constantinople; by Guldenstadt, as far as Caucasus (Steud.); in less than fifty years between the opening of the Doubs canal and "1822" made its appearance in the environs of Montbelliard (Bernard). "S. junceum," described by J. E. Smith from a specimen in Sibthorp's herbarium, is regarded by Sprengel as not distinct.

Cirsium eriophorum of Europe and the adjoining portion of Asia. A woolly-headed thistle said to grow in various parts of Spain, described by Lobel adv. 370 — (Spreng.), and observed by Dodoens pempt. v. 5 pl. 5 exotic in the gardens of Belgium: — is described also by Caesalpinus xiii. 40 (Spreng.); is termed "c. capite rotundo tomentoso" by Tournefort inst. 441; was observed by Scopoli in Carniolia (Jacq. austr. pl. 171, and Steud.); by Sibthorp, from the Peloponnesus to mount Haemus and Smyrna.

Carduus acanthoides of Europe and the adjoining portion of Asia. Described by Lobel adv. 371 — (Spreng.); termed "carduus acanthoides" by Bauhin hist. iii. 59, "c. nigrescens" by Villars iii. pl. 20, and known to occur in waste places throughout Europe (Moris. iii. 15 Jacq. austr. pl. 249, and Pers.): observed by Linnæus in Sweden, frequent along waysides and about villages in Scania; by Villars, in Dauphiny; by Forskal, and Sibthorp, from Crete and the Peloponnesus to Cyprus and Constantinople.

Moluccella spinosa of middle Asia. Termed "molucca asperior" by Lobel adv. 221 — (Spreng.), and according to Caesalpinus xi. 24 also exotic in Italy, taller with the floral whorls more spiny: M. spinosa is termed "molucca spinosa" by Tournefort inst. 187; was observed by Sibthorp, and Chaubard, near Navarino in the Peloponnesus and on mount Parnassus.

Pancratium maritimum of the seashore of Carolina and Florida. A large ornamental bulbous-rooted plant called in Greece "agria skilla" (Sibth.), in Egypt "sousan" (Del.); described by Lobel adv. 57 — (Spreng.), having possibly without human intervention reached the shore of Southern France and Spain (Pers.): observed by Sibthorp, and Chaubard, frequent in the maritime sands of Greece and Cyprus; by Delile, near Alexandria. Westward, was observed by Catesby app. v. pl. 5 in South Carolina (Ell.); by Chapman, in "salt marshes, South Florida to South Carolina." By Arab visitors, or possibly by Spanish colonists crossing the Pacific, was carried to the Malayan archipelago; observed by Blanco on the Philippines, kept by the natives in vases; by Rumphius vi. pl. 70, in other parts of the archipelago. (See Lilium candidum and Iris sambucina.) *

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* *Mamillaria simplex* of the West Indies and neighbouring portion of Tropical America. A melon-shaped *cactus*, transported to Europe, termed "echinomelocactus" by Lobel stirp. nov. 373 — (Spreng.); described also by Tournefort inst., and Linnæus. Westward, known to grow in rocky situations in South America (Pers.).

Sarracenia flava of Carolina and the Lower Mississippi. Its leaves from their size and shape called *trumpets*, and one procured from a sailor figured by Lobel stirp. nov. 430: the plant, transported to Europe, is described by Plukenet amalth. pl. 376. Westward, was observed by myself in bogs from 37° in Lower Virginia; by Catesby, and Walter, in South Carolina; by Chapman, "Florida to North Carolina, and westward;" by Drummond, from St. Louis along the Mississippi to New Orleans.

Yucca gloriosa of the seashore of Carolina and Florida. Having a palm-like stem two to four feet high crowned with bayonet-like leaves and an upright panicle of white tulip-like flowers: transported to Europe, described by Lobel adv. 2. 508, — Cnoffelius (Spreng.), Barrelier rar. pl. 1194, and Linnæus: by European colonists also, was carried to the environs of Bombay, where according to Graham "it seems to be quite naturalized" in "gardens," flowering "in the rains when the large panicle has a very showy appearance;" also to Peru (Pers.); and is cultivated in our own gardens as far North at least as the Merrimack. In its wild state, was observed by Michaux i. 196 on the seashore of Carolina (Pers.); by Elliot, in South Carolina; by Leconte, in Georgia (Collins); and by Chapman, "drifting sands along the coast, Florida to North Carolina, and westward."

"May 19th, 1571" (Stanley edit. De Morga 18 and 368), Manila, a large town "fortified with palms, and thick arigues filled in with earth, and a great quantity of bronze cannon, and other larger pieces with chambers," captured by a force sent by Legazpi from Panay. A new town was now founded on the site of the old one, presented "for that purpose" by the local chief Rajamora; the neighbouring chiefs gave in their submission, and the Spanish conquest of the Philippines was soon completed. — Legazpi died "Aug. 20th, 1572," and was succeeded by Guido de Labazarris, named in a sealed despatch "from the high court of Mexico" found among the papers of the deceased.

"Oct. 7th" (Blair), at Lepanto, the Turks defeated in *naval combat* by forces under Don John of Austria.

"1572, Aug. 24th, Sunday" (Alst., and Blair), in Paris and other places in France, massacre of some thousands of Protestants; Charles IX. reigning.

"The same year" (Hakl. iii. 525 to 779, Purch., and Holmes), landing of Francis Drake in Darien harbour, and two trains of mules laden with *gold* and *silver* intercepted. — The proceedings of Drake and the English "buccaneers," are to this day remembered along the Western coast of South America.

"In this year" (Markham edit. p. 390), Potosi visited by the viceroy Francisco de Toledo. Who introduced the use of *quicksilver*, and caused a census to be taken of the natives throughout Peru "between the ages of eighteen and fifty:" they numbered "1,677,697."

"In this year" (Humb. cosm. ii.), sudden appearance of a star of more than the first magnitude in the constellation Cassiopea. The star soon disappeared.

"In this year" (Spreng.), Ioannes Fragosus of Toledo publishing his Discurs.

"1573 A. D. = 'wen-li,' 1st year of" Chin-tsoung II. or "Chin-tsoung-hien-ti, of the Ming" or Twenty-third dynasty (Chinese chron. table).

"In this year" — (Spreng.), Rauwolf visiting Syria and part of Persia, meeting with among other plants *Astragalus coluteoides*, *A. christianus*, *A. densifolius*, *Tragopogon lanatus*, *Inula tuberosa*, *Michauxia campanuloides*, *Acanthus Dioscoridis*, "rausut" and "rumigi" *Aristolochia Maurorum*, and "arum Carsaami" *Calla Orientalis*. — He returned in "1576," published his travels in "1583," and died in "1596."

Gundelia Tournefortii of the Tauro-Caspian countries. The "silybum" of Rauwolf 74 — is referred here by Sprengel: G. Tournefortii was also observed in the East by Tournefort voy. ii. pl. 108; and transported to Europe, is described by Miller, and Linnæus.

"In this year" (Barcia 3, Biogr. univers., and Spreng.), Martinus del Barco visiting Paraguay. — His account was continued "to 1581."

Passiflora cærulea of Brazil. A *passion-flower* observed and described by Martinus del Barco — (Spreng.), and known to grow wild in Brazil (Pers.). Transported to Europe, is described by Miller pl. Linnæus, and Cavanilles pl. 295.; was observed by Forskal, Delile, and Clot-Bey, in the gardens of Egypt, called there "sjerk el fælak;" and apparently the same species by Forskal in gardens at Constantinople.

Dorstenia contrayerva of Mexico, the West Indies, and Peru. An herb observed and described by Martinus del Barco,* — according to Sprengel: known to grow as far as the West Indies (Jacq. ic. iii. pl. 514). Transported to Europe, is described by Blackwell pl. 579, and Linnæus. Its root, one of the kinds of *contrayerva* of commerce, is employed medicinally for its "stimulant sudorific and tonic qualities" (Guibourt, Mart., and Lindl.).

"1574 A. D." (art de verif.), Selim II. succeeded by Amurath III. or Murad III., fourteenth Turkish sultan. Coins of Murad III. issued at Cairo, are figured in Marcel p. 202.

Robbers becoming numerous among the population of Egypt, the pasha sent by Murad III. is said to have decapitated not less than "ten thousand" (Marcel p. 200).

"In this year" (Smith ed. fl. lapp.), Simler publishing his Description of Vallesia and the Alps.

"In this year" (inscr. date), letter to the pope from Nicol. Monardes, at this time printing his

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* *Dorstenia Braziliensis* of the West Indies and Brazil. Called in Brazil "caa-apia" (Marcg.), and probably the species seen by Martinus del Barco: — observed in Brazil by Marcgrave. 52. pl. ; by Martius, in the mountainous parts of S. Paulo and Minas, used against the bite of serpents and for other medicinal purposes, frequently confounded with but superior to all other species in salutary value, although unknown as an article of commerce; by Swartz 275, as far North as the West Indies (Lindl.).

Dorstenia opifera of Brazil. Possibly the species in question: — D. opifera, growing in Brazil, is described by Martius as a third kind of *contrayerva*, more farinaceous than the others (Lindl. See D. Drakena).

botanical work, enumerating, *Jatropha multifida* 334, *Convolvulus mechoacanha* 334. — The Second part contains a letter from Peru bearing the date of 1578.

Tropæolum majus of Peru. The *garden nasturtium*, called in Egypt "tortour el-bachah" (. . . .), described by Monardes 348 — (Spreng.), and "in 1684" introduced into Europe (Pers.); termed "cardamindum majus" by Moench; and observed by Delile, and Clot-Bey, in the gardens of Egypt. By European colonists, was carried to Northeast America, where it continues under cultivation for ornament and its capsules pickled; also to Hindustan, observed by Graham in "gardens" at Bombay.

Hymenæa courbaril of Tropical America. From transported specimens described by Monardes 297 — (Spreng.), C. Bauhin pin. 404, and Plukenet alm. pl. 82. Westward, was observed by Macfadyen a large forest-tree frequent on Jamaica; is known to grow also in Brazil, where the transparent resin exuding between the principal roots is called "jatchy" or "jatahy" or in Minas Geraës "jatoba," is used medicinally and for various kinds of varnish (Martius, and Lindl.), and is exported under the name of *American gum animi* (Descourt., and Mason). By European colonists, the living tree has recently been introduced into Hindustan (Graham), and Burmah (Mason v. 486).

Smilax Mauritiana of the West Mediterranean countries. Monardes thinks that the *sarsaparilla* of Spain, which is the root of "smilax aspera," possesses the same properties as that from Mexico: — Alpinus ascertained that a portion of the sarsaparilla of commerce was produced in the Mediterranean countries; and the kind most esteemed in Egypt was found by Forskal mat. med. to come "from Barbary:" S. Mauritiana is described by Duhamel, and Poiret; and was observed in Barbary by Desfontaines ii. 367 (Pers.).

"1575 A. D." (Alst., and Blair), founding of the University at Leyden; Janus Dousa made the first rector.

"In this year" (Spreng., and Winckler), Lorenzo Perez, an apothecary of Toledo, publishing De la Teriaca. — His Medicament was published "in 1599."

"1576, May" (Blair), signing of the edict of Pacification. Followed in France by a League of the Catholics, against Henri III. and the Protestants.*

"In this year" (Humb. cosm. ii.), the inclinometer or dipping needle invented in England by Robert Norman.

"In this year" (Spreng., and Winckler), Lobel publishing his Hist. Stirp., enumerating "ligusticum alterum Belgarum" hist. 457 *Physospermum Cornubiense*, "cicutaria maxima Brancionis" hist. 422 *Ligusticum athamanthoides*.

Hypochæris radicata of Europe and the adjoining portion of Asia. Termed "hieracium longius radicatum" by Lobel hist. 120, — "costole d'asino" by Caesalpinus (Targ.), "hieracium dentis leonis folio obtuso majus" by C. Bauhin pin. 127, and Tournefort inst. 420, and known to grow from Sweden throughout middle Europe (fl. Dan. pl. 150, Curt. lond. iii. pl. 52, and Pers.): observed by Rosen, and Linnæus in Sweden, as far as Scania; by Forskal, and Sibthorp, from the Peloponnesus to Constantinople.

"The same year" (Hakl., and Churchill coll.), under instructions from queen Elizabeth, Martin Forbisher seeking a Northwest passage, discovered a Strait in "sixty-three degrees and eight minutes latitude;" the same that has received his name. After penetrating many leagues, he was prevented by ice; but had interviews with the natives; and some of his company landing, procured flowers and specimens of a black mineral.

"The same year" (Steinschneid. iii. 27), by Moses ben Elia Pobian, the Bible translated from the Hebrew into Modern Greek.

"In this year" (Spreng., and Winckler), Clusius publishing his Rar. Stirp. Hispan., enumerating "candilera" *Phlomis lychnitis* 378, *Ixia bulbocodium* hisp. 259, *Iris scorpioides* hisp. 274, "sisyrinchium" hisp. 281 *Moraea sisyrinchium*, "juncaria Salmanticensis" hisp. 503 *Ortegia Hispanica*,

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* *Psoralea Americana* of Madeira. An *itch-trefoil*, transported to Europe, described by Lobel hist. ii. pl. 31, — Linnæus, and Jacquin schoenb. iii. pl. 227. Westward, known to grow wild on Madeira (Pers.); observed there by myself.

Cereus Peruvianus of Jamaica. A columnar *cactus*, thirty to forty feet high, transported to Europe termed "euphorbii arbor" by Lobel hist. ii. 25 — (Spreng.), described also by Linnæus. Westward, according to Persoon, grows wild on Jamaica.

Tillandsia utriculata of the West Indies. An *air-plant* two to three feet high, transported to Europe, termed "peruviana alia aloes facie" by Lobel hist. ii. 204. — (Spreng.); described also by Linnæus. Westward, was observed by P. Browne 194 on Jamaica; by Leconte, and N. A. Ware, as far North as "28°" in Florida, the dilated bases of its "leaves form a kind of cup which commonly contains a considerable quantity of water" (Chapman).

Scabiosa stellata hisp. 365, *Rhamnus lycioides* hisp. 70, "e. pumilum" hisp. 456 *Eryngium tenue*, "thapsia quarta" hisp. 431 *Athamantha panacifolia*, "bulbosum serot. tenuifolium" hisp. 272 *Leucoium autumnale*, "colchicum montanum" hisp. 267 *Bulbocodium autumnale*, *Asparagus albus* hisp. 461, *Erica Mediterranea* hisp. 112, *E. australis* hisp. 110, *E. scoparia* hisp. 113, *E. umbellata* hisp. 115, *E. cinerea* hisp. 116, *E. ciliaris* hisp. 119, "sanamunda prima" hisp. 175 *Passerina juniperifolia*, "sanamunda secunda" hisp. 176 *P. polygalaefolia*, *Silene conica* hisp. 339, *S. muscipula* hisp. 340, *S. polyphylla* hisp. 336, *S. tridentata* hisp. 343, "alsine corniculata" hisp. 416 *Cerastium dichotomum*, *Cistus lavandulifolius* hisp. 147, *C. ladaniferus* hisp. 156, *C. laurifolius* hisp. 158, *C. laxus* hisp. 160, *C. crispus* hisp. 139, *C. Clusii* hisp. 151, *Helianthemum elongatum* hisp. 148, *H. pilosum* hisp. 152, *H. ledifolium* hisp. 154, *H. libanotis* hisp. 162, *H. halimifolium* hisp. 144, *Ranunculus bullatus* hisp. 316, *Teucrium fruticans* hisp. 229, *Lavandula multifida* hisp. 235, *Sideritis hirsuta* hisp. 390, *Linaria triphylla* hisp. 351, *Lavatera maritima* hisp. 91, *Spartium sphaerocarpum* hisp. 205, "tinctoria hispan." hisp. 200 *Genista florida*, *Cytisus divaricatus* hisp. 192, *C. triflorus* hisp. 195, *Coronilla Valentina* hisp. 197, *Trifolium squarrosum* hisp. 247, *Lotus cytisoides* hisp. 204, "jacea luteo flore" hisp. 368 *Centaurea verutrum*, *C. Salmantica* hisp. 360, *Quercus tauzin* hisp. 24, *Q. Lusitanica* hisp. 23, *Viscum oxycedri* hisp. 102, and *Asplenium palmatum* hisp. 494.

"1577 A. D." (Parkhurst, Hakl., and Holmes), "one hundred ships from Spain, fifty from Portugal, one hundred and fifty from France, and fifty from England," engaged in the Newfoundland fishery. Besides "twenty or thirty ships from Biscay, to kill *whales* for train oil."

"The same year" (Alst.), end of the chronicle of Gerhardus Mercator.

"1578 A. D." (A. Dec. g. b. 978), Christophe Acosta writing De las drogas.

"Aug. 20th" (Hackl. soc., Churchill coll., and Holmes), Francis Drake passing cape Virgin Maria, near the entrance of the Straits of Magellan: among the simples on the South side of the Straits, he remarked "time," (. . . .), "marjerom" (. . . .), and "Alexander's scurvy grass" (*Apium dulce*), "and divers others well-known to us;" and on an island, he met with "fowl that could not fly, as big as geese" (. . . .): entering the Pacific, his ship was driven Southward among islands the uttermost cape of which is near Lat. 56° with no land in sight beyond; in "a good bay, they saw many men and women naked in canoos" (Fuegians), "and traded with them for such things as they had," remarked their "drinking of one herbe" not unlike "pennyleafe" (*Myrtus nummularia*), and found growing on shore a "small berry with us named currants" (*Ribes* no. 10 expl. exp.). Thence following the coast Northward, two of his men were killed by the natives of the outlying island of Mocha in "Lat. 39°." At Valparaiso he captured a Spanish ship; proceeding inland, "plundered nine houses being all there were in that which they called the town of Santiago;" and returning to the ship, continued his course Northward.

Wintera aromatica of Fuegia. A tree named from Winter, one of Drake's officers, who is said to have discovered it — (Bethune), and who may have brought home specimens of the bark: "Winters barke" was gathered by Hawkins in 1593 in the Straits of Magellan, the leaf "whitish greene and is not unlike to the aspen leafe;" but the *Winter's bark* of the present day, may be derived from the more Northern species, which appeared to me decidedly distinct (See W. Chilensis).

"In this year" (Prior), Lyte publishing his Niewe Herbal.

"In this year" (Spreng.), Leon. Thurneysser publishing his Hist. plant., containing figures of *Calystegia tomentosa* 485, *Meum heterophyllum* 1021, *Salsola rosacea* 41, *Cardamine latifolia* 163, and *Chrysanthemum serotinum* 539. — He died "in 1595," a full edition was published by Thom. Pancovius "in 1654," and a third by Barth. Zorn "in 1673."

Erigeron (*Cœnotus*) *Canadense* of Northeast America. Figured by Thurneysser 538 — (Spreng.), and as early as "1655" cultivated in the jardin de Blois and termed by Bruyner "aster canadensis annuus" — (Tourn., and A. Dec.); known to Boccone pl. 86 in Sicily in 1674, to Zannoni in Italy in 1675, and in 1694 termed "virga aurea virginiana annua" by Tournefort inst. 484; has become naturalized in Algeria (Munby) and throughout Europe as far as Sweden and Moscow (Ten., and Fries), from the Greek islands to Smyrna and Constantinople (Sibth.), in cultivated ground in the Tauro-Caucasian countries (Bieb.), and in Siberia as far as the Altaian mountains (Ledeb., and Dec.): by European colonists also, was carried to the Azores and Madeira (Dec., and Wats.), Austral Africa (Drège), the West Indies, Mexico, and Brazil (Dec.), and the Hawaiian Islands (Cham., and Mann). In its wild state, is known to grow in sunny situations from Canada along the Atlantic to Lat. 31° in Florida (Pursh, Baldw., and Chapm.), to Kentucky (Short), the Arkansas river (Nutt.): but multiplying in clearings after the removal of the forest, has become an abundant weed in waste and cultivated ground: was received by Torrey from Oregon.

"1579 A. D." (Spreng.), Linschoten visiting the Malayan Archipelago and China. — He published an account of his voyage "in 1599," — and died "in 1601."

"The same year (=986 Hej.," Pall. trav. i. 192), date of the latest of three Armenian inscriptions in the cemetery of the ruined city of Bolgari, on the lower Volga.

"June 5th" (Hackl. soc., Churchill coll., and Holmes), to avoid being intercepted, Drake proceeded North, anchored in "Lat. 43°," and called this portion of the continent "Albion." He next followed the coast Southward, and on the "17th" anchored in a large bay in "38° 30′:" a native in a canoe brought a basket made of rushes (*Scirpus lacustris*) filled with an "herbe which they called tabah" (. . . .); in the course of other interviews he ascertained that the men for the most part go naked, while the women make a loose garment of a kind of bulrushes and "kembing" it after the manner of hemp (cincture of *Apocynum*); the natives having quantities of the finest down from an herb much like our lettuce (. . . .), also a root called "petah," of which they make a kind of meal and eat raw (. . . .); the country containing very large fat deer (*American elk*, Cervus wapiti). Thence he sailed Westward across the Pacific, the Malayan Archipelago, — Indian Ocean, and up the Atlantic to England; completing the Second Circumnavigation of the Globe "Sept. 26th, 1580," in "two yeares ten moneths and some few odde daies beside."

"1580 A. D." (Spreng.), Alpinus arriving in Egypt, meeting with *Bunias spinosa* exot. 200. — He remained "three years."

Cordia crenata of Tropical Asia? The "sebesten sylvestris" of Alpinus pl. 8 — is referred here by Delile: C. crenata was observed by Forskal, and Delile, in the gardens of Egypt, and is described as a small tree called "mokhayet roumy;" as though brought from Constantinople.*

"Between 1580–90 A. D." (Jap. centen. comm. 60), Gorodayu Shonsui returning from China, where he had studied "this branch of trade," brought the art of making *porcelain* to Japan.

"1581 A. D. = 18th year of the cycle" (Pauth. 411), arrival in China of the first Christian missionary, the jesuit P. Michael Rogerius.

"The same year" (S. F. Haven in archæol. Amer. iv. 280), a number of eminent English merchants incorporated for trade with Turkey. — A perpetual charter was granted them by king James "in 1605:" and under the name of "the Levant or Turkey company," the corporation continues in existence to the present day.

"In this year" (Spreng., and Winckler), Lobel publishing his Kruydtboeck and Icones, enumerating *Gymnadenia viridis* obs. 90, "colus jovis" ic. 557 *Salvia glutinosa*; *Nardus stricta* ic. 90, *Arrhenantherum bulbosum* ic. 23, *Avena nuda* ic. 32, *Plantago subulata* ic. 439, *Polygonum erinaceum* ic. 468, *Omphalodes verna* ic. 577, *Symphytum tuberosum* ic. 584, *Verbascum virgatum* ic. 564, *Bunium aromaticum* ic. 724, *Myrrhis aurea* ic. 735, *Linum strictum* ic. 411, *L. campanulatum* ic. 414, *Tulipa suaveolens* ic. 127, *Scilla lilio-hyacinthus* ic. 101, *Allium carinatum* ic. 156, *Juncus aquaticus* ic. 12, *Luzula campestris* ic. 15, *Triglochin maritimum* ic. 17, *Alisma damasonium* ic. 301, *A. ranunculoides* ic. 300, *Rhododendron hirsutum* ic. 367, *Saxifraga Burseriana* ic. 375, *Dianthus prolifer* ic. 449, *D. deltoides* ic. 444, *Silene conoidea* ic. 338, *Silene maritima* ic. 337, *Cereus Peruvianus* ic. 2. 25, *Paeonia humilis*† ic. 683, *Digitalis ferruginea* ic. 573, *Cochlearia Anglica* ic. 294, *Alyssum spinosum* ic. 217, *A. campestre* ic. 220, *Vella pseudo-cytisus* ic. 2. 49, *Erysimum diffusum* ic. 205, *Erodium gruinum* ic. 662, *Ononis rotundifolia* ic. 2. 73, *Cytisus argenteus* ic. 2. 41, *Astragalus stella* ic. 2. 95,

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* *Antennaria margaritacea* of North America and Kamtchatka. Called in Britain *everlasting flower* (Prior), "gnaphalium americanum" by Clusius, who in this year received it from England; — where it became naturalized before the days of Ray; was known to the Bauhins only as a cultivated plant, but has since been found seemingly wild in various parts of Europe (Haller, Allion., and A. Dec.). Westward, "live forever a kind of cud-weed" was seen by Josselyn rar. 55 in New England: A. margaritacea, by Lapylaie from Lat. 49° in Newfoundland; by myself, frequent from 48° on the Lower St. Lawrence to 42° along the Atlantic; by Torrey, to 41° on the Hudson; by Chapman, in the "Upper districts of North Carolina, and northward;" by Long's Expedition ii., at Rainy Lake (Schw.); was received by Torrey from Oregon; by Gmelin, from Bering's Island and Kamtchatka.

† *Aquilegia Canadensis* of Northeast America. The *Canadian Columbine* transported to Europe described by Lobel ic. 26, — Cornuti pl. 60, Morison iii. 12. 2. f. 4, and Miller pl. 47. Westward, "columbines, of a flesh-colour, growing upon rocks," were seen by Josselyn 46 in New England: A. Canadensis is known to grow from Hudson Bay and 55° throughout Canada (Hook.); was observed by Michaux from Canada to the Alleghanies of Carolina; by myself, on rocky hills throughout New England; by A. Gray, "common" in central New York; by Schweinitz, at 36° in Upper Carolina; by Croom, near Newbern; by Elliot, on the Alleghanies of Carolina and Georgia; by Chapman, in "rocky woods, West Florida and northward in the upper districts;" by Beck, as far as the Mississippi near St. Louis.

Limnanthemum lacunosum of Northeast America. An aquatic with small floating Nymphæa-like leaves, and the "lutea minor" found by Lobel p. 258 in the Thames, — may be compared: also as transported to Europe, L. lacunosum is described by Ventenat (Steud.). Westward, according to A. Gray, grows in Maine and Northern New York; has been observed by myself frequent in lakes and slow-moving water from 43° to 38° along the Atlantic; by Pursh, from New Jersey to Carolina;

Medicago radiata ic. 2. 38, *Hypericum elodes* ic. 400, *H. serpyllifolium* ic. 2. 390, *Leontodon crispum* ic. 238, *Staehelina fruticosa* ic. 548, *Cirsium bulbosum* ic. 582, *Cirsium pratense* ic. 583, "acarna Theophrasti" ic. 2. 16, *C. Casabonae*, *C. Italicum* ic. 2. 15, *Gnaphalium alpinum* ic. 484, *Evax asteriscifiora* ic. 484, *Filago minima* ic. 481, *Cineraria campestris* ic. 347, *Carex ovalis* ic. 19, *C. pseudocyperus* ic. 76, *Atriplex laciniata* ic. 254, *A. patula* ic. 254, *A. angustifolia* ic. 257, *Asplenium marinum* ic. 814, *Cistoseira barbata* ic. 2. 254, *Fucus acinarius* ic. 2. 256, and *Ulva umbilicalis* ic. 2. 246; — he completed the Icones "in 1591."

Asperula Taurina of the West Mediterranean countries. Termed "rubia laevis taurinensium" by Lobel ic. 800 — (Spreng.), "galium taurinum" by Scopoli (Steud.), and known to grow in Southern France and the neighbouring portion of Italy, in woods from Dauphiny to Piedmont (Dec. fl. fr., and Mut.); was observed by Gouan near Montpellier, but perhaps adventive only (A. Dec.). In Britain, "from 1836" has become naturalized in two localities, in Leicester and Westmoreland (Bab.), and more recently in Southeastern Scotland (Wats.).

Thymus Barrelieri of the Mediterranean countries. Termed "calamintha secunda incana" by Lobel ic. 514 — (Spreng.), "c. pulegii odore" by Barrelier pl. 1166, "melissa Cretica" by Linnæus; known to grow in Spain and around Montpellier (Pers.), also in Sicily and Greece (Spreng.).

Polygonum lapathifolium of Northeast America. Described by Lobel ic. 315 — (Linn., and Spreng.); termed "persicaria major lapathi foliis calyce floris purpureo" by Tournefort inst. 510, "p. Pennsylvanicum" by Curtis lond. i. pl. 24 and 25; seems known to Linnæus only as occurring in France; but was observed by Sibthorp, and Chaubard, in waste places around Athens and in the Peloponnesus. Westward, by Banister (Ray suppl. 119) in Virginia; by Elliot, in South Carolina, and termed "p. incarnatum;" by Chapman, in "ponds, ditches, etc., South Carolina, and westward," the "flowers small flesh-colour" (pale pink), and the leaves "eight inches long." The white-flowered form, "P. densiflorum" of Meisner, was observed by Chapman on "muddy banks, Florida, and westward;" by myself, intermingled with P. persicaria in waste places around Salem in New England; and is perhaps the same seen by Torrey at 41° on the Hudson, and according to A. Gray growing in "moist places Michigan to Kentucky, and common southward," and "apparently indigenous."

Juncus glaucus of Europe and the adjoining portion of Asia. A leafless rush called in Greece "vourla" (Sibth.); described by Lobel ic. 85 — (Spreng.), and Barrelier pl. 208; termed "j. acutus panicula sparsa" by Tournefort inst. 246; and known to grow in moist places from Lapland and Russia to the Mediterranean (fl. Dan. pl. 1159, Engl. bot. pl. 665. Pers., and Wats.): observed by Sibthorp, and Chaubard, from the Peloponnesus to the Mediterranean.

Poa (*Heleochloa*) *maritima* of the shores of the North Atlantic and Mediterranean. A seaside grass termed "gramen geniculatum marinum" by Lobel ic. 21 — (Spreng.), "poa maritima" by Hudson, Willdenow i. 396, and Smith brit. i. 97, "glyceria maritima" by Wahlenberg, "festuca thalassica" by Kunth: known to grow along the seashore from Lapland to Ireland and the Mediterranean (fl. Dan. pl. 251, Engl. bot. pl. 1140, Pers., and Wats.), and even in Siberia (Kunth); observed by Decandolle on the seashore of France as far as the Mediterranean; by Sibthorp, around the Greek islands. Westward, by Hooker in Iceland; by myself, on the border of salt marshes around Salem, Mass.; and according to A. Gray is "not rare" along our sea-coast.

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by Elliot, in Granby, South Carolina, and Augusta; by Chapman, in "Florida, and northward;" by Short, in Kentucky; and by Nuttall, in New Jersey and Arkansas.

Polygonum (*Helxine*) *dumetorum* of Northeast America. A *climbing buckwheat*, transported to Europe, termed "helxine cissampelos altera" by Lobel pl. 624 — (J. E. Smith); described also by Tournefort inst. 511, and Linnæus; known to occur seemingly wild from Denmark throughout middle Europe (fl. Dan. pl. 79, Bromf., and A. Dec.); and collected by Sibthorp in Greece (J. E. Smith). Westward, has been observed by myself from 43° in New England to 40° along the Atlantic; by Schweinitz, at 36° in Upper Carolina; by Elliot, in South Carolina; by Chapman, in "Florida, and northward;" by A. Gray, "common" in central New York; by Michaux, and Short, in Kentucky.

Trisetum subspicatum of the Arctic region and alpine summits all over the Globe. A grass described by Lobel pl. 8; — known to grow in Lapland, and on the alpine summits of the Pyrenees and Switzerland (Fries, Ram., and A. Dec.), also in extreme Northern Asia (Kunth) as far as Kamtchatka (Ledeb.). Westward, was received by Hooker from Iceland and Melville Island; by Collins from Labrador; was observed by Sabine in Greenland; by myself, on the summits of the White mountains in New England; by E. James, on the Rocky mountains; and was received by Ledebour from Unalaska. Within the Tropics and in the Southern Hemisphere, was received by J. D. Hooker from the Andes of Mexico, Colombia, and Peru, and observed on the Falkland Islands, and on the mountains of Campbell's Island; was observed by myself on the mountains around Orange Bay near Cape Horn, and on the summit of Mauna Kea on the Hawaiian Islands.

Orchis latifolia of Europe and the adjoining portion of Asia. Described by Lobel obs. 90 — (Spreng.); termed "o. palmata pratensis latifolia longis calcaribus" by C. Bauhin pin. 85, and known to grow in moist meads throughout middle Europe (Tourn. inst. 434, fl. Dan. pl. 266, Curt. lond. v. pl. 65, and Pers.): observed by Rudbeck elys. ii. pl. 211, and Linnæus, in Sweden; by Vaillant pl. 31, in the environs of Paris; by Haller pl. 32, in Switzerland; by Sibthorp, and Chaubard, in the Peloponnesus.

"1582 B. C." (art de verif., and Thunb. trav. iv. 31), "at the solicitation of the jesuit missionaries," an embassy sent by the princes of Neugato, Bungo, and Arima to Rome, assuring pope Gregorius XIII. of their filial obedience; a measure that was ill-received in Japan. The same year (= "second day of the fifth month of the 25th year of Ookimatz," art de verif.), Nobunanga, holding next after Josijtira the office of cubo, slain together with his eldest son at Meaco: he was succeeded by Fide-josi, who took the name of Taiko-sama.

A painting by Taiko-sama is extant, — and after he had "quieted the country," a decided change in *Japanese art*: peaceful scenes were now represented, with flowers and trees, including "the Japanese maple with its beautiful autumnal tints" (*Acer pictum.* See Jap. centen. comm. 100).

"The same year" (Humb. iii. 8), the Northwest coast of America in Lat. 57° 30′, discovered by Francisco Gali.

"Oct. 5th," alias "15th" (Nicol. 34 and 206), "New Style," the change in reckoning devised by Christopher Clavius, established by pope Gregorius XIII.: "ten days" being deducted from this year by calling what "would have been the 5th of October, the 15th." — The so-called "Gregorian Calendar" has in the course of years been adopted by European nations generally: but not by Russia, nor anywhere in the East.

"The same year" (Churchill coll.), arrival of Francis de Ovalle from Mexico at the Philippine Islands. He next sailed North to Macao in China; and thence Northeast through the "Lequios" or Loo-Choo Islands, and at length Eastward across to the Pacific to the California coast "in thirty-eight degrees and a half of latitude:" not only making the first voyage from Mexico to China, but discovering the way of returning to Mexico.

"1583 A. D." (Hakl., Churchill coll., and Holmes), arrival in Newfoundland of Humphrey Gilbert, having obtained from queen Elizabeth the first English charter for a colony. Entering the harbour of St. John's among "thirty-six vessels of various nations," he landed and took formal possession; and "published three laws for the government of the territory." Sailing thence for Cape Breton, the loss of his largest ship induced him to return; his own ship was next lost; but the remaining one succeeded in reaching England.

"In or about this year" (Gassendi, and Blair), *refraction* of the rays of light in passing through transparent substances, re-discovered by Tycho Brahe; and the amount of error from this source in astronomical observation, ascertained by him with great exactness.

"In this year" (Spreng, and Winckler), Alpinus returning from Egypt by the way of Crete and the Greek islands, meeting with *Galium Graecum* exot. 166, *Ferula Orientalis* 199, *Statice echinus* 56, *Linum arboreum* 18, *Saponaria Cretica* 291, *Dianthus juniperinus* 38, *Teucrium Creticum* 102, *Nepeta scordotis* 283, *Alyssum Creticum* 118, *Anthyllis Hermanniae* 26, *Coronilla argentea* 16, *C. globosa* 314, *Astragalus echioides* 54, *Catananche lutea* 286, *Staehelina arborescens* 32, *Achillea Cretica* 83, *Ephedra fragilis* 140, and *Pteris ensifolia* 66.

Onosma simplicissima of the Uralian plains. Termed "echium ereticum" by Alpinus exot. 129 — (Spreng.): observed by Gmelin iv. pl. 40 in Siberia; by Pallas trav. i. 235 to ii. 18 from the Lower Volga to Oufa.

"In this year" (Spreng., Prior, and Winckler), Dodoens publishing his Stirp. Hist. pemptades, enumerating * *Allium magicum* 985, *Farsetia clypeata* 89, *Lathyrus Nissolia* 529, *Lysimachia ephemera* 203, *Bromus arvensis* 540, *Narthecium ossifragum* 208, *Veronica maritima* 86, *Iris graminea*

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* *Hibiscus palustris* of Northeast America. Possibly distinct from H. moscheutos, the flowers roseate and in all instances destitute of a dark central spot. Transported to Europe, is termed "althea hortensis s. peregrina" by Dodoens pempt. 653 — (Linn. sp. pl.). Westward, was observed by Kalm in Canada; by Bigelow, in the environs of Boston; by myself, only in Eastern New England, from 42° 30′ to 41° 30′.

Hibiscus moscheutos of Northeast America. The flowers in some instances deeply roseate and destitute of a dark central spot: — observed by Pursh from New York to Carolina; by Torrey, from Lat. 41° on the Hudson; by myself, frequent and very showy along the estuary of the Delaware; by Clayton, in Virginia; by Walter, and Elliot, in South Carolina; by Baldwin, as far as 31° in Florida; by Chapman, "Georgia, northward and westward;" by Short, in Kentucky; and by Nuttall, along the Arkansas. Transported to Europe, is described by Cornuti pl. 145 (Linn. sp. pl.).

247, *Plantago graminea* 108, *Tordylium Syriacum* 702, *Bupleurum rigidum* 633, *Tulipa sylvestris* 232, *Ornithogalum Narbonnense* 222, "bulbus eriophorus" 692 *Lunaria plumosa*, *Delphinium elatum* 441, *Anemone trifolia* 436, *Teucrium gnaphalodes* 283, *Thymus mastichina* 271, *Pedicularis fasciculata* 56, *Anarrhinum bellidifolium* 184, "alyssum Dioscoridis" 89 *Lunaria canescens*, *Anthyllis lotoides* (found by Paludanus on Lebanon) 109, *Trifolium rubens* 578, *Filago arvensis* 66, *Centaurea nigrescens* 124, *Salix fusca* 843, *Asplenium lanceolatum* 456, *Fucus siliquosus* 480, and *F. loreus* 479. — He died "in 1586."

Dianthus virgineus of the Uralian plains. Described by Dodoens stirp. hist. 176 — (Spreng.): observed by Scopoli in Carniolia (Steud.); by Pallas trav. i. 64 along the Volga; known to grow also in Siberia (Pers.).

Anemone Appennina of Italy and Greece. Described by Dodoens pempt. 434 f. 2, — termed "ranunculus nemorosus flore cæruleo foliis majoribus Apennini montis" by Tournefort inst. 285, and known to grow wild in Provence (Lois. i. 40) Corsica and Italy (A. Dec.): observed by Gussone frequent around Naples; by Sibthorp, and Chaubard, in shaded situations in the Peloponnesus. Introduced into Britain, became naturalized "before 1724," and continues to be cultivated in parks (Wats.); has been observed "sine dubio advena" in Holland (prodr. fl. bat.).

Lathyrus sylvestris of Europe and the adjoining portion of Asia. Termed "l. sylvestris" by Dodoens pempt. 523, — and Clusius hist. ii. 129, "l. s. major" by C. Bauhin pin. 344, and Tournefort inst. 395, and known to grow in mountainous situations throughout middle Europe (fl. Dan. pl. 315, Curt. lond. vi. pl. 52, and Pers.): observed by Linnæus in Sweden, fetid and neglected by cattle; by Sestini (Sibth.), and Chaubard, from the Peloponnesus to Constantinople.

Teesdalia nudicaulis of Europe and the adjoining portion of Asia. A small annual termed "bursa pastoris minor" by Dodoens pempt. 103, — "nasturtium petræum" by Tabernæmontanus pl. 451, "n. p. foliis bursæ pastoris" by Tournefort inst. 214, and known to grow in gravelly and sandy places from Sweden throughout Europe (C. Bauh. pin. 108, fl. Dan. pl. 323, Curt. lond. vi. pl. 42, and Pers.): observed by Linnæus in Sweden; by Sibthorp, in sunny situations in the Peloponnesus.

Polemonium coeruleum of Europe and Northern Asia. Called in Britain *Jacob's ladder* or *Greek valerian* (Prior), termed "valeriana coerulea aut graeca" by Dodoens 352, — and known to grow from Denmark and Western France to Caucasus (Tourn. inst. 146, fl. Dan. 255, Pers., and Spreng.); is further enumerated by A. Decandolle among widely-extended marsh plants.

Eranthis hyemalis of central Europe. Called in English gardens *winter-aconite* (Prior), first mentioned by Dodoens 440 — (Spreng.), termed "helleborus hyemalis" by Linnæus, and known to grow wild in Switzerland, Italy, and Austria (Jacq. austr. pl. 202, and Pers.). In Britain, has sometimes escaped from cultivation, but has not as yet become naturalized (Wats., and A. Dec.).

Ranunculus Illyricus of Europe and the adjoining portion of Asia. Termed "r. illyricus" by Dodoens pempt. 428, — and Lobel hist. 383, "r. lanuginosus angustifolius grumosa radice major" by Tournefort inst. 289, and known to grow from Sweden to Narbonne, Italy, and Hungary (Bauh. hist. iii. 863, C. Bauh. pin. 181, Jacq austr. pl. 222, and Pers.); observed by Linnæus in Sweden, extremely rare in Oeland; by Sibthorp, in shaded situations on mount Hæmus.

Epilobium montanum of Subarctic climates. Termed "pseudo-lysimachium purpureum primum" by Dodoens pempt. 85, — "lysimachia siliquosa glabra major" by C. Bauhin pin. 245, "chamænerion glabrum majus" by Tournefort inst. 303, and known to grow from Lapland throughout middle Europe, also in Northern Asia (fl. Dan. pl. 922, Curt. lond. iii. pl. 24, Pers, Dec, and Wats.): observed by Linnæus in Lapland and Sweden; by Schmidt 377, in Bohemia; by Ludwig, in Switzerland and Silesia; by Sibthorp, around Constantinople and on the Bithynian Olympus; by Bieberstein, on Caucasus. Westward, by Hooker in Iceland; by Mertens, at 57° around Norfolk Sound on the Pacific; is perhaps the species seen by myself in wet woods at 47° 30′ on the Lower St. Lawrence, also on the alpine portion of the White mountains, the stigma not examined (see E. tetragonum).

Ophrys fusca of the Mediterranean countries. Termed "o. serapias secundus minor" by Dodoens pempt. 238, — "orchis fucum referens flore subvirente" by Tournefort inst. 434, and known to grow in Portugal (Pers.): observed by Decandolle fl. fr. in France; by Sibthorp, and Chaubard, in the Peloponnesus.

Pulicaria vulgaris of Europe and the adjoining portion of Asia. Termed "conyza minima" by Dodoens pempt. 52, — "c. minor flore globoso" by C. Bauhin pin. 266, "aster palustris parvo flore globoso" by Tournefort inst. 483, and known to occur in rain-water pools, often in the streets of cities, throughout middle Europe (fl. Dan. pl. 613, Curt. lond. iii. pl. 57, and Pers.): observed by Linnæus in Sweden, as far as Scania; by Sibthorp, around Constantinople and in Asia Minor.

Cacalia anteuphorbium of Austral Africa. Recently brought to Europe, according to Dodoens pempt. iii. 378; — cultivated in Gerarde's garden, "in 1596;" described also by C. Bauhin pin. 387, and Linnæus; and in Europe very rarely flowering (Curt. bot. mag for 1874).

Senecio viscosus of Europe and the adjoining portion of Asia. Described by Dodoens 641 —

(Spreng.); termed "jacobæa pannonica prima Clusii" by Tournefort inst. 486, "s. incanus pinguis" by C. Bauhin pin. 131, and known to grow wild throughout middle Europe, occurring besides in city streets (fl. Dan. pl. 1230, Engl. bot. pl. 32, and Pers.): observed by Linnæus as far as Stockholm, having the aspect of S. vulgaris, but entirely viscid; by Sibthorp, in the Peloponnesus.

Linaria purpurea of the mountains of Italy, Sicily, and Greece. Described by Dodoens 183 — (Spreng.), termed "l. p. major odorata" by Tournefort inst. 170, and known to grow on the basal portion of Vesuvius (Pers.): observed by Gussone on the mountains of Italy and Sicily; by Sibthorp, in Greece. In Britain, is mentioned by Miller, and has escaped from cultivation in as many as six different localities (Bab., Wats., and A. Dec.).

"In this year" (Spreng.), Cæsalpinus publishing his treatise De plant., enumerating *Convolvulus cneorum* ix. 27, *Salvinia natans* xvi. 36, and "panacea" *Heracleum alpinum*. — (Spreng.). He died "in 1603."

Briza maxima of the West Mediterranean countries. An ornamental grass called in Greece "skōlarikakia" (Sibth.); described by Cæsalpinus, — Clusius, and C. Bauhin; termed "gramen paniculatum locustis maximis candicantibus tremulis" by Tournefort inst. 523; and known to grow in Portugal and Italy (Pers.). Eastward, observed by Sibthorp, and Chaubard, frequent in cultivated ground in Southern Greece and on the Greek islands. From Europe, was carried by colonists to Northeast America, where it continues to be cultivated in gardens; also, to Austral Africa, and India (Pers.).

Thymus lanuginosus of Western Europe. The "serpillum citratum" of Cæsalpinus xi. 52 — may be compared: T. lanuginosus is described by Miller, and Ehrhart; was observed by Allioni in Piedmont (Steud.); is known to grow farther North in France, and "var. citriodorum" is enumerated by Persoon.

"In this year" (J. E. Smith, and Spreng.), Clusius publishing his account of plants observed in Pannonia, Austria, etc., enumerating among others *Santolina rosmarinifolia*, *Bupthalmum maritimum*, and "colchicum pannonicum" *Sternbergia colchiciflora*, *Cardamine trifolia* 456, *Veronica latifolia* 613, *Salvia Austriaca* 579, *Pinguicula alpina* 361, *Echium violaceum* 681, *Androsace lactea* 491, *Soldanella montana* 354, *Viola grandiflora* 359, *V. biflora* 357, *Selinum Austriacum* 690, *Seseli hippomarathrum* 698, *Linum alpinum* 304, *Allium senescens* 221, *Ornithogalum comosum* 189, *O. pusillum* 190, *Tofieldia alpina* 262, *Chimaphila umbellata* 507, *Silene pumilio* 325, *Sedum villosum* 487, *Potentilla canescens* 429, *P. opaca* 428, *P. aurea* 427, *P. Clusiana* 425, *Aconitum Tauricum* 407, *A. Neubergense* 408, *A. cernuum* 451, *A. cammarum* 412, *A. variegatum* 414, *Clematis integrifolia* 294, *Ranunculus alpestris* 364, *Isopyrum thalictroides* 379, *Marrubium peregrinum* 589, *Thymus Pannonicus* 627, *Thymus alpinus* 623, *Dracocephalum Austriacum* 632, *Prunella grandiflora* 607, *P. laciniata* 608, *Pedicularis rostrata* 709, *Biscutella picridifolia* 471, *Peltaria alliacea* 466, *Arabis bellidifolia* 458, *Cytisus capitatus* 38, *C. supinus* 41, *Vicia oroboides* 741, *V. Pannonica* 745, *Astragalus Austriacus* 753, *A. asper* 756, *Scorzonera purpurea* 639, *S. humilis* 635, *S. rosea* 637, *Carduus Pannonicus* 656, *Artemisia scoparia* 556, *Arnica doronicum* 518, *Achillea Clavennae* 553.

Geranium phaeum of the mountains of middle Europe. Described by Clusius pann. 416 — (Spreng.); known in Britain as early as "1724" as appears from Dillenius (A. Dec.); escaping from cultivation, occurs at present only in suspected localities near gardens (Wats. cyb. i. 259 to iii. 400); occurs also in Holland (prodr. fl. bat. 54), and in moist meads around Montdidier in the department of Somme (Pauquy fl. somm.). In its wild state, is termed "g. patulum" by Villars, "g. lividum" by L'Heritier, and is known to grow on the mountains of Switzerland from France to Pannonia and Styria (Pers.).

Gentiana nivalis of the Arctic region and alpine summits farther South. An annual observed by Clusius pann. 291 — (Spreng.), Barrelier pl. 103 and 509, and Haller pl. 17, on the alpine summits of Switzerland (Pers.); by Wahlenberg, on the Carpathians and in Lapland, and is known to grow on mountain-summits in Silesia (A. Dec.); was observed by Pallas on alpine summits in Daouria. Westward, by Hooker on Iceland; and is known to grow in Labrador (Wats.).

Arabis alpina of Subarctic climates. Vernal, and termed "draba altera" by Clusius pann. 462, — "hesperis alpina seu muralis minor repens" by Bauhin hist. ii. 118, "turritis verna" by Desfontaines, and known to grow in the Arctic region and on mountains farther South (C. Bauhin pin. 109, Tourn. inst. 221, fl. Dan. pl. 62, Pers., and A. Dec.): observed by Linnæus frequent on the mountains of Lapland; by Boiss, on the mountains of Spain; by Desfontaines ii. 92, in Barbary; by Grenier and Godron, on the mountains of Corsica; by Hawkins, on the mountains of Crete (Sibth.); by Bieberstein, on Caucasus; and by Pallas, at 67° on the Oby. Westward, by Hooker in Iceland, and received by him from Greenland and Labrador.

Loiseleuria procumbens of the Arctic region and alpine summits farther South. Observed by Clusius 58; — by myself, in the alpine region of Switzerland; known to grow also on the Pyrenees (A. Dec.), the mountains of Scotland, the Feroe Islands (Martins), and Scandinavian peninsula as far

as North Cape and Finland (fl. Dan. pl. 6, Linn. fl. lapp. pl. 6, Fries, and Hook.). Eastward, was observed by Gmelin from the Biela river to Ochotsk and Kamtchatka; by Chamisso, in East Siberia as far as Bering Straits, and on the Aleutian Islands; by Mertens, around Norfolk Sound; by myself, on the alpine summits of the White mountains of New England; was received by Hooker ii. 44 from Arctic America, Newfoundland (A. Dec.), and Iceland.

Scrophularia vernalis of middle Europe. Described by Clusius pann. 595 — (Spreng.), and known to grow in France, Italy, Switzerland, and Austria (Pers.). In Britain, seems first mentioned by Aiton ii. 342, but has become frequent about towns and along hedges, and is regarded by Watson and A. Decandolle as exotic.

Linaria genistifolia of Europe and the adjoining portion of Asia. Described by Clusius pann. 308 — (Spreng.); termed "l. flore pallido rictu aureo" by Tournefort inst. 170, "ant. pallidiflorum" by Lamarck fl. fr., and known to grow from Switzerland and Saxony to Siberia (Pers.): observed by Jacquin austr. pl. 244 in Austria; by Sibthorp, from mount Athos to Constantinople. By European colonists was carried to Northeast America, observed by H. G. Clark, and Lesquereux, along "roadsides, New York, near the city" (A. Gray).

"In this year" (Klapr. chrest. p. viii), the Mandchous increasing in power and extending their conquests over Tartary and in the direction of China.

"In this year" (Dutch mem. emb., and Stanley note to De Morga 80), a mission of four Franciscans and a Jesuit, obtaining an audience of Fide-josi, receive permission to establish themselves at Meaco, on condition of not converting any Japanese.

"1584, July 13th" (Hakl., Churchill coll., and Holmes), Philip Amadas and Arthur Barlow under a charter from queen Elizabeth obtained by Walter Raleigh, arriving at Wohoken Island, outside of Pamlico Sound. Landing, they took formal possession; and Barlow with seven men proceeded up the Sound to Roanoke Island, to a village "of nine houses, built with cedar, and fortified with sharp trees" (palisades): meeting with "deer" (*Cervus Virginianus*), "rabbets" (*Lepus palustris?*), "hares" (*Lepus Americanus?*), and "fowl" (*Meleagris gallopavo*); also "vines" (*Vitis vulpina*), "pines, *sassafras*, cypress" (*Taxodium distichum*), "mastich-trees" (*Rhus copallina*), "white coral, and some pearls." Also (according to Strachey 142) "currants" (*Vaccinium*), and "the tree that beareth the rind of black synamon, of which like Capt. Winter brought from the Streights of Magellaun" (*Magnolia glauca*).

"In this year" (Spreng.), Guafridus Linocierus publishing his Hist., chiefly derived from Lerius, Garcias, Acosta, and others.

"1585 A. D." (art de verif.), the title "quambuku" conferred by Ookimatz on Fide-josi, rendering him equal and in effect, depriving himself of all temporal power: the ceremony only remaining of a visit of homage every three to five years.

"June 26th" (Hakl., and Holmes), Richard Greenville, under instructions from Walter Raleigh, arriving at Wohoken Island. After examining the neighbouring continent, he proceeded to Roanoke Island, and left there "one hundred and seven persons" under Rafe Lane; being the first settlement in America attempted by the English. He next sailed along the coast "one hundred and thirty miles," as far North as "the country of the Chesepeaks."

In the country around (De Bry i. 7) Hariot met with a kind of herb two and a half feet or more high, large-leaved and in its leaves producing silk (*Asclepias Cornuti*); "linum" growing wild (*Linum Virginianum*); trees in great abundance yielding turpentine, tar, and resin (*Pinus australis*); "cedrus," furnishing "odoratum" timber suitable for cabinet-work (*Juniperus Virginiana*); "vitis" of two kinds, one with acerb grapes as large as the English (*Vitis labrusca*), the other with much larger grapes full of juice (*V. vulpina*); nuts of two kinds that will yield oil (*Carya alba*, and *C. sulcata*); berries of three kinds, in shape "glandibus similis," from which oil is procured by the natives (*Myrica cerifera, Olea Americana, Pyrularia oleifera* *); various kinds of gums (. . . .), and other

* *Sapium sebiferum* of . . . . The *tallow tree* "twenty to forty feet high" (Chapm.), is called in the environs of Bombay "pippal yank" (Graham); and possibly one of the berries "glandibus similis" observed by Hariot yielding oil to the natives on the Roanoke: — S. sebiferum is described by Plukenet amalth. pl. 390; was observed by Michaux under cultivation in our Southern States (Pers.); by Chapman, in "Georgia and South Carolina near the coast," but regarded by him as "introduced." Eastward, was observed by Graham in gardens at Bombay; by Ainslie ii. 433, and Roxburgh, in other parts of Hindustan; and according to Drury "introduced," but now extensively cultivated in the Dhoons and Punjaub, its seed-vessels "hard brownish husks not unlike those of chestnuts." Farther East, the "kuei-xu" was seen by Navarrete i. 15 in 1663 used by the Chinese for making candles: S. sebiferum is used for this purpose in Northern China, and "forms a vast trade" (Abel trav. in chin. 177, and Drur.).

"medicamenta" (. . . .); "rhus coriariorum" (*Rhus glabra*); the herb "wassewowr" (. . . .) cooked, small and slender roots called "chappacor" (. . . .), and the bark of the "tangomockomindge" tree (. . . .), furnishing the natives with different red dyes; "kaishucpenauk," a white root of the size and shape of a hen's egg, cooked and eaten by the natives but the flavour not agreeable (. . . .); "cocushaw," a root growing in marshes, poisonous until dried and prepared by the natives, when it is pulverized and made into bread (*Caladium* (*Xanthosoma*) *sagittifolium*); "habascon," a hot root in size and form like "pastinacæ," not eaten by itself but cooked with other food (*Angelica lucida*); "allia," growing in many places and much like the English, eaten by ourselves but not by the natives (*A. Canadense*); "nuces regiæ" in the greatest abundance, occupying a third part of the forest for many miles and of two kinds, one having a nut in taste and form differing little from the English but its shell thicker and harder (*Carya sulcata*), the other with a hard and rough bark and a large sweet oleaginous nucleus which is pounded into a milky juice and mixed in the native cookery (*Juglans nigra*); "mora" and other similar fruits such as we have in England (*Rubus sp.*); five kinds of berries or nuts growing on as many different trees, the "sagatemener" (. . . .), "osamener" (. . . .), and "pummuckoner" (. . . .), the three from which oil is obtained; the fourth, "sapummener," cooked and squeezed having the taste of chestnuts and sometimes made into bread (. . . .); "abietes" large and lofty for masts of ships (*Pinus tæda*); "rakiock," a large tree furnishing canoes, its timber valuable and easily worked (*Liriodendron tulipifera*); "aquifolia, ad viscum" (*Ilex opaca*); "salices" suitable for making fish-baskets (*Salix nigra*), although the natives employ only "arundinibus" which are "firmæ et lentæ," (*Arundinaria macrosperma*); "fagi" (*Fagus ferruginea*) and "fraxini" (*Fraxinus platycarpa*), suitable for making buckets and hoops; "ulmi" (*Ulmus alata*); dwellings covered with mats in great part of "scirpo" (*Scirpus lacustris*); and among animals, "mustelæ odoratæ" (*Mephitis Americana*), and the "seekanauk" (according to the figure *Limulus Americanus*).

"Aug. 6th" (Asher edit. Huds., and Churchill coll.), John Davis, seeking a Northwest Passage in the Strait (that bears his name), arriving at "66° 40′ N.:" turning and following the American coast, he discovered an opening "on the 11th," named it Cumberland Strait, and returned in safety "Sept. 30th." — His Second voyage, in the following year, was interrupted by a mutiny, but he discovered Davis' Inlet and Tovuctoke Inlet, and traded with the natives "for seals, stags" (*Cervus rangiferinus*), "white hares skins" (*Lepus Grœnlandicus*), "dried fish and some fowl." On the "30th June, 1587," on his Third voyage, he reached "72° 12′, nearly four degrees farther north" in the Strait than any preceding navigator.

"The same year" (Anders. ii. p. 211, and S. F. Haven archæol. Amer. iv. p. 260), Antwerp captured and sacked by the duke of Parma: revolutionizing the whole system of European commerce, and rendering English trade independent; for "one-third part of the merchants and workmen who worked and dealt in silks, damasks, and taffeties, and in bayes, says, serges, stockings, etc., settled in England."

"1586 A. D." (Kaempf. iv. 5, and art de verif.), under Fide-josi, edict against Christians: — who from this time were persecuted in Japan.

"The same year" (Hakluyt, Churchill coll., and Holmes), Spanish settlements in the West Indies plundered by Francis Drake, in "a fleet of twenty sail" fitted out by "private adventurers." On his way home, Drake stopped "June 9th" off Roanoke Island; and finding the colonists "in distress for want of provision," offered a passage to England: the invitation was accepted. "Within fourteen or fifteen days" after the ships had left, arrival of Richard Greenville with supplies. Not finding the colonists and "unwilling to lose possession of the country," Greenville left "fifteen of his crew" upon Roanoke Island, "with provisions for two years."

"The same year," Joseph Acosta vii. 3 visiting Mexico.* He enumerates as introduced from Spain into Tropical America: "*let uce, radishes, onions, garlic, parsley, turneps, parseneps*, becengenes or apples of love" (*Solanum melongena*), "*siccorie*" (Cichorium), "*beets, spinage, peaches, apples, peares*, a few *plumbs, figges, quinces, cherries, pomegranats, almonds* rarely, *vines, olives, mulberries*, and *sugar-cane*.

"In this year" (Spreng.), Camerarius publishing his Epitome, enumerating "trifolium corniculatum" Rauwolf. *Lotus ornithopodioides* h. pl. 25 (Schmied. ed. G. i. fig. 10), *Gentiana imbricata* hort. pl. 15, *Eryngium amethystinum* h. 58, *Bupleurum longifolium* h. pl. 38, *Cachrys dichotoma*

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* *Caryocar butyrosum* of Guayana. The "chachapoyas almonds," growing only in the country of that name and on high trees, oily according to J. Acosta 26 and fatter than those of Spain, the husk somewhat bigger and more pricking than chestnut, — may be compared: C. butyrosum was observed by Aublet i. pl. 238 a forest-tree in Guayana; and from transported specimens is termed "castanea peruviana" by Clusius hist. i. 8 (Spreng).

h. pl. 11, *Silene fruticosa* h. pl. 33, *Euphorbia Gerardiana* h. 170, *Anthyllis tetraphylla* h. pl. 47, *Hieracium dubium* h. 82, *Artemisia Gallica* ep. 458, *Imperatoria angustifolia* ep. 533, *Athamantha annua* ep. 535, *Ballota alba* ep. 572, *Tragopogon Orientalis* ep. 312, *Sonchus alpinus* ep. 281, *Ulva plicata* ep. 872. — He published his Hort. med. in "1588," and died in "1598."

Bunias Syriaca of the Uralian plains. Described by Camerarius h. pl. 42 — (Spreng.), Scopoli, and Crantz (Steud.); and known to occur in Austria, Hungary, Syria, and even Sumatra (Jacq. austr. i. pl. 6, and Pers.). Observed by Pallas v. 508 in ditches around Lake Bogdo in the Naryn Desert.

Silene noctiflora of middle Asia. Termed "ocimoides noctiflorum" by Camerarius hort. pl. 34, — "lychnis noctiflora" by C. Bauhin pin. 208, and Tournefort inst. 335, and known to occur as a weed in grain-fields throughout Northern and middle Europe (Engl. bot. pl. 291, and Pers.): was observed by Linnæus naturalized in Sweden, although recently introduced; was already in Britain in the days of Ray syn. 340; was observed by Koch in Holland and Germany; by Fleischer, in Russia; by Zawadski, in Galicia; by Sibthorp, from Crete to Caria; but according to Linnæus, Ledebour, and Hohen., is clearly wild around Caucasus and in Siberia (A. Dec.). By European colonists, was carried to Northeast America, observed by Bigelow in the environs of Boston (A. Gray), by myself in grain-fields in Western Massachusetts.

Linaria minor of the Sierra Nevada mountains in Spain. Termed "antirrhinum tertium" by Camerarius epit. 922, — "l. arvensis minima" by Rivinus mon. 84, "l. pumila vulgatior arvensis" by Tournefort inst. 169, and known to occur in cultivated ground throughout Europe (C. Bauh. pin. 212, fl. Dan. pl. 502, Curt. lond. v. pl. 41, and Pers.): enumerated by Parkinson theatr. 1334 as an exotic cultivated in English gardens, had escaped and become a weed in the days of Ray syn.; was observed by Linnæus in Sweden, as far as Scania and Upsal; by Sibthorp, in cultivated ground in Greece; by Bieberstein, in fallow ground around Caucasus, but by C. A. Meyer in one wild situation; is however regarded by Boiss, and A. Decandolle, as indigenous only on the Sierra Nevada of Spain.

Alyssum calycinum of the Tauro-Caspian countries. An annual Cruciferous weed termed "alysson" by Camerarius epit. 558 f. 1, — described also by Clusius hist. ii 133, and C. Bauhin pin. 107 (Linn. sp. pl., Steud., and A. Dec.), termed "clypeola alyssoides" by Crantz, "adysetum calycinum" by Scopoli, "adysetum mutabile" by Moench, and more recently (Jacq. austr. pl. 338, and fl. Dan. pl. 1704) has extended itself throughout Western Europe from 57° in Scotland to 37° in Sicily, its seeds mingled often with grain: was around Copenhagen "in 1838," in Britain "in 1835," and naturalized near Edinburgh "before 1843;" was observed by Laterrade before 1846 near Bordeaux; by Noulet, in 1837 frequent around Toulouse; by Boissier, before 1839 on the mountains of Southern Spain; by Colmeiro, frequent around Barcelona and Tarragona; by Castagne, in 1845 around Marseilles; by Moris, in 1837 on Sardinia; by Gussone, in 1842 on Sicily; by Bertoloni, before 1846 in Calabria; by Friederichsthal, around Peros on the coast of Argolis; by Ebel, before 1844 in Dalmatia; by Endlicher, in 1830 on the hills of Hungary near Pesth; by Wahlenberg, abounding in the plain around the Carpathians; by Baumgarten, in 1816 in Transylvania; by Trautvetter, in 1842 near Kiew; by C. A. Meyer, about Caucasus from West to East, and on the Talysch mountains; by Hohenacker, in 1838 near the Helenendorff colony in the Talysch; by Gœbel, on the steppes between the Volga and the Ural; but down to 1854, when A. Decandolle was writing, seemed unknown in Siberia, as well as in Ireland, Portugal, the Azores, Madeira, the Canaries, and Algeria.

Cardamine hirsuta of Temperate climates. Termed "sisymbrium aquaticum alterum" by Camerarius ep. 270 — (Spreng.), "c. quarta Dalechampii" by Tournefort inst. 214, "nasturtium aquaticum minus" by C. Bauhin, pin. 104, "c. hirsuta minore flore" by Dillenius giss. 76, and known to occur in cultivated and fallow ground throughout Europe (Barrel pl. 455, fl. Dan. pl. 735, Curt. lond. iv. pl. 48, and Pers.), also in Tauria and Persia (Dec.), Nepal (Wats.), and from the Ural to Kamtchatka (Ledeb.): observed by Linnæus in Sweden; by Brotero, near Lisbon in Portugal; by Munby, in Algeria; by Sibthorp, and Chaubard, in the Peloponnesus; received by Richard from Abyssinia; by J. D. Hooker, from the Mauritius Islands and Ceylon; by Wight, from the Neilgherry mountains in Tropical Hindustan. Eastward from Kamtchatka was observed by Chamisso on St. Paul Island and Unalaska (Schlecht.); is known to grow from Oregon to the Arctic Sea (Hook. fl. ii. 45, and A. Dec.); was observed by Hooker in Iceland. In the Southern Hemisphere, by Chamisso in Chili (Hook. and Arn.); occurs according to J. D. Hooker on the Tropical islands of the Pacific; and as determined by him and Watson, on Auckland and Campbell's Islands, on the Falkland Islands, Tristan-d'Acunha, and from Patagonia to Buenos Ayres.

Tussilago (Petasites) alba of Northern Europe. Described by Camerarius epit. 593 — (Spreng.), and Linnæus, and known to grow in Sweden and Silesia (fl. Dan. pl. 544, Hoppe, and A. Dec.). In Britain, a patch several yards in extent discovered "in 1848" in oak woods near Huddersfield, and more recently another locality discovered in the county of Forfar (Wats. iii. 459, and A. Dec.).

At this time also (Spreng.), Thalius writing his Sylva Hercynia, enumerating * *Genista pilosa* 55, *Veronica verna* 39, *Eriophorum alpinum* 55, *Scabiosa ochroleuca* 108–9, *Campanula thyrsoidea* 32 pl. 4, *Phyteuma hemisphaerica* 94 pl. 8, *Laserpitium latifolium* 71, *Seseli annuum* 71, *Myrrhis hirsuta* 77, *Trienialis Europaea* 15, *Turritis glabra* 16, *Lathyrus latifolius* 74, *L. pratensis* 74, *Astragalus microphyllus* 37, *Hypochoeris glabra* 22, *Hieracium cymosum* 5. 64, *H. praemorsum* 9. 66, *H. paludosum* 13. 67, *Prenanthes purpurea* 75, *Senecio paludosus* 21, *Centaurea Phrygia*, *C. paniculata*, *Betula pubescens* 20, *Melampyrum sylvaticum* 79. — He died in "1587," and his book was published in "1588."

Sisymbrium Thalianum of Europe and the adjoining portion of Asia. Called in Britain *Thale cress* (Prior); and termed "pilosella siliquosa minor" by Thalius herc. pl. 7, — "bursæ pastoris similis siliquosa major seu majoribus foliis" by C. Bauhin pin 108, "turritis vulgaris ramosa" by Tournefort inst. 224, and known to occur along walls and in fallow ground from Sweden to the Mediterranean (Bauh. hist. ii. 870, Curt. lond. ii. pl. 49, and Pers.), also on Teneriffe (Wats.) and in Abyssinia (A. Dec.): was observed by Linnæus in Sweden, frequent in sandy situations; by Sibthorp, and Chaubard, from the Peloponnesus to Cyprus; by Pallas trav. iv. on the Lower Volga; but seems unknown in Eastern Asia (A. Dec.). By European colonists, was carried to Northeast America, where it has become naturalized, occurring according to A. Gray from "New York to Kentucky;" was observed by myself in the environs of Philadelphia; by Chapman, in "Georgia, and northward, introduced."

Geranium lucidum of Europe and the adjoining portion of Asia. Termed "g. saxatile" by Thalius herc. pl. 5, — and Ray hist. 1060, "g. lucidum saxatile" by C. Bauhin pin. 318, and Tournefort inst. 267, and known to grow from Sweden to the Mediterranean (Col. ecphr. i. pl. 137, Bauh. hist. iii. 481, fl. Dan. pl. 218, Engl. bot. pl. 75, and Pers.): observed by Linnæus in Sweden; by Sibthorp, and Chaubard, from Crete and the Peloponnesus to mount Athos.

Silene otites of Europe and the adjoining portion of Asia. Described by Thalius 68 — (Spreng.); termed "lychnis viscosa flore muscoso" by Tournefort inst. 336: observed by Sibthorp in cultivated ground on Cyprus, also near Thessalonica; by Pallas trav. i. 64, along the Volga; by Baumgarten, in Transylvania; by Scopoli, in Carniolia (Steud.); and is known to grow as far as France (Lam. fl. fr.), Britain (Engl. bot. pl. 85), and Denmark (fl. Dan. pl. 518).

Hieracium murorum of Europe and the adjoining portion of Asia. Described by Thalius 11. 67 — (Spreng.); termed "pulmonaria gallica fæmina" by Tabernæmontanus 504, "h. murorum folio pilosissimo" by C. Bauhin pin. 129, and Tournefort inst. 471, and known to grow from Lapland to Switzerland (Engl. bot. pl. 2082, and Pers.): observed by Linnæus in Lapland and Sweden, growing in woods; by Sibthorp, in shaded situations from mount Athos to Constantinople and Smyrna; by Bieberstein, on the Taurian mountains. Westward, by Hooker in Iceland; and is known to grow in Greenland (Wats.).

Hieracium sabaudum of middle Europe and the adjoining portion of Asia. Described by Thalius 7. 65 — (Spreng.); termed "h. s. varietas secunda" by Bauhin hist. ii. 1036, "h. fruticosum latifolium hirsutum" by C. Bauhin pin. 129, and Tournefort inst. 472, and known to grow from Sweden throughout middle Europe (Engl bot. pl. 349, and Pers.): observed by Leche in Westrogothia (Linn.); by Allioni pl. 17, in Piedmont; by Sibthorp, in woods in the environs of Constantinople; by Pallas trav. ii. 424, from the Volga and Yaik to Troitzkaia.

Hieracium alpinum of the Arctic region and mountain summits farther South. Described by Thalius 57 — (Spreng.); termed "h. a. pumilum folio lanuginoso" by C. Bauhin pin. 129, "h. villosum alpinum flore magno singulari" by Ray angl. iii. pl. 6, and known to grow in Lapland and on the Faröe Islands and mountains of Switzerland (Tourn. inst. 469, Engl. bot. pl. 1110, Jacq. austr. pl. 191, Pers., and Wats.): observed by Linnæus frequent on the mountains of Lapland; by Allioni pl. 14, in Piedmont; by Sibthorp, on the mountains of Greece; by Pallas, from 67° on the Oby to the

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* *Galeopsis ladanum* of Northern Europe. Observed by Thalius 103 about the Hartz mountains — (Spreng.), and known to occur in cultivated ground from Sweden and Russia to Switzerland (Pers., and Wats.): was observed by Moench in Germany, by Crantz in Austria. Westward, by Hooker on Iceland; by B. D. Greene, and myself, seemingly wild on Chelsea Beach near Boston.

Struthiopteris Germanica of Northern climates. A large tufted fern termed "struthiopteris" by Thalius 119, — "filix palustris altera fusco pulvere hirsuta" by C. Bauhin pin. 358, "strutiophera" by Munting phyt. 292, "lonchitis norwegica major" by Ray app. 68, and known to grow throughout Northern Europe; observed by Linnæus in Sweden; by Amman ruth. 175, in Russia. Westward, was observed by J. Robinson in the environs of Salem, Mass.; by D. C. Eaton, near Brattleboro, Vermont; was received by Willdenow from Pennsylvania; according to A. Gray, is "not rare northward" from central New York; and according to Hooker, grows throughout Canada as far as the Saskatchewan.

mountains of Dahuria. Westward, by Hooker, in Iceland; was received by Steinhauer from Labrador (Collins); and is known to grow in Greenland and British America (Wats).

Juncus triglumis of the Arctic region and alpine summits farther South. Observed by Thalius 60 — (Spreng.), and C. Bauhin theatr. 22; known to grow on the Swiss Alps (Koch) and the Pyrenees (Gay, and A. Dec.); also on the mountains of Britain (Bab.), the Faröe Islands (Wats.), Scandinavian peninsula (fl. Dan. pl. 132, and Fries), Finland, and on Caucasus and the Altaian mountains (Ledeb.). Westward, was observed by Hooker on Iceland, and received from the summits of the Rocky mountains.

"1587, Feb. 18th" (Blair), in England, Mary ex-queen of Scotland beheaded.

"In this year" (Spreng.), Dalechamp publishing his botanical writings, enumerating *Inula saxatilis* 1201, *Polygala Monspeliaca* 490, *Thymbra verticillata* 934, *Vicia angustifolia* 478, *Veronica urticaefolia* 1165, *Elymus arenarius* 432, *Knappia agrostoidea* 424, *Plantago alpina* 1183, *Camphorosma glabra* 1179, *Androsace chamaeiasme* 1204, *Viola calcarata* 1204, *Convolvulus saxatilis* 817, *Ramondia Pyrenaica* 837, *Eryngium rigidum* 1462, *Angelica Pyrenaica* 766, *Caucalis platycarpos* 762, *Myrrhis aromatica* 760, "pyrethrum Gesneri" 1170 *Seseli grâcile, Oenanthe globulosa* 724, *Sium verticillatum* 718, *Ornithogalum latifolium* 1583, *Moehringia muscosa* 1235, *Acer Monspessulanum* 95, *Gypsophila rigida* 1191, *Helianthemum tuberaria* 1099, *Lamium incisum* 1253, *Erinus alpinus* 1184, *Ononis pinguis* 449, *Coronilla minima* 510, *Ornithopus perpusillus* 486, *Astragalus montanus* 1347, *Arnopogon Dalechampii* 569, *Andryala integrifolia* 1116, *Conyza sordida* 778, *Erigeron glutinosum* 1201, *Chrysanthemum Myconi* 873, and *Orchis globosa* 1556. — He died "in 1588."

Althæa hirsuta of the Mediterranean countries. An annual described by Dalechamp 594 — (Spreng.), and Barrelier pl. 1169; termed "alcea hirsuta" by Tournefort inst. 98, and known to grow in Spain, France, Italy, and Austria (Jacq. austr. pl. 170, and Pers.): observed by Sibthorp in the Peloponnesus. In Britain is marked by A. Decandolle as introduced since 1724, maintaining itself in a single locality in Kent (Engl. bot. pl. 2674, Bab., and Wats.); occurs also in one locality in Holland, apparently washed down by the Meuse (prodr. fl. bat. 50); occurs also in Luxembourg (Lestib.), and seemingly wild at some points in Normandy and the Calvados (Hard., Ren., Lecl.).

Anthoxanthum odoratum of Northern climates. A sweet-scented grass called in Britain *vernal grass* (Prior), described by Dalechamp pl. 426, — and termed "gramen anthoxanthum spicatum" by Tournefort inst. 518; known to grow from the Faröe Islands and Lapland throughout Europe to Barbary (fl. Dan. pl. 666, Pers., and Wats.), also in Siberia (A. Dec.); and observed by Sibthorp, and Chaubard, in Greece and on the Bithynian Olympus. Westward, was observed by Hooker in Iceland; is known to grow also in Greenland and Newfoundland (Wats., and Hook.); observed by myself along the Atlantic from 44° to 40°, often in wild situations in the forest; by A. Gray, "naturalized" in central New York; by Chapman, in "low grounds around the larger cities, Savannah, Charleston, etc., introduced."

Campanula patula of Europe and the adjoining portion of Asia. Described by Dalechamp 490* — (Spreng.); termed "rapunculus angustifolius floribus purpureis amplis" by Ray extr. 308, "c. minor rotundifolia flore in summis caulículis" by Tournefort inst. 112, and known to grow throughout middle Europe (Dillen. elth. pl. 58, fl. Dan. pl. 373, Engl. bot. pl. 42, and Pers.); observed by Hooker in Iceland; by Linnæus, in Finland; by Link pl. 79, in Portugal; by Sibthorp, and Chaubard, in the Peloponnesus; and known to grow in Russia and Northern Asia (Wats).

Euphorbia esula of middle Europe. — Termed "esula Dalechampii" by Haworth (Steud.), "tithymalus fol. linearibus petalis emarginatis" by Haller 1046 as observed in Switzerland, and known to grow in woods and pasture-land in various parts of middle Europe (Pers., and Lindl.): observed by Scopoli in Carniolia. In Britain, from the few and wayside localities is suspected by Watson to be exotic; it occurs also in Sweden (Fries), Holland (prodr. fl. bat.), Jersey (Bab.), and Normandy (Breb), but in all Northwestern Europe is regarded by A. Decandolle as probably exotic. By Euro-

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* *Seseli montanum* of middle Europe. Described by Dalechamp 759 — (Spreng.), and Blackwell pl. 426; known to grow on the hills of France and Italy (Pers.); observed by Thuillier in the environs of Paris (Steud.); within less than fifty years from the opening of the Doubs canal "to 1822," made its appearance in the environs of Montbelliard (Bern., and A. Dec.).

Woodsia Ilvensis of Northern climates. A small tufted fern termed "lonchitis aspera Ilvensis" by Dalechamp 1221, — and Bauhin hist. iii. 749, and known to grow throughout Northern Europe (Moris. iii. 14. pl. 3, and Pluk. phyt. pl. 179): observed by Linnæus in Sweden, frequent in clefts of rocks in elevated situations. Westward, is termed "nephrodium rufidulum" by Michaux; was observed by myself from 45° at Mount Desert to 40° along the Atlantic; grows according to A. Gray on "exposed rocks, common, especially northward, and southward in the Alleghanies;" according to Chapman, "along the Alleghany mountains" in our Southern States.

pean colonists, has been carried to Northeast America, observed by Oakes adventive in "Essex county, Massachusetts" (A. Gray).

"In this year" (Pall. trav. ii. 521), building of a small fort opposite the junction of the Tobol with the Irtich; the commencement of the city of Tobolsk.

"July 22d" (Hakl., Churchill coll., and Holmes), under instructions from Walter Raleigh, arrival at Hatteras of "one hundred and seventeen" colonists, with John White as governor. The "fifteen English" left on Roanoke Island had been attacked by the natives, some slain, and the remainder compelled to depart in their boat: the new colonists were however landed, a grandchild, Virginia Dare, the first Anglo-American, was born to the governor "Aug. 18th" (note by Major), and at the solicitation of the colonists he sailed on the "27th" for England for supplies. — Returning after three years, governor White learned from an "inscription on a tree," that the colonists were removed to Croatoan; a native village South of Hatteras. The abandoned colonists as afterwards appeared, were slaughtered by order of the aboriginal chief Powhatan; "seven" of them remaining alive until the settling of Jamestown in 1607 (Strachey trav. Virgin.).

"The same year (= 2247th of Synmu," art de verif.), abdication of Ookimatz in favour of his grandson Go-josei, now dairo of Japan.

"1588 A. D." (Blair), invention of *bombs;* cannon-balls made hollow and filled with gunpowder.

"July 27th" (Alst. p. 313, and Blair), the formidable armada fleet of Philip II. of Spain, defeated and dispersed by the English under Francis Drake.

"Sept. 9th" (Alst. p. 313, and Churchill coll.), after plundering Spanish settlements on the West coast of America, and thence continuing West, Thomas Candish arriving in England completed the Third circumnavigation of the Globe.

Pterocarpus draco of the Northern extreme of South America. A tree thirty feet high growing near Carthagena, exuding from the bark drops of red juice that soon harden, and are collected and exported under the name of *dragon's blood:* — observed also by Jacquin amer. pl. 183, but at the time of his visit to Carthagena, the commerce had nearly ceased.

"In this year" (Spreng.), Io. Bapt. Porta publishing his Phytognom. — He died "in 1615."

"In this year" (Spreng.), Tabernæmontanus publishing his Krauterbuch or Icones plant, enumerating *Holosteum umbellatum* 543, *Salvia Hispanica* 764, *Scirpus Tabernæmontani* 566, *Polycnemum arvense* 57, *Dipsacus laciniatus* 1071, *Galium lucidum* 434, *Cnidium Pyrenaeum* 304, *Linum Austriacum* 1207, *Juncus sylvaticus* 535, *Dianthus pinifolius* 668, *Scleranthus perennis* 1217, *Stellaria alsine* 1089, *Erodium pimpinellifolium* 123, *Geranium radicatum* 124, *Spartium multiflorum* 1509, *Hieracium sylvaticum* 505, *Crepis virens* 491, and *C. Nemaurensis* 492. — He died "in 1590," and the work was completed "in 1592."

Cerastium arvense of Northern climates. Termed "holosteum caryophyllæum" by Tabernæmontanus pl. 233, — "myosotis arvensis subhirsuta flore majore" by Tournefort inst. 245, and known to grow from Sweden throughout middle Europe (C. Bauh., fl. Dan. pl. 626, Curt. lond. vi. pl. 29, and Pers.): observed by Linnæus in Sweden, on sandy hills as far as Scania; by Vaillant pl. 30, near Paris; by Sibthorp, on mount Athos. Westward, according to Hooker, grows throughout Canada to the Rocky mountains, and was observed by Menzies near the mouth of the Columbia; according to Chapman, grows in "rocky or dry soil, chiefly in the upper districts" of our Southern States; observed by myself at Rivière du Loup on the Lower St. Lawrence, also near Boston and Philadelphia, but having the aspect of an introduced plant. Clearly by European colonists was carried to Mendoza, at the elevation of "five thousand feet" in Austral America (Wats.).

Cerastium aquaticum of Europe and the adjoining portion of Asia. Described by Tabernæmontanus 1089 — (Spreng.); termed "alsine major" by C. Bauhin pin. 350, "a. maxima solanifolia" by Mentzel pl. 1, and Tournefort inst. 242, and known to grow in watery places from Sweden throughout middle Europe (Curt. lond. i. pl. 34, and Pers): observed by Linnæus in dripping woods in Sweden; by Sibthorp, and Chaubard, from Crete and the Peloponnesus to mount Athos and the Bithynian Olympus.

Vicia dumetorum of Europe and the adjoining portion of Asia. Termed "cracca maior" by Dalechamp 892 — (Spreng.), "v. sylvatica maxima piso similis" by Bauhin hist. ii. 315, "v. s. m. piso sylvestri similis" by Tournefort inst. 398, and known to grow in woods and thickets throughout middle Europe (C. Bauh. pin. 385, Ray hist. 900, and Pers.): observed by Leche in Scania in Sweden (Linn.); by Sprengel fl. hal. pl. 7, in Germany; by Sestini, in the environs of Constantinople (Sibth.).

Epilobium parviflorum of Europe and the adjoining portion of Asia. Described by Tabernæmontanus 1237 — (Spreng.); termed "lysimachia siliquosa hirsuta parvo flore" by Bauhin prodr. 116 and C. Bauhin pin. 245, "chamænerion villosum majus parvo flore" by Tournefort inst. 303, "e. pubescens" by Roth, and known to grow throughout middle Europe (fl. Dan. pl. 347, Curt. lond. ii. pl. 22, and Pers.): observed by Linnæus in Sweden; by Hoffmann, in Germany; by Sibthorp, and

Chaubard, from the Peloponnesus to Constantinople. By European colonists was carried to Northeast America, observed by myself in the streets of Newport R. I.

Helianthus annuus var. The first "corona solis" of Tabernæmontanus ii. 466 — is referred by Sprengel to "H. Indicus;" described by Linnæus mant. p. 117; by Persoon, as hardly a foot high, and cultivated in Egypt; observed there in gardens by Clot-Bey and Figari.*

Verbascum lychnitis of middle Europe. The *white mullein* is termed "v. album 2" by Tabernæmontanus pl. 564, — "v. lychnitis flore albo parvo" by C. Bauhin pin. 240, and is known to grow in calcareous soil from Sweden throughout middle Europe (Engl. bot. pl. 58, and Pers.); was observed by Linnæus as far as Scania in Sweden. By European colonists was carried to Northeast America, occurring according to A. Gray along "road-sides, Pennsylvania, rare, and sandy fields at the head of Oneida Lake;" according to Muhlenberg, in "Carolina" (Chapm.).

Veronica arvensis of Europe and the adjoining portion of Asia. Described by Tabernæmontanus 1089, — and Columna phyt. pl. 8 (Spreng.); termed "alsine veronicæ foliis flosculis cauliculis adhærentibus" by C. Bauhin pin. 250, "v. flosculis adhærentibus" by Morison ii. 321 (Linn.), and Tournefort inst. 145: known to occur in waste and cultivated ground throughout middle Europe (Oed. Dan. 515, Curt. lond. ii. pl. 2, and Pers.); observed by Linnæus, frequent in Sweden; by Sibthorp, and Chaubard, in cultivated ground from Constantinople to Cyprus and the Peloponnesus. By European colonists, was carried to Northeast America, observed in "cultivated grounds, rather common" (A. Gray) in our Middle States, and in "cultivated ground" in our Southern States (Chapm.).

Crepis Dioscoridis of Europe and the adjoining portion of Asia. An annual termed "hieracium maior" by Tabernæmontanus — (Spreng.), "h. majus erectum angustifolium caule lævi" by Tournefort inst. 469, and "c. lacera" by Tenore as observed in Italy (Chaub.); known to grow from France and Germany to Siberia (Pers.); and observed by Sibthorp, and Chaubard, in cultivated ground in the Peloponnesus and other parts of Greece.

Athyrium filix-fœmina of Northern climates. Called in Britain *lady fern*, a translation from the Latin (Prior): termed "filix petræa fœmina prima" by Tabernæmontanus pl. 793, — "f. non ramosa petiolis tenuissimis et tenuissime dentatis" by Tournefort inst. 537, and known to grow throughout middle Europe (Moris. iii. 4. pl. 3, Pluk. phyt. pl. 130, Ray angl. iii. 121, and Engl. bot. pl. 1459): observed by Linnæus in Lapland and Sweden; by Sibthorp, in moist shady places in Greece. Westward, by myself from 47° 30′ on the Lower St. Lawrence to 40° along the Atlantic; by A. Gray, "common" in central New York; by Chapman, in "low shady woods, Florida to Mississippi;" by Nuttall, on the Arkansas.

"1589 A. D." (Alst. p. 234), Henri III. of France assassinated by a monk.

"1590 A. D." (Alst. p. 313), Paris besieged by Henry IV. of France. "The same year" (chron. edit. by Michelant), he appointed the marquis de la Roche governor of the French possessions in America, from "Lat. 4° to 52°."

"In this year" (Spreng., and Winckler), Io. Wigand publishing his Herb. Boruss., enumerating *Glaux maritima.*

"About this time" (Humb. cosm. ii.), the *compound microscope* invented in Holland by Zacharias Jansen and his father Hans.

At this time (Winckler), J. Jungermann, nephew of Camerarius, journeying in the East, meeting with . . . . — He died at Corinth "in 1591."

"1591 A. D." (N. Shaw edit. Champl. p. xi), vessels under Chédotel sent by the marquis de la Roche to form a settlement in Canada. Arriving at Sable Island, seventeen persons were sent on shore and abandoned, — who after subsisting "seven years" on fish and "cattle which they found wild in considerable numbers," were brought away by Chédotel; he receiving half of the "black fox skins" and other property collected. (The cattle according to Champlain were derived from the wreck of a Spanish ship, see Baron de Lery.)

"1592 A. D." (Purchas, and Holmes), by Juan de Fuca, a Greek in the Spanish service, sailing along the West coast of America, a strait discovered "in the forty-eighth degree of north latitude;" the same that has received his name.

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* *Helianthus multiflorus* of Northeast America. A slender species of *sunflower*, transported from "Virginia," to Europe (Pers.), is the fourth "corona solis" of Tabernæmontanus ii. 466 — (Spreng.), is clearly described by Plukenet phyt. 159, Tournefort inst. 489, Linnæus, and Jussieu. Westward, H. decapetalus (regarded as identical) is figured by Josselyn rar. pl. 62; is known to grow from Quebec to the Saskatchewan (Hook.); was observed by Pursh from Canada to Virginia; by myself, throughout New England; by Nuttall, as far as 40° in New Jersey; by Schweinitz, at 36° in Upper Carolina; by Elliot, and Chapman, on the mountains of Georgia; by A. Gray, "common" in central New York; by Short, in Kentucky.

"In this year (=20th of wan-ly," geogr. Chin., and Klapr.), Corea invaded and in great part conquered by the Japanese under Fide-yosi.

In this year (="1595 — 3 years" of Barents, Purchas v. iii. 518), on the North coast of Asia, Gielhsidi, sometimes visited by sea from Pechora, won by the Russians from the Tartars.

"In this year" (Spreng., and Winckler), Adamus Zaluzani publishing his Method. herbar.

"In this year" (J. E. Smith, and Spreng.), Columna in his "twenty-fifth" year publishing his Phytobas., enumerating *Primula Palinuri* pl. 5, *Scabiosa Palaestina* pl. 22, *Campanula graminifolia* pl. 34, and *Cerastium repens* pl. 31.

Stachys annua of the Tauro-Caspian countries. A weed called in Italy "herba Turca" or "herba stregona." sorceress herb (Targ.), described by Columna phyt. pl. 9 — (Spreng.), and observed by C. Bauhin pin. 233 already in cultivated ground in central Europe: termed "betonica arvensis annua flore ex albo flavescente" by Tournefort inst. 203, "betonica annua" by Linnæus, and at the present day occurring in and about cultivated ground from France to Russia (Jacq. austr. pl. 360, Pers., and A. Dec.): observed by Bertoloni in Italy, in one or two instances outside of cultivated ground; by Sibthorp, on mount Athos and near Constantinople; by Bieberstein, in waste places and grain-fields in the Crimea; by C. A. Meyer, in cultivated ground on the Talysch mountains. In Britain "from 1830" has made its appearance in grain-fields in Kent (Engl. bot. pl. 2669, and Bab.).

"1593, June 12th" (Hackl. soc. . . . .), sailing of Richard Hawkins. On Saint Annes islands in Lat. 22° 30′ off Brazil, he met with *purslane*; the natives along the coast having canoes carrying seventy or eighty men. Passing through the Straits of Magellan, he gave the natives "lamskinnes," and at Coquimbo procured skins of the "*chinchilla*" (. . . .).

Cacalia Kleinii of Western Hindustan? The *cabbage-tree* of English colonists is called in the environs of Bombay "gao-zaban" (Graham); and in this year a branch sent by Garetus to Clusius — (exot. i. 5): the plant is described also by Dillenius elth. pl. 54, and Linnæus hort. cliff.; and was seen by Clot-Bey in the gardens of Egypt. In its wild state is said to grow on the Canary Islands (Pers.); but was observed by Gibson, and Graham, in Western Hindustan, "in high rocky situations" on the Deccan, "used in medicine" by the natives.

Amaryllis formosissima of Mexico. Roots of the *jacobea lily* procured in this year by Simon de Tovar from a ship from South America, and sent to Clusius and Bernard Paludanus — (Beckmann): the plant is described also by Rudbeck 2 f. 10, and Dillenius elth. pl. 162; and continues in greenhouses; was introduced in 1835 into the environs of Bombay, and afterwards in 1837 "from Egypt" (Graham). Westward, according to Descourtilz, has become seemingly wild in the forests of the Antilles, but came originally from Mexico.

Polyanthes tuberosa of Peru. The *tuberose*, called in Egypt "zymbyl" (. . . .), at Bombay "gool-shubo" or "chereē," at Cochin by the Portuguese colonists "fulla pipa" pipe-flower (Graham), in Burmah "hnen-ben" (Mason), at Manila "azucena" (Blanco); and as early at least as this year, brought from the East Indies by Simon de Tovar and roots sent to Bernard Paludanus, — who published a description in Linschoten's Voyage (Beckm.): also as transported to Europe, is described by Morison ii. pl. 12, and Linnæus, and from Europe was carried to Northeast America, where it has become a favourite in gardens: was observed by Forskal in gardens at Constantinople; by him, Hasselquist, Delile, and Clot-Bey, in the gardens of Egypt; by myself, in Yemen, the flowers brought to market at Mocha; by Graham, "common in gardens" around Bombay; by Roxburgh in Eastern Hindustan; by Mason, "exotic" in Burmah; by Rumphius v. pl. 98, in the Malayan archipelago, enumerated as introduced; by Blanco, on the Philippines. Seems therefore to have been brought in the first Spanish voyages across the Pacific, and was seen by Ruiz and Pavon iii. 66 wild in Peru.

"Dec. 17th" (Hakl., and Holmes), Henry May in a French ship wrecked on Bermuda. — A bark was built of "cedar" (*Juniperus Bermudiana*); and at the end of "nearly five months," placing on board "thirteen live *turtles* for provisions," the party left the island.

"The same year" (Spreng.), arrival of Hernandez in Mexico, meeting with *Salvia leonuroides* 103, *Piper geniculatum* 126, *Commelyna tuberosa* 253, *Ficus citrifolia* 81–2, *Tournefortia bicolor* 292, *Convolvulus* (*Batatas*) *littoralis* 256, *Lobelia acuminata* 216, *Cerbera Thevetia* 443, *Lisianthus exaltatus* 233, *Eryngium aquaticum* 222, *Melastoma fragile* 413, *Bocconia frutescens* 158, *Cactus* (*Epiphyllum*) *phyllanthus* 392 and 457, *Passiflora perfoliata* 301, *Geranium Carolinianum* 293, *Carolinea insignis* 68, *Achania mollis* 117, *Stevia punctata* 360, *Gnaphalium Domingense* 232, *Epidendrum bifidum* 368, *Aristolochia arborescens* 42, *Calopogon pulchellus* 283, *Acalypha cuspidata* 390, *Acacia Portoricensis* 58, *Mimosa cornigera* 86, and *Mirabilis longiflora* 170. — He remained there "seven years untill 1600."

Hura crepitans of the West Indies and neighbouring portions of Tropical America. The *sandbox tree*, described by Hernandez 88 — and from transported specimens by Clusius exot. 47 (Spreng.), and Linnæus hort. cliff. pl. 34. Westward, was observed by Aublet, and Martius, in Guayana; is known to grow also in the West Indies and Mexico, its milky juice producing "blindness a few days

after touching the eye," and its seeds "a violent drastic dangerous purgative" (Lindl.). By European colonists, has been recently introduced into Hindustan, observed by Graham, and myself, in gardens at Bombay.

Cyperus articulatus of Tropical America. A tall leafless rush observed and described by Hernandez 33 — (Spreng.); seen by Sloane pl. 81 on Jamaica, and known to grow as far as Cumana and Truxillo (Kunth); observed by Elliot at Ogeechee in Georgia; by Chapman, in "marshes near the coast, Florida to South Carolina." Possibly through European colonists carried to the opposite coast of Equatorial Africa (R. Brown, and Benth.), observed by Grant along "Nile edges 2° N.," by Forskal, and Delile, in wet situations in Lower Egypt; to Madagascar (A. de Jussieu); and to Hindustan (Pers., Del., and A. Dec.).

"1594 A. D." (Asher edit. Huds. p. cxxxvii), Willem Barents, sailing from Amsterdam, followed the coast of Nova Zembla to the Orange Islands beyond, and rounded its Northeastern extremity — (an exploit that has been repeated only by Barents himself, two years afterwards). Returning to the Southern extreme of Nova Zembla, on the "24th Aug. N. S. 1595," he obtained information of the sea beyond from the Samoieds, and "Sept. 1st" from a Russian "lodie or barke;" and landing "Sept. 9th" on "the south end of the States Iland, where the crosse standeth," ascertained that there is no tide (Purchas v. iii. 518).

"In the beginning of this year" (Dallat 2), the Japanese army in Corea, consisting chiefly of Christians, joined by the jesuit P. Gregorio de Cespedes, who remained nearly a year.

"The same year" (Pauth. 409), the Japanese, after capturing various cities, repelled by the native Coreans aided by Chinese troops. — On application, the emperor Chin-tsoung II. in the following year, granted the title "Ji-pen-wang, king of Japan;" but prohibited the Japanese ruler from sending ambassadors to China.

"Dec. 19th" (Blair), expulsion of the Jesuits from France. — The prohibition continued nine years.

"The same year" (Spreng.), Honorius Bellus in Crete writing to Clusius,* enumerating *Plantago Cretica*, and "gaiderothymo" *Stachys spinosa*.

Fagonia Cretica of the North African Desert. Called in Yemen "schoæka" or "schouki" (Forsk.); sent by Honorius Bellus, — and termed "trifolium spinosum creticum" prodr. 142: observed by Forskal in Yemen; by Delile, not far from Cairo, growing in the Desert; by Desfontaines, near Mascar in Algeria (Pers.).

"In this year" (Wislizen., and Humb. cosm. v.), settlements in New Mexico, North from Zacatecas, first planned by the viceroy Juan de Oñate.

1595 A. D. (= "1585 + 10 years," art de verif.), Fide-josei, having established his authority over the local princes and fixed his seat of government at Jedo, meditating the expulsion of foreigners from Japan.

"March 22d" (Hakl., and Holmes), arrival of Walter Ralegh in Trinidad. Leaving his ships there, he proceeded in boats "four hundred miles" up the Orinoco, and returned: and on his way to England was prevented by adverse winds from reaching Hatteras, to search for the lost colony.

"June 11th" (De Morga 42 and 229), Dr. Antonio de Morga, appointed "lieutenant-general of the Philippines," arriving in the port of Cabit. — He left Manila for Mexico "July 10th, 1603."

In various parts of Luzon, according to De Morga 267 and 306, are "natives of a black colour, with 'cabellos de pasas' tangled hair" (Negrillos), "not very tall in stature," who "have no houses nor settled dwellings; they go in troops and bivouac in the mountains and craggy ground, changing their abode according to the season," "maintaining themselves with some little tillage, and sowing of rice, which they do temporarily, and with the game which they shoot with their bows," also "with the mountain honey, and roots which grow in the earth. They are barbarous people with whom there is no security, inclined to murder, and to attack the towns of the other natives, where they do great mischief without its having been possible to take measures to prevent them, nor to reduce them to subjection, nor bring them to a state of peace, although it is always attempted by good or evil means, as opportunity or necessity demands."

Other natives of the Philippines wash their hair "with the boiled rind of a tree," which they

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* *Ribes* (*Grossularia*) *hirtella* of Northeast America. The *purple gooseberry* transported to Leyden, seen in this year and termed "grossularia spinosa fruct. purpurasc." by Clusius — rar. i. 85. Westward, was observed by Michaux along the Saguenay (Pers.); by myself, from 47° 30′ on the Lower St. Lawrence to 42° along the Atlantic; by Pursh, from Canada to the Alleghanies of Virginia; according to A. Gray, grows from "New England to Wisconsin, common;" and "G. saxosa" according to Hooker, from Boston to the Saskatchewan. Under cultivation, G. hirtella in our climate succeeds better than the European species.

call "gogo" (*Entada scandens*): and "before the Spaniards entered the country" wore "coats of cangan without collars," "coming a little below the waist, some blue, others black, and a few of colours for the chief men;" and "a coloured wrapper," the "feet unshod, the head uncovered, and a narrow cloth wrapped round it."

Among the fruit trees are "sanctores" (*Citrus Sinensis*), "tamarinds" (*Tamarindus Indica*); in the province of Caganan, "chestnut trees which give fruit" (*Castanea Morgai*); and in other parts "pine trees," * other "trees which give very large pine-nuts, with a strong smell and pleasant taste" called "piles" (*Canarium album*); "bejucos" with which they make inclosures for capturing fish, also "cables and other cordage for their vessels" (*Calamus usitatus*); "a green fruit like walnuts," pickled and called "paos" (*Mangifera altissima*); "much cachumba, instead of saffron and other spices" (. . . .). "In all these islands there were no temples, nor public houses for the worship of idols, but each person made and kept in his own his anitos:" prayers for the sick were offered by a few old men and women called "catalonas:" and "they buried their dead in their own houses."

"July 21st" (Churchill coll., Dalrymple, and Quiros in De Morga 65), by Alvaro de Mendaña, sailing from Peru with a colony, an island discovered, one of four inhabited by very large, handsome, and tattooed people: "on the west side of Sta. Christina" (Waitahu) "in 9½°" S. Lat., "a good port was found, in which the fleet anchored:" "in the way of victuals" were seen "*pigs* and *hens*, *sweet canes*" (Saccharum officinale), very good *plantains* (Musa paradisica), a "fruit like chestnuts in savour but much larger than six chestnuts" (*Artocarpus incisa*), "nuts with a very hard shell which were very oily" (*Inocarpus edulis*), and "pumpkins of Castille sown in the ground" (*Lagenaria vulgaris*). Leaving "Aug. 5th" for the "west, to the south-west, or north-west, a matter of four hundred leagues," on the "20th" in "10¾" S., "we saw four low islands, with sandy beaches, full of many palms and woods;" "all four may have a circuit of twelve leagues," and we named them "St. Bernard." Continuing Westward, never rising above 11° or going below 10°, on the "29th" we "discovered a round islet, which might be a league round, all surrounded by reefs," and named it "Solitary Island;" it is "in 10⅜°" S., and will be "one thousand five hundred and thirty-five leagues from Lima." On the "eve of our Lady in September, at midnight, we saw an island which might have a circuit of from ninety to a hundred leagues," and "will be a thousand eight hundred leagues from Lima;" we named it "Santa Cruz," and "the ships came to anchor in the northern" part "in 10°" S., about seven leagues from an active volcano; in addition to the above-named esculents, were seen "one, two, or three kinds of roots like sweet potatoes, which they eat roast and boiled, and make 'buyos' with it" (*Batatas edulis* and *Dioscorea sp. ?*), "two kinds of good almonds" (*Terminalia catappa*), "two kinds of pine nuts" (. . . .), "muchos bledos" (*Euxolus viridis*), "a very strongly scented sweet basil" (*Ocymum*), "and coloured flowers" which "they keep in the gardens" (*Amaranthus tricolor*), "and two other species of another sort also coloured" (*Codiæum variegatum*), a "fruit on high trees, like pippins" (*Jambosa Malaccensis*), "great quantity of ginger which grows there without its being cultivated" (*Zingiber zerumbet*), "much yerba chiquilite with which they make indigo" (. . . .) "agave trees" (*Pandanus furcatus*), "and a great deal of sagia" (*Cycas circinalis*); the people "are black" (Papuan or Negrillo). "Oct. 17th" a "total eclipse of the moon," and on the "18th" Mendaña died; much sickness ensued, many died, and "Nov. 18th" the island was abandoned. After "two days," the chief pilot Quiros was ordered to "shape the course" for Manila; — and "Jan. 14th," the flagship arrived in sight of Cape Espiritu Santo.

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* *Pinus Morgai* of Northern Luzon. A tree called in Ylocano "saleng" (Blanco); and from early times, used for torches: — clearly the "pine trees" in question; and according to Blanco growing in Ylocos, Zambales, and other localities in Northern Luzon.

Mimosa acle of the Philippines. A large unarmed tree called in Tagalo "acle" (Blanco); and from early times, employed in house building, and its bark for washing, like the "gogo," but inferior in quality: — observed by Blanco in the environs of Manila.

Pterocarpus pallidus of the Philippines. A large tree called in Tagalo "asana," in Bisaya and Camarines "naga" or "narra," in Pampango "daitanag" (Blanco); and from early times employed medicinally, and its timber for cabinet-work: — "a finely coloured wood" called "asana" is enumerated by De Morga 275; and P. pallidus according to Blanco grows on all the islands.

Diospyros multiflora of the Philippines. A tree called in Tagalo "canomoi" or "canomai" (Blanco); its poisonous fruit known from early times, said to kill fish, and cause the crocodile to quit the water: — observed by Blanco.

Diospyros pilosanthera of the Philippines. A tree; its hard wood known from early times, and its fruit eaten: — "*ebony*, one kind finer than another" is enumerated by De Morga 275, and according to Blanco the wood of all the Philippine species more or less resembles ebony: D. pilosanthera was observed by him on the Philippines.

"The same year" (Alst., and art de verif.), Murad III. succeeded by Mohammed III., fifteenth Turkish sultan. Coins of Mohammed III. issued at Cairo, are figured in Marcel p. 204.

"In this year." (Spreng.), Marcus Urzedowa publishing his Polonicum Herbarium, enumerating *Melampyrum nemorosum* 293.

"In this year" (Spreng., and Winckler), Giovani Pona of Verona publishing his Simplicia in Baldo, enumerating* *Lotus glaucus*, *Marrubium acetabulosum* 10, "trifoglio argentato alpino" pl. 222 *Potentilla nitida* (Schmied. ed. G. p. 63), *Veronica saxatilis* 74, *Paederota bonarota* 72, *Campanula petraea* 62, *Phyteuma comosa* 70, *Bupleurum graminifolium* 111, *Saxifraga rupestris* 76, *Cherleria sedoides* 89, *Arenaria Bavarica* 60, *Clematis* (*Atragene*) *alpina* 68, *Ranunculus rutaefolius* 87, *Myagrum saxatile* 78, *Geranium argenteum* 91, *Trifolium alpinum* 84, *Senecio incanus* 111, and *Aspidium alpinum* 101.

"1596 A. D." (Pauth. p. 409), in the provinces of Ho-nan, Chen-si, and Chan-si, "ten *gold* and *silver* mines" opened by the emperor Chin-tsoung II., contrary to the advice of his ministers.—"Six years" afterwards, he caused them to be closed.

"In this year" (Spreng.), arrival of Barnabas Cobo in the West Indies.—He afterwards proceeded to Mexico, and remained chiefly in Peru "until 1653."

"June 9th" (Churchill coll.), sailing from Amsterdam, Willem Barents and John Cornelis Ryp discovered Bear Island "in 74° 30′;" and "on the 19th," Spitzbergen in "80° 11′," supposed however by them to be part of Greenland. Continuing East, Barents "on the 15th Aug." again rounded the Northeastern extreme of Nova Zembla, but being unable to advance or return, wintered there,—and died on the following "20th June."

"June 11th" (Churchill coll.), arrival on the coast of Sumatra of Cornelius Hootman with four ships; "the first voyage the Dutch made to India."

"In this year" (De Morga 78), a Spanish vessel from the Philippines in distress seeking refuge in Japan, the pilot, Francisco de Landa, imprudently exhibited his charts of navigation to a Japanese official: the charts included Mexico and Peru, and on being asked how possession was obtained of such very distant countries, Landa replied, "that first the monks had entered and preached their religion, and the military forces following after them had subjected those countries." All which being reported to Fide-josi, he again prohibited Christianity in his dominions,—and on the following "Feb. 5th," six Franciscans and eighteen Japanese converts were crucified.

"June 21st" (Blair), Cadiz in Spain captured by the English.

"In this year" (Spreng.), C. Bauhin publishing his Phytopinax, enumerating *Trifolium lappaceum* pl. 5.

"1597 A. D." (Univ. hist., and Holmes), in addition to the English buccaneers in the West Indies, a fleet of French making their appearance captured and pillaged Carthagena.

In this year (De Morga 88), near Mindanao, the small island of Jolo (Sulu), that "may have three thousand men, with their own king and lord, all of them" Mussulmans, had hitherto willingly paid tribute: but after the withdrawal of the main body of Spanish forces from Mindanao, Juan Pacho, captain of the fort at Caldera, sent a few soldiers to barter for wax, when they were ill-treated and two of them killed by the people of Jolo. Pacho desiring to chastise this excess, went there "with a few boats and thirty soldiers;" but was himself slain, and his party totally defeated. The "event caused much regret at Manila," from the loss of prestige both on Jolo and Mindanao.

"In this year" (Spreng.), Evang. Quatrami of Ferrara publishing his Ingredienti della teriaca.

Scutellaria Columnæ of Italy and Greece. Mentioned by Quatrami—(Spreng.); observed also in Italy by Columna ecphr. pl. 189, and Allioni pl. 84 (Pers.); by Chaubard, in the Peloponnesus.

"In this year" (Spreng., and Prior), Gerarde publishing his Herbal, enumerating *Rhynchospora alba* 50, *Festuca myurus* 29, *Hordeum pratense* 29, *Potamogeton heterophyllus* 821, *Campanula latifolia* 448, *Asclepias variegata* 100, *Sison segetum* 1018, *Polygonum minus* 446, *Arenaria peploides*

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* *Silene acaulis* of the Arctic region and mountain-summits farther South. Termed "ocymoides muscosus" by Pona 341, as observed on mount Baldo,—"muscus alpinus lychnidis flore" by Bauhin hist. iii. 767, and known to grow on Spitzbergen and on the mountains of Northern and middle Europe and Asia (C. Bauhin pin. 206, fl. Dan. pl. 21, Pers., and Wats.): observed by Linnæus abounding on the mountains of Lapland, often covering their summits with its deep purple flowers; by myself, in purple patches on the crest of the Swiss Alps, meriting the appellation of "Alpium ornamentum" bestowed by Persoon. Westward, was observed by Sabine in Iceland and Greenland, and according to Hooker grows along the shores of the Arctic Sea and throughout Arctic America; was observed by ....in Labrador (Pursh, and Tor.); by Chamisso, on Unalaska; by E. James, on the alpine portion of the Rocky mountains; by myself, on the alpine portion of the White mountains, but here inconspicuous and moss-like with whitish flowers (compare S. exocapa of Allioni pl. 79 f. 2).

622, *Mentha gracilis* 680, *Stachys palustris* 1005, *Scutellaria minor* 581, *Trifolium maritimum* 1208, *Trifolium filiforme* 1186, *Cineraria integrifolia* 304, "snakeweed" 848 *Aristolochia serpentaria*, *Salix aurita* 1390, and *S. acuminata* 1390. — He died "in 1607."

"1598, April" (Blair), by Henri IV. of France, the edict of Nantes granted to the Protestants.

At this time (Spreng., and Winckler), Castor Durante writing his Hist. Plant. — He died "in 1599," and his work was published "in 1636."

"In this year" (Spreng.), J. Bauhin publishing his Hist. balnei Boll.

"In this year" (Spreng., and Winckl.), Pierre Richer de Belleval, having founded at Montpelier the earliest *botanic garden* in France, now publishing his Nomencl. stirp. in hort. reg. Monsp., enumerating *Scabiosa maritima* 76, *Plantago serraria* 10, *Androsace Septentrionalis* 12, *A. elongata* 13, *Gentiana pumila* 25, *Campanula pulla* 26, *C. vesula* 27, *Seseli saxifragum* 210, *S. turbith* 212, *Statice echioides* 142, *Allium narcissiflorum* 240, *Arenaria saxatilis* 153, *Ranunculus Cassubicus* 176, *Betonica hirsuta* 53, *Limosella aquatica* 63, *Iberis saxatilis* 193, *Cardamine asarifolia* 199, *Brassica Richerii* 197, *Erodium Romanum* 232, *Ononis fruticosa* 224, *O. pubescens* 225, *Hedysarum saxatile* 216, *H. obscurum* 217, *Hypericum Richeri* 168, *Hieracium aureum* 121, *H. cerinthoides* 128, *H. porrifolium* 133, *H. verbascifolium* 135, *Apargia dubia* 120, *Crepis alpina* 126, *Hyoseris hedypnois* 123, *Serratula heterophylla* 81, *Cirsium helenioides* 83, *Carthamus mitissimus* 86, *Erigeron uniflorum* 100, *Chrysanthemum montanum* 103, *Centaurea amara* 92, *Microstylis monophyllos* 262, *Salix formosa* 274, *S. arbuscula* 275.

Allium moschatum of the Mediterranean countries. Described by R. de Belleval 241 — (Spreng.), Bauhin prodr. pl. 28, Rudbeck elys. ii. 166, and known to grow in Spain and Southern France (Pers.): observed by Kitaibel pl. 68 in Hungary, by Gittard in the Peloponnesus (Chaub.).

Hieracium amplexicaule of Dauphiny and the Pyrenees. Described by R. de Belleval 134 — (Spreng.); termed "h. pyrenaicum rotundifolium amplexicaule" by Tournefort inst. 472, "h. balsameum" by Asso, "h. pulmonarioides" by Villars, "lepicaune balsamea" by Lapeyrouse, and known to grow in the alpine portion of Dauphiny and the Pyrenees (Pers., Steud., and A. Dec). In Britain, has been found only on the walls of a college at Oxford and of castle Cleish in Kinross, and is therefore considered not completely naturalized.

"Sept. 13th" (Alst. p. 566, and Nicol.), Philip II. of Spain succeeded by his son Philip III.; the war in Belgium continuing. — In the following year, Philip III. married an Austrian princess: and on the same day, "April 12th," his sister married Albert of Austria, an archduke and cardinal having charge of Belgium.

"The same year" (Churchill coll.), by the "Holland East India company," a fleet of "six great ships and two yachts" sent to the East Indies.

"The same year" (art de verif.), death of Fide-josi. He was numbered among the gods by the dairo, a temple erected to him at Meaco containing his urn; he was succeeded by his son Fide-jori, now at the age of six ruler of Japan, under the regency of Ijesaz.

"1599, March" (narrat., Wilmere transl. p. xvii and 6 to 48), Samuel Champlain accompanying a Spanish fleet in sight of the island of Descada in the West Indies. He visited Guadeloupe, Hayti, Porto Rico, Mexico,* — Panama, and Cuba, and returned to Spain after "two years and two months" absence.

Hæmatoxylon Campechianum of Central America. A Leguminous tree, its wood called in commerce *logwood;* and "Campesche" wood was seen by Champlain on his way to the city of Mexico — (N. Shaw edit. 23): goods were brought by Dampier for the logwood cutters in Campeachy: H. Campeachianum was observed by Sloane ii. pl. 10, and Macfadyen 332, on Jamaica; is described also by Catesby ii. pl. 66; and is known to abound especially around the Bay of Honduras. By European colonists has recently been carried to Burmah, and successfully introduced (Mason v. 511). Logwood "is a powerful astringent," but as an article of commerce is "chiefly used by dyers" (Macf., and Lindl.).

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* *Icica? copallina* of Mexico. The "copal" of the Mexicans of Papantla and Misantla (Linnæa v. 601, and Lindl.); and the "copal" gum from a tree like the pine-tree and very good for gout and pains, seen by Champlain in Mexico — (N. Shaw edit. 32), may be compared.

Ficus Americana of the West Indies. The "sombrade" tree seen by Champlain on Porto Rico, the tops of its branches, falling to the earth, taking root and producing other branches, and thus covering "more than a league and a quarter, bearing laurel-like leaves but no fruit," — is referred here by N. Shaw p. 11, and identified with the "figuier maudit marron" of Hayti: F. Americana was observed by Plumier pl. 132 on Jamaica (Pers.); by Aublet, in Guayana (Steud.).

Cocos lapidea of Mexico. A species of *cocoa-palm*, distinguished by Champlain, its "cocques" made by the Mexicans into "little cups and bottles," like those "of Indian nuts which come from the palm" — (N. Shaw edit. p. 30). From transported nuts, C. lapidea is described by Gaertner.

"The same year" (Wilmere edit. Champl. p. xii), under "a privilege for ten years, at the charge of forming a company for the colonization of Canada" and "propagation of the Roman Catholic religion among the savages," Chauvin and Du Pont Gravé, Protestants, arriving at Tadoussac on the St. Lawrence at the mouth of the Saguenay. Du Pont Gravé desired to proceed farther, having traded with the natives at "Three Rivers" in a previous voyage; De Monts, a volunteer, was of the same opinion; but Chauvin insisted on building a house at Tadoussac, and leaving behind "sixteen men," sailed for France. The men suffered severely, and but for the compassion of the natives, would have all perished. — Returning in the following year, Chauvin found few survivors, but left behind "twenty more men" (Desmarquets); and on reaching France, died while fitting out an expedition on a larger scale.

Abies balsamea of Canada. A slender tree thirty feet high, called in our Northern States *fir* (Slafter) or *balsam fir* (A. Gray); and the "fir" seen by Chauvin at Tadoussac — (Champl.), may be compared: the "firre" is mentioned by various early visitors to Newfoundland and Northern New England: A. balsamea is described by H. Marshall 102; was received by Collins from Labrador; was observed by Lapylaie from 51° on Newfoundland; by F. A. Michaux, in Nova Scotia and Canada; by myself, from Canada to 43° 30′ on the Atlantic near Portland; by Long's Expedition, at 49° on Lake Superior; by Drummond, on the Saskatchewan near the Rocky mountains; and yields "the oleo-resin called *Canada balsam*" (Lindl).

Abies alba of Subarctic America. The *white spruce*, a tree seventy feet or more high, with slender tapering cones twice as long as those of A. nigra; included perhaps in the "fir" seen by Chauvin at Tadoussac — (Champl.): was observed by Richardson in Arctic America, along the Coppermine; by Herzberg at 57° 20′ in Labrador (Meyer); by Lapylaie, from 51° on Newfoundland; by F. A. Michaux, from 49° in Canada to Maine, New Brunswick, and Nova Scotia; by myself, not South of 46°; by Long's Expedition ii. 81, at 50° on Lake Winnipeg; by Drummond, on the Saskatchewan near the Rocky mountains.

"In this year" (Klapr. chrest. p. ix) by the Chinese emperor Thai-tsou, Erdeni-baksi and Gagai-dchargoutsi sent to instruct the Mandchous in the art of writing. The alphabet selected was that of the Mongols, derived from the Ouigours of Central Asia, and ultimately from the Syriac. — Since the conquest of China in "1644," Mandchou literature has been enriched by a great number of works, chiefly translations from the Chinese.

"In this year" (Spreng.), Ferrandus Imperati, a friend of Columna and Clusius, publishing his Hist. Nat., enumerating *Valeriana Italica* 869, *Phyteuma pinnata* 882, *Telephium Imperati* 872, *Euphorbia Mauritanica* 876, *Cichorium spinosum* 88, *Parmelia fuciformis* 850, *Fucus lumbricalis* 842, *Fucus plocamium* 844, and "cava" 858 *Ulva intestinalis*.

Zapania nodiflora of Tropical America. A diminutive Verbenaceous herb, transported to Europe, described by Ferrandus Imperati 889 — (Spreng.), C. Bauhin, and Barrelier pl. 855; known to occur in Southern Italy (. . . .); observed by Sibthorp, and Chaubard, in two localities in the Peloponnesus and in one on Crete; by Forskal, and Delile, on the Mediterranean border of Egypt; by myself in Upper Egypt, seemingly wild on the river-flat; by Forskal, on the mountains of Yemen, but as in the preceding instances, no native names given. Westward from America, may have been carried by European colonists across the Pacific to the Philippines, observed by Blanco frequent, though not universally known to the natives, called in Tagalo "chachachachahan" and made into a kind of tea; to Hindustan, where it has acquired Sanscrit names (A. Dec.), was observed by Burmann ind. pl. 6, by Rheede x. pl. 47 in Malabar, by Graham "common all over Bombay, creeping among the grass." In its wild state, is known to grow from Cuba near Havana (Kunth) throughout Tropical and Austral America as far as Buenos Ayres (Schauer, and A. Dec.).

"1600 A. D." (Humb. cosm. ii.), sudden appearance of a star of more than the first magnitude in the constellation Cygnus. — After continuing visible "twenty-one years," the star disappeared.

"In this year" (Spreng., and Winckler), Schwenkfeld publishing his Stirp. Siles., enumerating *Ligusticum Austriacum* 60, and *Sedum saxatile* 195.

"In this year" (Churchill coll.), "by patent from queen Elizabeth," a company of "merchant-adventurers" authorized to trade in the East Indies. An association better known as the English East India company.

"The same year" (Churchill coll.), in "sailing from Peru for the Philippine Islands," a squadron of "four ships" driven South of the Equator among "several rich countries and islands not far from the isles of Solomon:" the name "Monte de Plata" being in one instance bestowed. — "A captain of note went out on purpose and saw these discoveries:" and two petitions to the king of Spain from captain Peter Fernandez de Quiros, on the extent "of the continent and great value of the islands, which he speaks of as an eye-witness," are preserved by Purchas iv. p. 1432.

"In this year" (Juss., and Markham 206), the healing powers of *Peruvian bark* first made known to Europeans, a jesuit not far from Loxa having been cured of a fever: — "in 1638," specimens

of the bark were sent by Francisco Lopez Cañizares to the conde de Chinchon, viceroy of Peru, and hence the name *cinchona*. The bark soon became extensively known, the most approved kinds being exported from Lima. Among more than twenty species enumerated by Lindley, *C. micrantha* furnishes "silver, grey, or Huanuco bark;" *C. lanceolata*, most of the "yellow bark," a portion being contributed by *C. hirsuta* and *C. nitida*; *C. magnifolia* furnishes "cinchona nova;" *C. purpurea*, "Huamalies bark;" and there are various exported kinds whose origin has not been traced.

Cinchona Condaminea of the Western slope of the Peruvian Andes. Probably the kind employed in the case of the jesuit: — presumed by Lindley to be the "cascarilla chauharguera" said by Ruiz to be that sent to the conde de Chincon: termed "quinaquina" in a description sent by Condamine, and published in act. par. 1738: C. Condaminea according to Humboldt and Bonpland i. pl. 10 grows near Loxa, also near Guancabamba and Ayavaca in Peru, always on micaceous schist, and at the elevation of "5700 to 7500 feet." Its imported bark is called in commerce "*pale crown or Loxa bark*" (Lindl.).

One hundred and seventy-seventh generation. Jan. 1st, 1601, onward mostly beyond youth: the Greek writer Nicolaus son of Demetrius d. 1625: Brenning: cardinal Baronius; Henrico Catharino Davila; Justus Lipsius; Stephen Pasquier; Mariana; Scevole de St. Marthe; cardinal Perron; Isaac Casaubon; president de Thou; Henry Saville; William Camden; Francis Bacon; Paul Sarpi; Gruterus; Malherbe; Marini; Papirius Masso; Boccalini; Helvicus; Andrew du Chesne; John Barclay; Robert Cotton: the Spanish writers, Cervantes, and Lopez de Vega: the English dramatists, Shakespear, and Ben Jonson: the botanists, Josephus de Aromatariis, Petr. Paawius, Anton. Donati, Casp. Pilletier, Lauremberg, Io. Stephan. Strobelberger, Io. Fischartus: the painters, Ludovico Caracci d. 1619, and Annibale Caracci d. 1609.

"January = twelfth lunation of the thirty-eighth year of the cycle" (Semedo, and Pauth. 411), arrival at the Chinese court of the first Jesuit missionary, P. Matthæus Riccius or Ricci. In the "winter of the 29th year wen-li" (topog. Cant., and Pauth. p. 474), first arrival of the English in China; at Macao, in two or three large ships. They wore red garments, were tall, with red hair and deeply sunk blue eyes, and feet fourteen inches long; and frightened the people by their strange aspect. They came saying, "We are not pirates but bring tribute:" but having never before made their appearance, and bringing no letter, a reception was refused by the commandant; the captain was imprisoned by the officer of customs for a month, and then released.

"The same year" (Alst. p. 313, Grot. ann., and Holmes), arrival home in Holland of Olivarius or Oliver Van Noort, completing the Fourth circumnavigation of the Globe.

"In this year" (J. E. Smith, and Spreng.), Clusius publishing his Hist. rar. plant., enumerating *Iris Mauritanica*, *Hyacinthus serotinus*, *Centaurea crucæfolia*, *Paronychia Hispanica* ii. 183, *Melica nutans* 2. 219, *Veronica spuria* 1. 347, *V. alpina* 1. 350, *V. aphylla* 1. 350, *V. dentata* 1. 349, *Fedia cornucopiae* 2. 54, *Iris variegata* 1. 221, *I. susiana* 217, *I. aphylla* 223, *I. lutescens* 1. 227, *I. spuria* 1. 228, *I. pumila* 225, *Scabiosa* (*Trichera*) *sylvatica* 2. 2, *Galium rubrum* 2. 175, *Crucianella latifolia* 2. 177, *Cynoglossum cheirifolium* 2. 162, *Soldanella alpina* 1. 309, *Lysimachia* (*Naumburgia*) *thyrsiflora* 2. 53, *L. punctata* 52, *Euonymus verrucosus* 57, *Viola pinnata* 1. 309, *Eryngium pusillum* 2. 158, *Narcissus minor* 1. 165, *N. bulbocodium* 1. 166, *N. moschatus* 1. 166, *Allium oleraceum* 194, *Scilla Italica* 1. 184, *S. Morisoni* 182 ("S. peruv."), *S. verna* 188, *Asphodelus albus* 197, "comosus byzantinus" 180 *Hyacinthus ciliatus*, *Erica purpurascens* 1. 43, *Dianthus caesius* 1. 282, *Sedum anacampseros* 2. 67, *S. collinum* 2. 60, *S. virescens* 2. 60, *Reseda purpurascens* 1. 295, *Spiraea salicifolia* 1. 84, *Helianthemum Oelandicum* 73, *H. umbellatum* 1. 81, *Cistus populifolius* 78, *Illicium Philippinarum* 2. 202, *Delphinium ambiguum* 2. 206, *D. intermedium* 2. 94, *Rhizobolus butyrosus* 1. 8, *Ranunculus Creticus* 239, *Scrophularia tanacetifolia* 2. 209, *Orobanche ramosa* 1. 271, *Lepidium alpinum* 2. 128, *Vesicaria sinuata* 2. 133, *Thlaspi montanum* 131, *Iberis odorata* 132, *Hesperis tristis* 296, *H. inodora* 297, "alcea americana" 2 26 *Hibiscus subdariffa* 2. 26, *Polygala major* 1. 324, *Erythrina corallodendron* app. 253, *Anthyllis cytisoides* 96, *A. erinacea* 107, *Vicia pisiformis* 2. 229, *Coronilla glauca* 97, *C. coronata* 98, *Trifolium alpestre* 245, *Lotus tetragonolobus* 2. 244, *Hypericum Balearicum* 1. 68, *Apargia incana* 2. 141, *Saussurea discolor* 2. 151, *Carduus defloratus* 2. 149, *Serratula simplex* 150, *Carlina racemosa* 2. 157, *Carthamus coeruleus* 2. 152, *Senecio abrotanifolius* 334, *Cineraria alpina* 2. 23, *Senecio doronicum* 2. 17, *Inula ensifolia* 15, *Chrysanthemum alpinum* 1. 335, *Achillea tanacetifolia* 331, *Buphthalmum salicifolium* 2. 13, *Centaurea alba* 9, *Corallorhiza Linnaei* 2. 120, *Aristolochia glauca* 2. 71, *Quercus Austriaca* 20, *Corylus tubulosa* 1. 11, *Polypodium calcareum* 2. 212, *Botrychium rutaceum* 3. 119, *Fucus vesiculosus* 1. 21, *Peziza auricula* 2. 276, and *Merulius lobatus* 294.

Erysimum Orientale of the mountains of middle Europe. Described by Clusius hist. ii. 127, — and C. Bauhin pin. 112; termed "brassica orientalis perfoliata flore albo siliqua quadrangula" by Tournefort cor. 16, "b. orientalis" by Linnæus, "erysimum perfoliatum" by Crantz, "e. glaucum" by Moench (Steud.), and known to grow from Montpelier to Thuringia and Austria (Jacq. austr. pl.

282–3, and Pers.). Transported to Britain, has been found adventive, springing up spontaneously (Wats. cyb. i. 154).

Thlaspi alpestre of Western Europe. Described by Clusius hist. 2. 131 — (Spreng.), Arduini it. pl. 15, and Linnæus: observed by Hudson in Britain (Engl. bot. pl. 81); known to grow in mountainous pasture-land in Switzerland and on the Pyrenees (Pers., Dec., and Wats.), but remains unknown in Lapland and Siberia (A. Dec.). By European colonists was carried to Northeast America, observed by Mrs. Perceval in Canada.

Alyssum incanum of Europe and the adjoining portion of Asia. Termed "thlaspi incanum machlinense" by Clusius hist. ii. 132, — "alysson fruticosum incanum" by Tournefort inst. 217, and known to grow throughout middle Europe (C. Bauh. pin. 108, and Pers.): observed by Linnæus in Sweden; by Roth, in Germany; by Sibthorp, on mount Athos.

Helianthemum fumana of middle Europe and the adjoining portion of Asia. Termed "chamæcistus sextus" by Clusius hist. i. 74, — "h. tenuifolium glabrum luteo flore per humum sparsum" by Bauhin hist. ii. 18, and Tournefort inst. 249, "herba fumana" by Bartholin, and known to grow from Gothland to France and Switzerland and throughout middle Europe (Jacq. austr. pl. 252, and Pers.): observed by Linnæus in Gothland; by Sibthorp, on mount Athos.

Silene nutans of Europe and the adjoining portion of Asia. Termed "lychnis sylvestris nona" by Clusius hist. i. 291, — "l. montana viscosa alba latifolia" by C. Bauhin pin. 205, and Tournefort inst. 335, and known to grow from Sweden throughout middle Europe (fl. Dan. pl. 242, Engl. bot. pl. 465, and Pers.): observed by Linnæus in mountain meads in Sweden; by Loesel pl. 40 in Prussia; by Scopoli, in Carniolia; by Sibthorp, and Chaubard, from the Peloponnesus to Constantinople.

Silene alpestris of the mountains of middle Europe. Described by Clusius hist. i. 291 * — (Spreng.); termed "lychnis quadrifida" by Scopoli (Steud.), and known to grow on the Tyrolean and Austrian Alps (Jacq. aust. i. pl. 96, and Koch). A single specimen collected in Scotland, on a mountain East of Clova (Bab., and A. Dec.).

Limodorum abortivum of middle Europe and the adjoining portion of Asia. Described by Clusius hist. i. 270 — (Spreng.), termed "orchis abortiva" by Linnæus, and known to grow in shaded situations throughout middle Europe (Swartz, and Pers.): observed by Allioni and Decandolle fl. in France; by Jacquin pl. 193, in Austria; by Scopoli, in Carniolia; by Chaubard, in the Peloponnesus.

Lilium Pyrenaicum of the Pyrenees and Southern Alps. Termed "montanum flavum" by Clusius hist. 2. 256 — (Spreng.); observed by Gouan on the Pyrenees, known to grow also on the Southern Alps of Switzerland (A. Dec.). Transported to Britain, cultivated in gardens; but prior to 1850 found by G. Maas in a locality about a mile and a half from Molland in North Devonshire (Bot. Gaz. ii. 305, Phytol., and Wats. cyb. iii. 370), but A. Decandolle suggests, it may have been planted.

Scilla autumnalis of Europe and the adjoining portion of Asia. Described by Clusius hist. 185 — (Spreng.), termed "ornithogalum autumnale minus flore dilute purpureo" by Tournefort inst. 381, and known to grow from Britain throughout middle and Southern Europe (Curt. lond. vi. pl. 25, Cav. iii. pl. 274, and Pers.): observed by Sibthorp, and Chaubard, frequent from the Peloponnesus to Constantinople.

Allium paniculatum of Eastern Europe and the adjoining portion of Asia. Described by Clusius hist. 194 — (Spreng.); termed "a. montanum bicorne flore obsoletiore" by Tournefort inst. 384, and known to grow from Italy and Switzerland to Siberia (Hall. opusc. 25, and Pers.): observed by Scopoli 398 in Carniolia; by Sibthorp, Link, and Chaubard, from the Peloponnesus to mount Athos and Bithynia; and received by Bieberstein from the Taurian mountains.

Allium Clusianum of the Mediterranean Countries. Observed by Clusius hist. i. pl. 192 in Southern Europe — (Pers.); by Chaubard, in the Peloponnesus.

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* *Sarracenia purpurea* of Northeast America. The *side-saddle flower*, transported to Europe, described by Clusius hist. 2. 82 — (Spreng.), Plukenet amalth. pl. 376, and Miller pl. 376. Westward, is known to grow from Quebec to Lake Huron and farther North (Hook.), and "from New England to Wisconsin" (A. Gray), but farther South not seen West of the Alleghanies by Nuttall; was observed by Lapylaie from 51° in Newfoundland; by Josselyn pl. 54, in New England; by myself, as far as 40°; by Schweinitz, to 36° in Upper Carolina; by Catesby ii. pl. 70, in South Carolina; by Elliot, in the middle district of Carolina and Georgia; by Chapman, in "Florida and northward."

Scabiosa atropurpurea of Austral Africa? Herbaceous with sweet-scented flowers. Transported to Europe, is described by Clusius hist. 2. 3 — (Spreng.), Linnæus, Moench, and Schott (Steud.); and is cultivated in gardens, sometimes springing up spontaneously in cultivated ground (A. Dec.). Eastward, was observed by Lush at Dapooree in Hindustan "introduced from the Cape" (Graham).

Allium flavum of Europe and the adjoining portion of Asia. Described by Clusius hist. 194 — (Spreng.), and Rudbeck elys. ii. pl. 157; termed "a. juncifolium bicorne luteum" by Tournefort inst. 384; and known to grow from Fontainebleau to Montpelier (Pers.): observed by Jacquin pl. 141 in Austria; by Sibthorp, on the Greek islands.

"March, 1602" (Strach. 154), Samuell Mace, in the employ of Sir Walter Raleigh, sailing from England: but instead of examining the country around Hatteras, he visited the coast "forty leagues to the so-westward" in "34°;" procuring "saxafras" at that time "worth some three shillings the lb," also "Chyna roots" (*Smilax pseudo-China*), "benjamin" (*Benzoin odoriferum*), "cassia-lignea" (*Cassia Marilandica*), "and the rynd of the tree which growes there, more strong than any spice, the vertue whereof, at length, is nowe well knowne" (*Aralia spinosa*).

"May 15th" (Strachey, Purchas, and Holmes), by Bartholomew Gosnold, in making the first direct passage from England West to America, a headland discovered "in the latitude of forty-two degrees," and named by him "cape Cod." Following the coast Southward and soon Westward, an island discovered on the "21st," and named by him "Martha's Vineyard" from the "nombre of vynes" (*Vitis labrusca*). Beyond this, on another island named by him "Elizabeth," he commenced a fort and settlement. The island proved to be covered with "oaks, ashes, beech, walnut, witch-hazel" (*Ulmus Americana*), "sassafrage and cedars" (*Juniperus Virginiana*), "with divers others of unknown names;" also "wild pease" (*Pisum maritimum*), "young sassafrage" (*Sassafras officinale*), "cherry-trees, gooseberry-bushes" (*Ribes hirtellum*), "hawthorn" (*Cratægus coccinea*), "honeysuckles" (*Azalea viscosa*), "with others of the like quality;" besides "strawberries" (*Fragaria Virginiana*), "rasps" (*Rubus strigosus*), "eglantine" (*Rosa lucida*), "ground-nuts" (*Apios tuberosa*), "surrin" (. . . .), "tansy" (*Potentilla anserina*), "etc. without count." * — Dissensions arising, the whole party "June 18th" sailed for home.

"1603, March 24th" (Blair, and Nicol. p 339), Elizabeth queen of England succeeded by James VI. of Scotland. Thereby uniting the two kingdoms, under the general title "Great Britain."

"May" (Churchill coll., and chron. edit. by Michelant), anchoring at Tadoussac, Samuel Champlain continued up the St. Lawrence to the rapids, "getting information of several great lakes and of a boundless sea at four hundred leagues distance westward."

"Beginning of June" (Purchas, and Holmes), arrival of Martin Pring with two small vessels on the American coast, "between the forty-third and forty-fourth degrees of north latitude, among a multitude of islands." Following the coast South, in search of *sassafras*, he entered a large sound; and on the North side, "in the latitude of forty-one degrees and odde minutes," built a hut and enclosed it with a barricade; where some of the party kept guard while others collected sassafras in the woods. The natives were treated with kindness, and the last of the two vessels departed well freighted on the "9th of August."

"The same year" (art de verif.), Mohammed III. succeeded by Achmed or Achmet, sixteenth Turkish sultan.

"The same year" (Spreng.), the Academia Lynceorum, the earliest literary and scientific association, founded by Fridericus Cæsius of Rome.

"1604, May 6th" (Churchill coll., Charlev., and Holmes), arrival in Acadie of De Monts, with two ships. Doubling Cape Sable, he entered an extensive bay; and on the East side, found a harbor which he named Port Royal, and settled there some of his men. On the West side of the Bay, he discovered a great river which he called St. John; and proceeding thence "southwesterly twenty leagues," he wintered on an island which he called St. Croix.

"The same year" (Humb. cosm. ii.), sudden appearance in the foot of the constellation Ophiucus of a star of more than the first magnitude. The star soon disappeared, — and from this time, no new star of the first or second magnitude has made its appearance in the heavens.

"The same year" (M. Russell p. 273), the Abyssinian king Za Denghel converted to Catholicism by the jesuit Peter Paez, and the observance of Saturday or the Jewish sabbath prohibited. The Abyssinians revolting, Za Denghel was overpowered and slain, and Yacob was restored as king.

"1605, May" (Strachey, and Slafter), Capt. Georg Weymouth sailing along the coast from Cape Cod as far as the Sachadehoc (Kennebec). He continued sailing "very neere forty miles" up the river, which he found "virged with a greene border of grasse" and a noble growth of timber, the

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* *Thaspium aureum* of Northeast America. A yellow-flowered Umbelliferous plant, perhaps the "alexander" seen by Gosnold on Elizabeth Islands, — and the "alexanders which grow upon rocks by the seashore" seen by Josselyn 45 farther North in New England: T. aureum was received by Hooker from Quebec and Lake Huron; was observed by myself from 44° throughout New England; by A. Gray, "not rare" in central New York; by Pursh, from Pennsylvania to Carolina; by Elliot, in South Carolina; by Chapman, in "Florida, and northward."

"goodly oake" (*Quercus rubra*), "birch" (*Betula papyracea*), "tall firre" (*Strobus Americanus*), "and spruce" (*Abies nigra*). Having "sett upp a crosse with his majestie's inscription thereon" he returned to England.

"In this year" (Peyrere relat. du Groenl. 218), under instructions from Christian IV. of Denmark, Gotske Lindenau sailing for Greenland. He brought back some of the natives, — and in the following year, on a second voyage, brought back others, who remained some years in Denmark. Also "a *Greenland calendar*, composed of twenty-five or thirty little bones fastened to a strap of *sheepskin*, which is not used by any but the original Greenlanders."

"Nov. 5th" (Blair), in England, Gunpowder plot detected. — The celebration of this event, brought into New England by the first colonists, was within my recollection kept up in Salem: and may be regarded as the beginning of New England Tradition.

"In this year" (Blochmann, and W. W. Hunter), Akbar succeeded by Jahangir, now emperor of Hindustan. — In whose reign, arrival of the first British ambassador, Thomas Roe.

"In this year" (Spreng.), Clusius publishing his Exot., enumerating *Protea nereifolia* 38, *Yucca Draconis* 48, *Ranunculus amplexicaulis* app. alt. exot., "indicum" 89. *Polypodium quercifolium* and *Clathrus ruber* app. alt. exot.

Ornithogalum nutans of Eastern Europe and the adjoining portion of Asia. Termed "neapolitanum" by Clusius app. alt. exot. — (Spreng.), observed by Jacquin pl. 301 in Austria, and known to occur in Switzerland and Italy (Pers.): observed "in 1787" on the ramparts of Copenhagen (fl. Dan. pl. 912), "in 1808" in Britain (Engl. bot. pl. 1997) and has since become more frequent (Bab.), is known to occur in Holland (prodr. fl. bat. 273), and sparingly in central France (A. Dec.); was observed by Koch here and there in Germany; by Chaubard, in the Peloponnesus.

Dorstenia Drakena of Eastern Mexico. An Urticaceous herb, transported to Europe, described by Clusius exot. 83 — (Spreng.), Miller dict 3, and Linnæus. Westward, grows wild on, "high ground near Vera Cruz," and its exported root constitutes a fourth kind of *contrayerva* (Houston phil. trans. 421 pl. 195, Guibourt, and Lindl.).

Dorstenia Houstoni of Central America. Known probably as early as this date. — Transported to Europe, is described by Miller dict. 2, and Linnæus. Westward, grows wild on "high rocky ground near Campeachy," and its exported root constitutes a fifth kind of *contrayerva* (Houston phil. trans. 421 pl. 195, Guibourt, and Lindl.).

"1606, Jan. 26th" (Leza, and Stanley append. De Morga 403), Quiros from Peru arriving in sight of Anegada, a flat uninhabited islet about two leagues long, "in 25°" S. and "one thousand leagues from Callao." On the "29th," another uninhabited island without anchorage, Sin Puerto, was reached, "in 24¾°" and 1075 leagues from Callao." "Feb. 4th and 5th," four islands were reached, "three or four leagues apart" and "in 20°-and 21°." On the "9th," an islet "like those left behind" was seen "in 19°," and received the name of "Santa Polonia." On the "10th," a flat island "in 18° 10'," full of palm trees, with "people on the beach," armed with long lances (*Paumotuans*); two Spaniards, swimming to the shore, met with a friendly reception, and in return a chief and an old woman came off to the ship; they were "clothed and treated," but were "much frightened," and on being set on shore, sent back a parting gift of "a bunch of hair and some poor feathers, and some carved shells of pearl oysters," the "finery" of this "very wild people:" the woman had "a small white *dog* like ours;" half of "a pulley of cedar, wrought on the coast of Nicaragua or Peru," was found on the island, and the chief's canoe was "not of one piece of wood," but "as good as could have been made in Castile" (probably the work of survivors from a Spanish shipwreck): coasting along on the "12th," the island was found to be "twenty-five leagues long and ten broad, all the middle is sunk, as though" "a piece of the sea surrounded by land." (Dean's Island). On the "13th," in "16¼°," another island. On the "14th," an island "in 15°," found by De Leza to be "in a straight line 1398 leagues" from Callao. On the "21st," an island "in 10½°," understood to be San Bernardo. Sailing thence W. and a quarter N. W. "fully ten degrees," on "March 2d" a low island, the people and arms "of the fashion of those we had left behind;" the island received the name of La Matanza, and on landing in spite of the opposition of the natives, "some little *dogs* were found in the village."

Continuing on the same "parallel for thirty-two days," at the end of "1940 leagues from the city of Lima" a very high island called Taomaco; the inhabitants "great seafarers, all well furnished with beards" (Papuans), "great archers and throwers of javelins and very venturesome; their boats, which are very large, could go a great distance; they gave us information of more than forty islands, large and small, and all inhabited," "telling us that they fought with several of them;" information also "of the isle of Santa Cruz, and of that which happened there to" Mendaña, and sent a canoe there, a distance of "sixty leagues," to convey the news; "there were amongst them white people" (albinoes) "and others red, other native Indians of the colour of those of the Indies" (Malayans), "and others black, swarthy, and dusky," for they use captives as slaves for their tillage; they

live on "*yams* and fish," cocoa-nuts, and have "pigs and fowls:" on leaving, Quiros carried away four of the natives. One of these (according to Hale ethnogr. 168 to 195) was a native of Chikayana, four days sail from Taomaco and two days from Guaytopo (Vaitupu), had seen people of Guaytopo, driven out of their course in seeking "*tortoise-shell* of which they make ear-rings," and described the women as wearing "a veil of blue or black called foafoa;" he further stated that a great pilot, a native of Taomaco, had procured "from a large country named Pouro" (Bouro) "arrows pointed with a metal as white as silver"—(*tin* from the Malayan archipelago). Confirmation is found in Rienzi ocean. iii. 384 meeting with a Bugis captain who had visited the Solomon Islands: and Hale found the natives of Vaitupu "wearing ear-rings of tortoise-shell, a very unusual ornament in Polynesia," and the women, a "long fringe of *pandanus leaves* called fou." (See Burotu.)

From information procured at Taomaco, Quiros now sailed southwest, and "in 12½°" found "an island of the size of that of Taomaco with the same sort of people," and "called Chucupia;" the natives offered peace, and "presented the husk of a tree, which looked like a very fine cloth" (tapa). Continuing South, and afterwards "a day's sail" West, a volcano was discovered, "very high and thick, more than three leagues in circumference" (Tanna), "and with black inhabitants with thick beards" (*Papuans*): "to the west, and in sight" at "the distance of eight leagues," was an island "well peopled with black inhabitants" (*Negrillos*), two of whom were caught, and "were clothed and fed, and the next day put on shore," but at a port "a gunshot further on" a Spaniard was wounded with an arrow: in sight and all around "were many very high and large islands;" and "going southwards," one of these islands was found "May 1st" to contain a bay fifteen or sixteen leagues in circumference, "well inhabited and very fertile, with *yams* and many fruits, pigs, and fowls; all these people are black and naked" (*Negrillos*), "fight with arrows, javelins, and large clubs; they never would be friends with us, although we spoke together many times, and I treated them; I never set foot on shore with their good will, as they always wished to oppose it, and we always fought with little risk;" the island received the name of "Espiritu Santo" (the largest island of the New Hebrides); the bay is "in 15° 20′," is "very fresh, and has many and large rivers," and on the "6th," Quiros took formal possession, "and of the Austral regions to the pole," in the name of the king of Spain: "June 11th," Quiros, a Portuguese among Spaniards, was prevented by his mutinous crew from making farther explorations; but arrived safely with his ship at Navidad in Mexico "Oct. 20th."

Torres, in command of the second ship, knowing only that the flagship went forth "at one o'clock after midnight" without "making signals," spent "fifteen days" in a fruitless search, opened the king's orders, and proceeded south-west a degree beyond the latitude named (40° S.) without seeing land. Turning "north-north-west as far as 11½°," he "fell in with the beginning of New Guinea" (the Southern point of Louisiada), and as he "could not go up it by the east side," "went coasting to the west, and on the south side it is all the land of New Guinea; it is peopled by Indians who are not very white, and naked, though their middles are well covered with the bark of trees, after the manner of cloth, much coloured and painted" (tapa); "they fight with javelins and bucklers, and some stone clubs, with many gaudy feathers about them." "Having run three hundred leagues of coast" to "9°," a bank begins "which stretches along the coast until 7½°, and the extremity of it is five;" he was therefore obliged to go out South-west to "11°," and keep in the deep channel; "there were some very large islands, and more were seen towards the south; they were inhabited by black people, naked, and very corpulent" (*Papuans*), having "for weapons some thick and long lances, many arrows, very uncouth stone clubs." Following "this shoal for two months" to "5°, and ten leagues from the coast, and we had gone four hundred and eighty leagues; here the coast trends to the north-east" (he had passed through what are now called Torres Straits). Running to the North "as far as 4°, when we fell in with a coast which also stretched from east to west," understood to be continuous with that left behind, and "inhabited by black people, different from all the rest," "more gaudily adorned; they also use arrows and javelins, and very large shields, and some blow-pipes of cane full of lime which they discharge;" continuing "west north-west beside the coast, always finding these people, though we landed in several places," also meeting with "the first iron and bells of China, and other things from there;" we went "a hundred and thirty leagues, so that the extremity would remain at fifty leagues distance:" at the extremity "we found some clothed Moors, with artillery," "arquebuses, and white weapons; they go conquering these people who are named Papuas (*Negrillos*), and preach to them the sect of Mahomed; these Moors traded with us, selling us fowls, and goats, and fruit, and some pepper and biscuit, which they call *sagu*," and "gave us news of the events in the Moluccas, and of Dutch ships; though they had not reached here."

"July 26th" (Lesc. iv. 12), De Monts and Poutrincourt on their Second voyage arriving at Port Royal, where they found two survivors of the party left behind. In the forest around, Lescarbot vi. 24 met with "chenes" (*Quercus rubra*), "frenes" (*Fraxinus sambucifolia*), "bouleaux fort bons en menuiserie" (*Betula lenta*), "erables" (*Acer rubrum*), "sycomores" (*Acer saccharinum*), "aube-

pins" (*Cratægus coccinea*), "framboises" (*Rubus strigosus*), "petits fruits bleuz" (*Vaccinium Canadense*) "et rouges" (*V. vitis-Idæa*), "grozelles semblables aux nôtres mais elles deviennent rouges" (*Grossularia hirtella*), "ces autres grozelles rondelettes que nous appellions guedres" (*Viburnum opulus*), "pois en quãtite sur les rives de mer" (*Lathyrus maritimus*). — Returning to France "in 1607," Lescarbot iv. 3 again visited Port Royal, and remained there three years.

"In this year" (Spreng., and Winckler), Adrian Spigelius publishing his Isag. in rem herb. — He died "in 1626."

As early as this year (Spreng.), Augerius Clutius after traversing Spain crossing to Morocco. — He returned "in 1607," and his work was published in "1634."

"1607 A. D." (Humb. cosm. ii.), Halley's comet making its appearance.

"Apr. 26th" (Purchas, Smyth, Churchill coll., Holmes, and archæol. Amer. iv.), under a charter from king James, arrival of Christopher Newport with three ships in "the bay of Chesapeac." Sailing up the Powhatan river, men were landed "May 14th" on the North side; who proceeded to cut down the trees, to the alarm of the natives, and named the place "James Town." An aristocratic form of administration prepared by the home government, was established; and under Edward Maria Wingfield as president, the first permanent English settlement on the American continent inaugurated.

Ascending the river to the head of tide-water, Newport (relatyon, archæolog Amer. iv. 42) on "May 22 Fryday" was offered baskets of "dryed oysters" (*Ostrea Virginica*); also, "wheate" (*Zea mays*), "beanes" (*Phaseolus vulgaris*), "and mulberyes" (*Rubus*), "sodd together;" and on "May 23 Satturday," a "wiroans," who "satt upon a matt of reeds with his people about him," gave "a deare roasted," caused "his weomen to make cakes," and also gave "his crowne, which was of deare's hayre dyed redd." While "banquetting with them, seeing their dauncs, and taking *tobacco*," the great chief Powatah arrived: when "they all rose from their matts, save the wiroans Arahatec, "separated themselves aparte in fashion of a guard, and with a long shout they saluted him." Continuing up the river to the residence of Powatah, on a high hill with "a playne betweene it and the water, twelve score over, wheron he sowes his wheate, beane, peaze" (*Phaseolus vulgaris* var.), "tobacco, pompions, gowrds" (*Lagenaria*), "flaxe" (*Linum Virginianum*), "etc.," Newport was hospitably received, but was not permitted to proceed inland beyond the Falls. He learned however that the "caquassun" or *copper* "was gott in the bites of rocks, and betweene cliffs in certayne vaynes" (clearly therefore from Lake Superior); and found it flexible enough to bend "a peece of the thicknes of a shilling rounde about" the finger (native copper being as is well known tougher than smelted copper). "May 25," returning down the river, he was shown the herb "wisacan, which they say heales poysoned wounds" (. . . .), and which "is like lyverwort or bloudwort;" also, "a roote wherewith they poisen their arrowes" (. . . .). "They would shew us any thing we demaunded; and laboured very much, by signes, to make us understand their languadg." The natives are further described: as living "comonly by the water-side, in litle cottages made of canes and reeds covered with the barke of trees;" some "fortie or fiftie in a hatto or small village, which townes are not past a myle or half a myle asunder in most places;" the women doing "all the labour," while "the men hunt and goe at plesure." They "goe all naked, save their privityes, yet in coole weather they weare deare-skinns with the hayre on, loose: some have *leather* stockings up to their twists, and sandalls on their feet." Their "feight is alway in the wood, with bow and arrowes and a short wodden sword." They "steale anything comes neare them;" and "having once conveyed, they hold it an injury to take the same from them." "They sacrifice tobacco to the sunn, fayre picture, or a harmefull thing, as a swoord or peece; also, they strincle some into the water in the morning before they wash. They have many wives; to whome, as neare as I could perceive, they keep constant. The great king Powatah had most wives. These they abide not to be toucht before their face." The country is described as naturally yielding "vines aboundance," "respesses" (*Rubus strigosus?*), "scarretts" (*Archemora rigida?*), "the roote called Sigilla christi" (*Polygonatum*), "and many other unknowne;" also "apothecary-druggs of diverse sorts, some knowne to be of good estimacon, some strange, of whose vertue the salvages report wonders."

"May 26th" (relatyon Newp. p. 54), first attack by the natives on the colonists at James Town; the assailants numbering "above two hundred." Hostile demonstrations by smaller parties were made at intervals during the ensuing months. "Dec. 10th" (Wingfield in archæol. Amer. iv. 92), John Smith ascending the Chechohominies river, was "taken prysoner, and by the means of his guide, his leif was saved:" after some days he was brought "to the great Powaton," who had already proffered friendship, and who, — "Jan. 8th," sent him home. The chief's daughter Pocahontas at this time a child (Deane in note); she is not mentioned in the early accounts of the transaction.

"July 30th" (Strachey, Hakl. soc. 1849, and Purchas), George Popham and Raleigh Gilbert with two ships on their way to the Sachadehoc (Kennebec) arriving in sight of land. "Aug. 1st," a party landing "on a galland island" in "44½°" found "gooseberries" (*Grossularia cynosbati*), "strawber-

ries" (*Fragaria Virginiana*), "raspices" (*Rubus strigosus*), "hurts" (*Vaccinium*), "and all the island full of huge high trees of divers sorts." Sailing thence "so-west, for soe the coast lieth," on the "17th" the two captains entered the Sachadehoc, and on the "18th" made "choise of a place for their plantacion, at the mouth or entry of the ryver on the west side." While the fort was building, Gilbert on the "28th" sailed in the shallop Westward as far as a headland in "43½°," the trees growing thereon being "most oake" (*Quercus rubra*) "and walnutt" (*Juglans cinerea*), the islands on the way "all overgrowne with woods, as oak, walnutt, pine, sprusè trees, hasell nutts, sarsaparilla, and hurts in abundaunce." After an unsuccessful attempt to find the Penobscot, had a sight "Sept. 15th in the morning, of a *blasing starr* in the nor-east of them." On the "25th," at the head of navigation on the Sachadehoc, were "great store of grapes, both redd and white" (*Vitis cordifolia* and *V. labrusca*, unripe), "good hopps" (*Ostrya Virginica?*), "as also chiballs and garlike" (*Allium schoenoprasum* and *A. Canadense*), "certaine codds in which they supposed the cotton wooll to grow" (*Asclepias Cornuti*), and among other trees "pineaple" (*Pinus resinosa?*). The ensuing winter proved "extreame unseasonable and frosty," but the colonists "fully finished the fort," built "fifty howses therein, besides a church and a storehowse," also a "pynnace of about some thirty tonne, which they called the Virginia," obtained many kinds of furs "from the Indians by way of trade," and gathered "good store of sarsaparilla" (*Aralia nudicaulis* and *A. hispida**): but "noe mynes" were discovered, Capt. Popham died, — and a ship with supplies arriving in the spring brought news of a legacy to Capt. Gilbert requiring his presence in England, when the colonists unwilling to remain behind all embarked for home.

"Before the middle of August" (Purchas iii. 464, and Asher edit. Huds. p. cxci), by Henry Hudson on his First voyage, an island discovered in "71° N." near the Greenland coast, and named Hudson's Tutches — (now called Jan Mayen).

"1608, June 26th" (narrat., edit. Asher), Hudson on his Second voyage arriving on the coast of Nova Zembla in "72° 25′ N.:" parties landing at different times found "a crosse standing on the shoare, much driftwood, and signes of fires," also "a herd of white deere" (*Cervus rangiferinus*), "footings of many great beares, of deere, and foxes," grass "of the last yeere and young grasse came up amongst it a shaftman long," also "flowers and greene things that did there grow." As far as examined Nova Zembla seemed "a pleasant land, much mayne high land with no snow on it, looking in some places greene, and deere feeding thereon; and the hills are partly covered with snow."

Elymus arenarius of the seashore in Arctic and Subarctic climates: A species of *lyme grass*, probably the tall "grasse" seen on Nova Zembla: — E. arenarius is termed "gramen spicatum secalinum maritimum spica breviore" by Tournefort inst. 518; was observed by Forskal along the Sea of Marmora, and by Sibthorp from the Greek islands to the Euxine; is known to grow along the Atlantic seashore from France to Ireland and Lapland (Pers., and Wats.). Westward, was received by Hooker from Arctic America; was observed by him on Iceland; by Lapylaie, on Newfoundland; by Kalm, as far South as 48° on the Lower St. Lawrence; by myself to 47° 30′.

"July 3d" (N. Shaw edit. Champl. p. xxiv), having arrived at a narrow part of the St. Lawrence, Champlain decided to establish his settlement on a spot called by the natives "Quebec;" and caused dwellings to be erected, and the land apportioned, cleared and sown. — On the following "18th of May," he proceeded farther up the river, and having promised the natives aid against the Iroquois, arrived at Saint Croix on the "1st of June." Entering the Iroquois river, his boat was stopped at the first rapid; but Champlain, with only two of his men willing to accompany him, kept on with the natives and their canoes "July 2d." On reaching the Lake (which continues to bear his name) a battle ensued at a village on its border, when Champlain with his "arquebuss loaded with four balls" killed at one shot two Iroquois chiefs and wounded a third: this decided the contest in favour of his native allies, who returned to the St. Lawrence with "ten or twelve prisoners." In "1610," he accompanied the Algonquins against the Iroquois, and stormed a fort or stockade; and hearing from his friend De Monts at Paris, returned to France.

"Summer" (Smith; Purchas, and Holmes), exploration of the Chesapeake by John Smith in an open barge: sailing in all "about three thousand miles." At the Susquehanna river, the natives had implements "of iron and brass," derived by their own account from the French of Canada.

"In this year" (edit. Markh.), Francisco de Avila recording Peruvian legends.

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* *Aralia hispida* of Northeast America. Called there *bristly sarsaparilla* (A. Gray), and possibly included in the "sarsaparilla" gathered on this occasion: — the other "sarsaparilla" is described by Josselyn as "having the same leaf, but is a shrub as high as a gooseberry-bush, and full of sharp thorns:" A. hispida is known to grow from Newfoundland to the Saskatchewan (Hook.); was observed by Michaux at Hudson's Bay and in Canada; by myself, along the Atlantic as far as 42° N. beyond Salem; and by Pursh, on the Alleghanies in Pennsylvania and Virginia.

"The same year" (Blair, and Humb. cosm. ii.), *telescopes* invented in Holland. Three instruments offered to the government "Oct. 2d" by Hans Lippershey; and on the "17th," a similar offer by Jacob Adriansz called Metius, who claimed to have made such instruments for "two years."

"In this year" (Spreng.), Clusius continuing his botanical investigations, describing *Saxifraga hirculus* post. 11. — He died "in 1609," and his Cur. post. were published "in 1611." *

"In this year" (Spreng.), Schwenckfeld writing his Cat. plant. Hirschb., enumerating *Tussilago spuria*, *T. nivea*.

"In this year" (Spreng. gesch. ii. 91), J. Robin and Petr. Vallet publishing their Jardin du Henri IV., enumerating *Haemanthus multiflorus*.

"1609 A. D." (San-kokf transl. Klapr.), Sio-nei (Chang-ning) "twentieth" Loo Choo king of the Tame-tomo dynasty, taken prisoner by the prince of Satsouma and carried to Japan. — After "four years," he was released and returned to his own country: the Loo Choo kings have since continued vassals of Japan.

"May 15th" (Major introd. Strach. p. xi.), sailing of nine vessels with five hundred emigrants for the new colony in the Chesapeake. The ship containing the three officers, Sir Thomas Gates lieutenant governor, Sir George Sumers admiral, and Christopher Newport vice admiral, became separated "July 28th" (Strach. 42), and was wrecked on Bermuda: where they occupied themselves "in forming a settlement" and building "two small vessels." In the mean time, the seat of Sumers in parliament was declared vacant, on account of his accepting a colonial office: apparently the first notice of Virginia by the English parliament (Holmes). The remaining vessels, with the exception of one ketch that was lost, reached James Town "Aug: 11th."

"May 19th N. S." (Juet, and Asher edit. Huds. 46), Hudson off North Cape on his Third voyage "observed the sunne having a slake" (without the aid of a telescope): — in "March, 1610" (Humb. cosm. ii. and iv.), John Fabricius of East Friesland from the gradual change in position of *solar spots* inferred rotation of the sun: and solar spots were seen "Dec 8th" by Thomas Harriot, who however did not recognize them as belonging to the sun.

"July 18th N. S." (Juet, Van Meteren, and Asher edit. Huds. 61 to 149), Hudson in the Dutch service entering a harbour in "Nova Francia" in "44° 1′" (near the Kennebec): he here cut a new fore-mast, one of the natives speaking "some words of French;" and "on the 19th," two French shallops came in, bringing "red cassockes, knives, hatchets, copper, kettles, trevits, beades, and other trifles" to trade for furs. "Aug. 3d," in about "41° 56′," the shallop with five men was sent in to sound, and landing (on the peninsula of Cape Cod) found "goodly grapes" (*Vitis labrusca*) and "rose trees" (*Kalmia latifolia*): voices were heard on the following day, and a boat sent on shore "found them to be savages which seemed very glad of our comming," and had "greene tabacco" (*Nicotiana rustica*). Continuing South, Hudson "on the 18th" in "37° 26′" on the north side of "the entrance into the King's river in Virginia" (Chesapeake) "where our English-men are;" and "on the 24th" was in "35° 41′, being farre off at sea." Returning, "on the 28th" he found the land trending "north-west, with a great bay and rivers" (mouth of the Delaware): but the bay "shoald," and he turned back. "Sept. 3d," he entered an opening in "40° 30′" (entrance to the Hudson), finding "a very good harbour," abundance of "blue plums" (*Prunus maritima*), some "currants" brought by the natives "dryed" (*Vaccinium*), and the country "full of great and tall oakes:" proceeding up the river, "on the 22d" he reached the "end for shipping to goe in," but boats went "eight or nine leagues" farther, finding "but seven foot water," and Hudson himself landed in "42° 18′:" on the "25th," nine or ten leagues down the river, on "the west side" were found "great store of goodly oakes, and walnut-trees" (*Carya*), "and chest-nut trees" (*Castanea Americana*), "ewe trees" (*Abies Canadensis*), "and trees of sweet wood in great abundance" (*Liquidambar styraciflua*), "and great store of *slate* for houses:" on the "30th," the "wind at south-east, a stiffe gale betweene the mountaynes;" "Oct. 1st," at the end of seven leagues "got downe below the mountaynes," then "it fell calme," and "the people of the mountaynes came aboord;" a thieving native endeavouring to escape with his plunder was shot, and hostilities commenced; "on the 2d," at the end of "2+7+2" leagues, "anchored in a bay cleere from all danger of them on the other side of the river," on that side "that is called Manna-hata;" on the "4th," sailed from the inlet. "Nov. 7th," Hudson with a mutinous crew, composed in great part of Englishmen, arrived at Dartmouth, and was detained by the government.

"Dec. 29th" (Riccioli, Blair, and Humb. cosm. ii.), through the invention of telescopes, the four satellites of Jupiter discovered by Simon Marius at Ansbach, — and "Jan. 7th 1610," by Galileo:

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* *Cassine Capensis* of Austral Africa. A Celastroid shrub, transported to Europe, described by Clusius post. 4 — (Spreng.), and Dillenius elth. pl. 236. In its wild state, observed by Burmann afr. pl. 85, and Thunberg prodr. 52, in Austral Africa.

affording ocular demonstration of the truth of the so-called Copernican System. From the eclipses or occultations of these satellites, Galileo further proposed determining Longitude on the Earth's surface.

"1610, February" (Humb. cosm. ii. and iv.), the crescent or the moon-like phases of Venus discovered by Galileo; — comparison with the outer planets now hastening the general adoption of the Copernican System. In "November," the planet Saturn found by Galileo to be irregular in outline, like "three heavenly bodies in contact with each-other."

"The same year" (Blair), nine hundred-thousand Moors or Muslims, expelled from Spain.

"In this year" (Starch. 42), Captain Argol, in search of the lost ship, returning from Bermuda followed the American coast from "44°," discovered another goodly bay "in 39°," and called its Southern cape "in 38½" Cape Lawar.

"May 23d" (Major edit. Strach. p. xiii), Sumers with his companions, including William Strachey, in two small vessels from Bermuda arriving at James Town. The colony, after the departure of Capt. John Smith, had been reduced "to only sixty" persons "in the last stage of wretchedness and famine." On consultation, it was decided to abandon the country, and the colonists were on their way down the river "June 6th" when they were met by news of the arrival of their governor Thomas 11th Lord de Lawarre, bringing supplies. In the reorganization, Strachey was appointed secretary of the governor's Council: — and may have returned with the governor in the following year, was at least in England "in 1612" (Major p. xv).

The natives make cordage "of their naturall hempe, and flax together" (*Apocynum cannabinum* and *Linum Virginianum*), girdles of "silke grasse" (*Eriophorum Virginicum?*); "in June, July, and August they feed upon rootes of tockohow" (*Pachyma cocos*), "berries, grownd nutts" (*Apios tuberosa*), "fish, and greene wheate" (*Zizania aquatica?*); have "rattles made of small gourdes" (*Lagenaria vulgaris*): their "bowes are of some young plant, eyther of the locust-tree" (*Robinia hispida*) "or of weech" (*Corylus Americana*): "the women sow and weed the corne," cleansing it of the "orabauke" (*Cusouta arvensis?*), "dodder" (*Cuscuta Gronovii*), "and choak weed" (*Polygonum dumetorum?*), "and such like, which ells would wynd about the corne and hinder the growth;" sow also "a fruit like unto a musk million, but lesse and worse, which they call macock gourds" (*Cucurbita polymorpha*): they have "cherries, much like a damoizin, but for their tast and cullour we called them cherries" (*Prunus Chicasa*); "and a plomb there is, somewhat fairer then a cherrie, of the same relish" (*Prunus Americana*); "a berry much like our goose-berries in greatness, cullour, and tast, which they call rawcomenes, and they doe eate them rawe or boyled" (*Vaccinium stamineum*); "many hearbs in the spring time are comonly dispersed throughout the woodes, good for broathes and sallotts, as violetts" (*Viola pedata*), "purselin" (*Portulaca oleracea*), "sorrell" (*Rumex acetosella*), "and roses" (*Rosa lucida*): they have also "a smale roote" which they call "vighsacan" (. . . .), that bruised and applied "cureth their hurts and diseases;" "pellitory of Spaine" (*Parthenium integrifolium*); "in the low marishes grow plotts of onions conteyning an acre of ground or more," appearing for the most part "in the last season of the yeare," small, "not past the bignes of the toppe of one's thumb," eaten by ourselves but not by the natives (*Allium cernuum*); "all the country is overshadowed with trees," including "twoo or three" kinds of oak, one having bark "more white then the other" and "somewhat sweetish" acorns, which being boiled "affordes a sweet oyle" (*Quercus alba*); "there is also elme" (*Ulmus Americana*) "and ash" (*Fraxinus pubescens*), "black walnutt" (*Juglans nigra*), "white poplar" (*Liriodendron tulipifera*) "and another tree like unto yt, that yieldeth" an "odoriferous gumme" (*Liquidambar styraciflua*), also a small tree like the "mirtle" but the fruit "much more bynding" (*Adenorachis arbutifolia*). "By the dwellings of the salvages are bay-trees" (*Gordonia lasianthus*), "wild roses" (*Rosa lucida*), "and a kynd of low tree, which beares a cod" . . . . "we take yt to be locust" (*Robinia hispida*): "crabb trees there be, but the fruiet small and bitter" (*Malus angustifolia*). "The country wants not salsodiack enough to make glasse of, and of which we have made some stoore" (from *Salicornia ambigua*, and *Salsola kali*).

The country is described by Strachey as producing transported fruits and vegetables as well or "better then in England, as *parsenips*, *carrotts*, *turnips*, *pumpions*, *mellons*, *cowcumbers*, etc., and many of our English garden seedes, *parsley*, *endiff*, *socory*, etc.:" besides, "*tobacco-seed* from Trinidado, *cotton wool*, and *potatoes*."

"Aug. 3d" (Asher edit. Huds., and Churchill coll.), Hudson on his Fourth voyage, now in English employ, in "61° 20′" passing out of the strait which bears his name into the "sea to the westward:" a party landing found "sorell" (*Oxyria digyna*), "and that which wee call scurvy-grass in great abundance" (*Cochlearia officinalis*). Turning Southward, the ship was frozen in "Nov. 10th" in "52°." — The following spring, "a budde of a tree full of a turpentine substance" was brought, and "of this our surgeon made a decoction to drinke" (*Abies nigra*), a single native also made his appearance: "June 21st," after the ship was released, Hudson was placed in the shallop with eight others and abandoned; he was not heard of afterwards.

"In this year" (Campion addit. Stan-Jul. industr. chin. 109), Siu-kouang-ki writing.

"1611, March 28th," (Major edit. Strach. p. xv), Lord de Lawarre, seriously ill, sailing for home, leaving Sir George Percy in command of the Virginia colony. Sir Thomas Gates, arriving "in August," assumed the post of governor, — which he held "till 1614."

"In the early spring" (Wilmere edit. Champl. p. xxviii), Champlain, having returned from France, proceeding from Quebec up the river. At Mont Royal (Montreal), he met the Algonquins, and after exchanging presents, entrusted another lad to their care; returned to Quebec "in June," and sailed for France.

"June 12th" (relat. Jes. i. præf.), arrival at Port Royal in Acadia of Pierre Biard and Enmond Massé, the first Jesuit missionaries in North America.

"In this year" (append. Sibth., Spreng., and Winckler), Paul Renealmus publishing his Specim. hist. plant., enumerating *Dianthus atrorubens*.

"The same year" (art de verif.), by the regent Ijesaz, leave granted to the Dutch to trade with and throughout Japan.

"1612 A. D." (Churchill coll., Anders. ii. 274, and Asher edit. Huds. 194), Thomas Button sent in search of Hudson. From the Strait sailing on the inland sea "above two hundred leagues to the southwestward," he reached the main land opposite at the mouth of a river called by him Nelson's; and after wintering, — returned in the following "autumn."

"June" (Purchas, and Churchill coll.), by Richard More, a permanent settlement established on Bermuda.

"In this year (= 2272 d. of Synmu," art de verif.), Go-Josei or Josei II. succeeded by his son Dai-sco-kouotei, now dairo of Japan.

"The same year" (Alst., and Nicol.), Rodolph II. succeeded by the king of Hungary Matthias; now thirty-third emperor of Germany and Italy.

"The same year" (Alst.), end of the chronicle of Robertus Bellarminus.

"In this year" (Spreng., and Winckl.), Alpinus publishing his Rhapont. disput., and writing his Exot., enumerating *Scabiosa limonifolia* 34, *Campanula Alpini* 340, *Scrophularia sambucifolia* 202, *Trifolium clypeatum* 306, *Chrysanthemum trifurcatum* 320, *Centaurea Babylonica* 281, and *C. eryngoides* 158.* — He died "in 1617," and his Exot. was published "in 1627."

Cardamine impatiens of Europe and the adjoining portion of Asia. Termed "sium impatiens" by Alpinus exot. 331, — "c. annua exiguo flore" by Tournefort inst. 214, and known to grow in woods from 60° in Sweden throughout middle Europe (Barrel. pl. 155, Engl. bot. pl. 80, and Pers.): observed by Linnæus in Sweden; by Sibthorp, in shaded situations on mount Hæmus.

Syringa Persica of Central Asia. The *Persian lilac* or "agem lilag Persarum" brought "from Persia" (Miller dict. pl. 164) is termed "ligustrum nigrum" by Alpinus exot. 178, — "ligustrum" by J. Bauhin prodr. 158 (Spreng.); escaping from cultivation has in some localities been found seemingly wild (A. Dec.). By European colonists, was carried to Northeast America, where it continues in gardens; and recently by Nimmo to Hindustan (Graham).

"In this year" (Spreng.), Emanuel Sweert publishing his Florilegium, enumerating *Iris Swertii* 41, *Gladiolus iridifolius* 66, *Narcissus radians* 21. f. 8, and *Amaryllis Orientalis*.

In this year (see Spreng.), J. Bauhin continuing his botanical writings, enumerating *Saxifraga aspera* 3. 695, *Galium uliginosum*, "hyssopifolia minor" *Lythrum thymifolia* 3. 792, *Ajuga Genevensis*, *A. alpina*, *Plantago serpentina*, *Andromeda polifolia* i. 527, *Gnaphalium rectum* iii. 160, *Listera cordata* iii. 534, *Scirpus sylvaticus* 2. 501, *Veronica Austriaca* 3. 287, "gramen minimum Cherleri" 2. 465, *Triticum loliaceum*, *Galium rotundifolium* 3. 718, *Campanula spicata* 2. 801, *C. linifolia* 2. 797, *C. rhomboidea* 2. 806, *C. Bononiensis* 2. 804, *C. hederacea* 2. 797, *Phyteuma pauciflora* 2. 811, *Herniaria hirsuta* 3. 379, *Myrrhis bulbosa* 3. 183, *Bupleurum Pyrenaicum* 3. 199, *Cnidium Alsaticum* 3. 106, *Laserpitium angustissimum* 3. 137, *L. aureum* 3. 57, *Scilla unifolia* 2. 622, *Rumex lunaria* 994, *Sax-*

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* *Oenothera biennis* of North America. Seeds sent from England in this year by John More to Alpinus, — by whom the plant was termed "hyosciamus virginianus" (exot. pl. 325, Linn., and Pers): Oe. biennis is described also by C. Bauhin pin. 245; and before 1640 had become naturalized in Britain (Park., Morison, and Ray), spreading thence to Denmark and throughout middle Europe (Miller, and A. Dec). Is known to grow wild in North America, from Lat. 56° throughout Canada and along the Atlantic to 30° in Florida, and Westward to the Rocky mountains and Nutka Sound (Baldw., E. James, and Hook.). The name *evening-primrose*, given by colonists remembering the pale yellow flowers of the true primrose, has been adopted in the mother-country (as appears from Prior). By European colonists also, Oe. biennis was carried to Hindustan, observed by Law "in gardens Belgaum" (Graham); and to Japan, var. "parviflora", having no native name observed by Thunberg around Nagasaki and in gardens.

ifraga moschata 3. 762, *Arenaria tenuifolia* 3. 364, *A. striata* 3. 360, "cerasus racemosa" 1. 223, *Cerasus semperflorens*, *Pyrus Pollveria* 1. 59, *Rosa tomentosa* 2. 44, *Helianthemum nummularium* 2. 20, *H. ocymoides* 2. 20, *H. glutinosum* 2. 19, *Ranunculus plantagineus* 3. 866, *R. Pyrenaeus* 3. 866, *R. montanus* 3. 861, *Nepeta nuda* 3. 226, *Sideritis Romana* 3. 428, *Ocymum monachorum* 3. 260, *Scutellaria albida* 3. 291, *Linaria Pelisseriana* 3. 461, *Thlaspi peregrinum* 2. 927, *Sisymbrium obtusangulum* 2. 862, *Spartium purgans* 1. 404, *Genista sylvestris* 1. 400, *Orobus canescens* 2. 326, *Lathyrus hirsutus* 2. 305, *Vicia platycarpos* 2. 286, *Cytisus biflorus* 1. 373, *Coronilla juncea* 1. 383, *Astragalus Monspessulanus* 2. 338, *Astragalus pilosus* 2. 335, *Lotus angustissimus* 2. 356, *Medicago coronata* 2. 386, *M. tuberculata* 2. 385, *M. rigidula* 2. 385, *M. pubescens* 2. 385, *Leontodon obovatus* 2. 1037, *Hieracium staticaefolium* 2. 1041, *Picris Sprengeriana* 2. 1026, *Cirsium canum* 3. 44, *C. ferox* 3. 58, *Conyza Sicula* 2. 1049, *Inula spiraeaefolia* 2. 1049, *Senecio nemorensis* 2. 1063, *S. aquaticus* 2. 1057, *Cotula aurea* 3. 119, "chrysanthemum latifolium" 3. 105, *Acmella repens*, *Achillea herba rota* 3. 144, *Caulinia fragilis* 1. 216, *Salix Amanniana* 1. 216, *S. arbutifolia* 1. 217, and *S. reticulata* 1. 217. — He died "in 1613," his Prodrom. was published "in 1619," and his Hist. plant. "in 1650–1."

Thlaspi alliaceum of the Mediterranean countries. A garlic-scented annual described by J. Bauhin 2. 932 — (Spreng.), and Jacquin rar. i. pl. 121; and known to grow in France (Lam. fl. fr.) and Southern Europe (Pers.). By European colonists carried to Northeast America, is enumerated by A. Decandolle as having been found there but not as yet naturalized.

Calepina Corvini of the plains around the Caspian. A Cruciferous weed known to J. Bauhin 2. 895 as brought from Italy and cultivated in a garden at Stuttgard — (Spreng. and A. Dec.), but now occurring in various localities on the Upper Rhine (Koch, and Godron): observed by Barrelier 38 along the Tiber; by Gussone, around Naples and in Sicily; by Vaillant, on garden-walls near Paris; by Boreau, and Lecoq, in central France; by Kitaibel, Bieberstein, and others, in localities more or less artificial in Southern Germany, Hungary, and as far as the Crimea; by Reuter and Margot, on Zante. But farther East, by Goebel, and Hohenacker, wild in moist places in the plains North of the Caspian.

Arenaria trinervis of Europe and the adjoining portion of Asia. Termed "alsine plantaginis folio" by J. Bauhin hist. iii. 364, — and Tournefort inst. 242, and known to grow from Sweden and Russia to the Mediterranean (fl. Dan. pl. 429, Curt. lond. iv. pl. 31, Pers., and Wats.): observed by Linnæus in woods in Sweden; by Sibthorp, and Chaubard, in the Peloponnesus. Westward, has been found in Greenland (Wats.).

Ranunculus nivalis of the Arctic region and mountain-summits farther South. Termed "r. minimus alpinus luteus" by J. Bauhin hist. iii. 861, — and known to grow from Spitzbergen to the Altaian mountains (Jacq. austr. pl. 325, Pers., and Hook.): observed by Linnæus everywhere on the highest points of the Lapland mountains; by Sibthorp, on the summit of the Bithynian Olympus. Westward, by Sabine in Iceland and Greenland, growing also according to Hooker along the Arctic Sea to Bering's Straits, and on the alpine portion of the Rocky mountains.

Draba muralis of Europe and the adjoining portion of Asia. Termed "bursæ pastoris sublongo loculo affinis pulchra planta" by J. Bauhin hist. ii. 938, — "d. minima muralis discoides" by Columna ecphr. i. pl. 272, "alysson veronicæ folio" by Tournefort inst. 217, and known to grow from Sweden to the Mediterranean (Engl. bot. pl. 912, Pers., and Dec.), also in North Africa (Wats.): was observed by Linnæus in Gothland and as far as Upsal; by Brotero, in Conimbrica in Portugal; by Sibthorp, and Chaubard, on the mountains of the Peloponnesus; and by Bieberstein, along the Taurian mountains. Westward, by Hooker in Iceland, and was received by him from Montreal.

Thalictrum galioides of middle Europe. Termed "t. pratense angustissimis foliolis" by Bauhin prodr. pl. 146, — "t. Bauhini" by Crantz, and known to grow about Basle and on the Upper Rhine (Pers.); observed by C. Ch. Gmelin around Baden; by Crantz, in Austria; by Pollich, in Germany; by Decandolle fl. fr., in France (Steud.); and in less than fifty years after the completion of the Doubs canal "to 1822," made its appearance in the environs of Montbelliard (Bern., and A. Dec.).

Carduus crispus of Europe and the adjoining portion of Asia. A thistle termed "carduus caulé crispo" by J. Bauhin hist. iii. 59, — and Tournefort inst. 440, "carduus spinosissimus angustifolius vulgaris" by C. Bauhin pin. 385, and known to occur in cultivated and fallow ground throughout Europe (fl. Dan. pl. 621, and Pers.): observed by Linnæus as far as Upland in Sweden; by Loesel pl. 5, in Prussia; by Sibthorp, in the Peloponnesus.

Rumex pulcher of Central Asia. Called in Greece "lapathō" (Sibth.); known to J. Bauhin hist. ii. 988 only from a specimen sent from Bologne, termed by him "lapathum pulchrum bononiense" — (A. Dec.), by Tournefort inst. 504, "l. p. b. sinuatum" and seems to have been first observed in Britain by Ray syn. 142, in the outskirts of London: has since become frequent in waste places from Italy throughout middle Europe (Tilli pis. pl. 37, Pollini, Hall. helv. 1593, Lam. fl. fr., and Pers.), was observed by Forskal near Marseilles, by A. Decandolle around Geneva. Eastward, was observed by Sibthorp, and Bory, among rubbish and ruins from the Peloponnesus to Constantinople, and is

said to abound from Caucasus to Tartary (A. Dec.). By European colonists, was carried to America, observed by Elliot around Charleston, S. C.; by A. Saint-Hilaire in the streets of Porto Alegre in Austral America. "R. divaricatus" annual and pubescent, but regarded as probably not distinct, was also observed in Italy by Tilli pl. 37 f. 2, and on Lemnos by Sibthorp.

Stachys alpina of the mountains of middle and Southern Europe. Termed "pseudo-stachys alpina" by Bauhin prodr. 113, — and C. Bauhin pin. 236, "galeopsis alpina betonicæ folio flore variegato" by Tournefort inst. 185, and known to grow in mountainous situations in Germany (Pers.): observed by Celsius, and Rosen, in Sweden (Linn.); by Sibthorp, on the mountains of the Peloponnesus.

Najas major of Europe. An aquatic annual described by J. Bauhin 3779 — (Spreng.), and Michell n. g. pl. 8. f. 2 — (Pers.); termed "n. marina" by Linnæus, "n. fluviatilis" by Lamarck; observed by Allioni in Piedmont; by C. Ch. Gmelin, in the waters at Baden; and by Thuillier, near Paris (Steud.). Occurs according to Kunth enum. iii. 113 on the Hawaiian Islands (A. Dec.).

Juncus ericetorum of Eastern Europe and the adjoining portion of Asia. Termed "foliatus minimus" by J. Bauhin 2. 523 — (Spreng.); observed by Pollich in the Palatinate (Steud.), by Chaubard in the Peloponnesus.

"1613, May 30th" (narrat., archæol. Amer. iv. p. 285), arrival in Spitzbergen of Benjamin Joseph, William Baffin, Robert Fotherby, and others, with seven English ships, having on board the necessary outfit, and "twenty-four Basks, who are men best experienced" in "killing of the whale." Along the shore "in all places of the countrye" there was "great store of driftwood, which the sea bestows on the barren land" (brought from the great rivers entering the Arctic Sea, the "tree" or "peice of straight timber" towed p. 291 agreeing with Northern Coniferæ). "The thawe began" (Lat. 79°) "about the 10th of June:", and "in the moneths of June, Julye, and the beginning of August, ther is oftentimes pleasant and warme weather; but, in the other moneths, certainlie very uncomfortable." The land quadrupeds met with, were "white bears" (*Ursus maritimus*), "graie foxes" (*Vulpes Arcticus*), "and great plentie of deare" (*Cervus rangiferinus*; all three species having come of course over the ice, from Greenland or from Nova Zembla). "But, by all likelihood," the country "was neuer yet inhabited by anie natiues that beare the shape of man."

"The same year" (Charlev., and Holmes), a party of French missionaries, including two Jesuits from Port Royal, landing on the island of "Monts Deserts." (East of the Penobscot), commenced a settlement there: but were forcibly removed by captain Samuel Argoll, on a fishing voyage from Virginia. Returning, Argoll obtained three armed vessels from the governor of Virginia; and after taking formal possession of Monts Deserts, proceeded to destroy the remains of De Monts' settlement on St. Croix, and the abandoned dwellings at Port Royal, where he found "not a single person." The home government being all the while at peace. He also visited Manhattan, and induced the Dutch colonists to submit to the governor of Virginia.

"The same year" (Purchas i. 4. p. 371, and Churchill coll.), "rowing betwixt Firando and Fuccata" in Japan, captain John Saris found "a great town, where there lay in a dock a junck of eight or ten hundred tun burden *sheathed all with iron*."

As ambassador from the English Company at the court of Jedo, Saris obtained the following account from a Japanese who had twice visited Yeso: the men (Ainos) "are white and well made, but very rough and hairy all over their bodies:" their "arms consist of a bow and poisoned arrows: those who live on the south side understand weights and measures, but thirty days journey inland they know nothing about them." The Japanese on the island "have no fixed dwelling place or market except Matchma" (Matsmae), where "are five hundred Japanese families who have also a fort:" to this city "almost all the natives go to buy and sell, especially in the month of September to lay in their winter store: in the month of March they bring salmon and all sorts of fish, together with other wares which the Japanese accept in barter" (Sieb. elucid. Vries p. 101).

"In this year" (Winckl., and Spreng.), publication of the Hortus Eystettensis (attributed to Besler), enumerating *Lavatera Thuringiaca* aest. 6. f. 5. 1, *Salvia grandiflora* aest. 8. f. 1, *S. odorata* aest. 8. f. 1. 2, *S. Syriaca* aest. 8. f. 2. 3, *Iris biflora* vern. 8. f. 1. 4, *I. xiphium* aest. 3. f. 10. 1, *Scabiosa Bannatica* aest. 9. f. 9. 3, *S. argentea* aest. 9. f. 10. 3, *Ipomoea discolor* aest. 13. f. 8. 2, *Lysimachia quadrifolia* aest. 10. f. 7. 1, *Lachenaliæ pallida* vern. 2. f. 17. 2, *Ornithogalum pyramidale* vern. 5. f. 14. 2, *Scilla Lusitanica* vern. 2. f. 11, *Cactus melocactus* autumn. 4. f. 1. 1, *Fragaria elatior* vern. 7. f. 8, *Melissa grandiflora* aest. 7. f. 7. 1, *Geranium palustre* vern. 1. f. 9, and *Malva crispa* aest. 6. f. 9. 1. — Besler died "in 1629."

Iris xiphioides of the West Mediterranean countries. Described by Besler eyst. aest. 3. f. 10. 1, — termed "iris xiphium" by Jacquin coll. iii. 320, and known to grow in Spain and Southern France (Pers., and Dietr.). In Britain termed "xiphium latifolium" by Miller, "iris anglica" by gardeners, and escaping from cultivation has maintained itself forty years upon one point of Wales (Dillw., and Wats.), has also become naturalized in a locality in Scotland (G. Don, and A. Dec.).

"1614 A. D." (Stith, Josselyn, and Holmes), arrival at Manhattan of a new governor from Holland, who refused tribute and acknowledgment to the English, assumed a posture of defence, and under a grant from the States General, named the country "New Netherlands." According to Vanderdonck vertoogh 27, the Dutch in this year had "traded at the Fresh river" (Connecticut), and "had also ascended it."

"The same year" (Smith, Purchas, and Holmes), by John Smith, exploration and survey of the coast between the Penobscot and Cape Cod; and a map presented to prince Charles, who named the country "New England."

"In this year" (Major edit. Strach. p. xvi), Sir Thomas Gates succeeded by Sir Thomas Dale, now third governor of Virginia.

"The same year" (Blair), *logarithms*, facilitating arithmetical computation, invented by John Napier of Merchiston.

"The same year" publication of the glossarium Graecobarbarum of Meursius, the earliest glossary of the kind (E. A. Soph.).

"1615 A. D." (Stith, Chalmers, Holmes, and Major p. xvi), landed property first granted to the colonists in Virginia: "fifty acres" to each adventurer, and his heirs.

"June 5th" (Wilmere edit. Champl. p. xxxvii), Champlain, with two Europeans and ten natives, leaving Sault St. Louis by the "Rivière des Prairies" for the Algonquin country. Thence he continued by land to the Lake of the Nipiserini (Nipising) in "45½°," descended a river to the great Lake Attigouantan (Huron), and reached the village of Cahiagué on its shore "Aug. 17th," having "overtaken on the way thirteen or fourteen Frenchmen." After an unsuccessful attack on a stockade as allies of the natives; Champlain returned to Cahiagué on the "23d;" — passed the winter in exploring the country, and leaving on the "20th May," after "forty days journey" reached Sault St. Louis.

"In this year" (Winckler, and Spreng.), L. Jungermann publishing his Flor. Altorf, "written in 1600;" — his Flor. Giess. "in 1623," Cat. hort. Altorf "in 1646," and died "in 1653."

In this year (Spreng. gesch. ii. 98, and Winckl.), Lobel in Britain as court-botanist to James I., enumerating *Agrostis pungens* ill. p. 32, and *Pulmonaria maritima* p. 121. — He died "in 1616," and his Illustr. were published by Howe "in 1655."

"The same year = 52d year of the cycle" (Couplet, and Pauth. 411), in China, first persecution of Christians, including P. Alvarez Semedo; by one of the principal mandarins at Nan-king, named Chin-kio. Of the dispersed converts, many were openly protected by Christian mandarins: — and at the end of "six years," Chin-kio was disgraced.

"The same year" (Crawfurd vii. 11), in the Moluccas, eruption of a volcano on Banda.

"1616, Jan. 25th" (Harris, Churchill coll., and Holmes), by Isaac le Maier and William Cornelison Schouten, an island discovered in "almost fifty-five degrees of south latitude," and named "Staten-land." Sailing through the Strait between this and Terra del Fuego, and passing islands which he named "Barnevelt's," and a cape which he named "Hoorn," Schouten found himself in "fifty-nine degrees twenty-five minutes" and beyond the longitude of the Straits of Magellan. He now changed his course, and in "April," discovered several small islands in about fourteen or fifteen degrees of South Latitude "inhabited by naked people, none of whom come aboard" (Paumotuans), nor could he "come to anchor." Thence sailing West, in "May" he saw many more islands; and inclining Northward to avoid falling South of New Guinea, many more islands were met with, on some of which he landed and procured refreshments. He anchored "July 1st" off the coast of New Guinea; and following this, in "half a degree of south latitude" discovered the small island which has received his own name "Schouten." On reaching Jacatra (Batavia), his vessel was seized; but taking passage with his men in one of the Company's ships, — he reached home; completing in "two years and eighteen days" the Sixth circumnavigation of the Globe.

"Early in this year" (Major p. xvi), Sir Thomas Dale succeeded by Sir George Yeardly, now fourth governor of Virginia. *Tobacco* first cultivated there in this year by the English.

"The same year" (Forster, and Holmes), passing Davis' Straits, Robert Bylot discovered islands in "seventy-two degrees forty-five minutes;" and finding women only there, named them "Women's Islands." Continuing North, he discovered and named Lancaster Sound, Jones Sound, cape Dudley Digges, Wolstenholme Sound, and Whale Sound in 77 deg. 30 min. William Baffin in the same season (. . . Churchill coll., and Anders. ii. 268), continued North to "seventy-eight degrees" to a sound called by him "Thomas Smith's;" where the *compass varied* "fifty-six degrees to the westward," making the true North bear "N. E. by E." — The Northern expanse of water has received the name "Baffin's Bay."

"Oct. 25th" (inscript., in Voyag. Belg.), Australia first visited by a European ship; commanded by Hartoghs or Hartogsrade of Holland. — The *Australians* on the Murray were found by Eyre to have the following account of the origin of the creation, "That there are four individuals living up

among the clouds called Nooreele, a father and his three male children, but there is no mother" (the Hindu system of creation by a Supreme Power with three emanations, Stanley edit. De Morga 307): "the father is all powerful and of benevolent character: he made the earth, trees, etc., gave names to every thing and place, placed the natives in their different districts, telling each tribe that they were to inhabit such and such localities, and were to speak in such and such a language: it is said that he brought the natives originally from some place over the waters to the eastward." Moorhouse found that the natives round Adelaide "believe in a soul or spirit (itpitukutya) separate and distinct altogether from the body, which at death goes to the west, to a large pit, where the souls of all men go."

"The same year" (Chinese chron. table, and Pauth. 410), cities in Northern China captured by the Mantchou or Eastern Tartars; whose chief declared himself emperor, and assumed the name Thian-ming. — The titles "Tai-tsou Kao-hoang-ti of the Tai-thsing," and "Tsing-Tai-tsou," were added by his descendants.

"The same year" (art de verif.), Fide-jori manifesting predilection for Christianity and the Portuguese, attacked by the regent Ijesaz, and driven to the fortress of Osakka; where, according to one account, he destroyed his palace and himself by fire. Ijesaz having now acquired supreme power, commenced the execution of the policy of Fide-josi, and enjoined all foreigners except the Dutch to quit Japan; and soon afterwards, prohibited the Japanese from leaving their own country.

"In this year" (Spreng.), Columna publishing his Ecphrasi, enumerating *Stachys Heraclea* i. 128 to 131, *Teucrium pseudohyssopum* 67, *Veronica montana* 288, "circæa minima" *Circæa alpina* ii. 80, *Fedia echinata* i. 206, *F. coronata* i. 209, *F. dentata* i. 209, *Sherardia erecta* i. 300, *Galium hispidum* i. 297, *Myosotis Apula* i. 185, *Cynoglossum sylvaticum* i. 175, *Androsace Vitaliana* 2. 65, *A. carnea* 2. 65, *Phyteuma orbicularis* i. 224, *Gentiana utriculosa* i. 222, *Hydrocotyle natans* i. 316, *Bupleurum tenuissimum* i. 247, *B. odontites* i. 247, *Daucus muricatus* i. 94, *Tordylium Apulum* i. 124, *Ornithogalum villosum* i. 323, *Chlora sessilifolia* 2. 77, *Scleranthus polycarpos* i. 294, *Saxifraga bryoides* 2. 67, *S. androsacea* 2. 67, *S. bulbifera* i. 317, *Saponaria bellidifolia* i. 153, *Agrimonia agrimonoides* i. 144, *Euphorbia epithymoides* 2. 51, *Ranunculus chaerophyllus* i. 311, *Sempervivum arachnoideum* i. 291, *Rhinanthus elephas* i. 188, *Bartsia trixago* i. 197, *Euphrasia latifolia* i. 202, "anonyma S. Gregorii" 2. 50, *Tozzia alpina* 2. 50, *Clypeola ionthlaspi* i. 284, *Sisymbrium Columnae* i. 268, *Spartium radiatum* i. 294, *Ononis Columnae* i. 301, *Astragalus sesameus* i. 301, *Geropogon hirsutus* i. 231, *Scorzonera hirsuta* i. 233, *Prenanthes viminea* i. 240, *P. hieracifolia* i. 249, *Hypochoeris minima* 2. 27, *Crepis corymbosa* i. 236, *C. scariosa* i. 237, *Tolpis barbata* 2. 27, *Hyoscris foetida* 2. 31, *Carpesium cernuum* i. 252, *Doronicum Columnae* 2. 36, *Centaurea crupina* i. 34, and *Orchis simia* i. 320. — He died "in 1640."

Turgenia latifolia of the Euro-Caspian countries. An annual Umbelliferous weed described by Columna ecphr. i. 97 — (Spreng.), known also to the Bauhins (A. Dec.), termed "c. arvensis echinata latifolia" by Tournefort inst. 323, "caucalis latifolia" by Linnæus, and known to occur in cultivated ground throughout middle Europe (Jacq. hort. pl. 128, Hoffm., and Pers.): in Britain, is first mentioned by Dillenius "in 1724;" was observed by Moris in Sardinia, by Munby in Algeria, by Gussone in Sicily; by Sibthorp, and Fraas, in cultivated ground from the Peloponnesus to Cyprus. To all appearance wild on the mountains of Suwant (Hohen. and C. A. Meyer).

Thlaspi perfoliatum of Europe and the adjoining portion of Asia. Described by Columna ecphr. i. 276 — (Spreng.); termed "t. arvense perfoliatum majus" by Tournefort inst. 212, "erba montanella" by Micheli (Targ.), "t. alpestre" by Hudson, "t. montanum var." by Lamarck fl. fr. (Steud.), and known to occur throughout middle Europe (Jacq. austr. pl. 237, and Pers.); was observed by Sibthorp, and Chaubard, from the Peloponnesus to Cyprus.

Hutchinsia petræa of Europe and the adjoining portion of Asia. A diminutive annual termed "cardamine pusilla saxatilis montana discoides" by Columna ecphr. i. pl. 274, — "nasturtium pumilum vernum" by C. Bauhin pin. 105, and Tournefort inst. 214, and known to grow in stony places, chiefly calcareous, from 59° in Sweden to the Mediterranean (Engl. bot. pl. 111, Jacq. austr. pl. 131, and A. Dec.), also on the mountains of Algeria (Du Rieu): observed by Linnæus in Sweden; by Miquel, in Holland; by Gaudin, in Switzerland; by Brotero, in Portugal; by Boiss., on the Sierra Nevada in Spain; by Moris, on the mountains of Sardinia; by Gussone, on the mountains of Sicily; by Ebel, in Dalmatia; by Baumgarten, in Transylvania; by Sibthorp, and Chaubard, in the Peloponnesus; and by Bieberstein, in the Crimea.

Allium pallens of the Mediterranean countries. Described by Columna ecphr. ii. pl. 7, — termed "a. montanum bicorne flore pallido odoro" by Tournefort inst. 384, and known to grow in Spain, Italy, and Pannonia (Pers.): observed by Gouan ill. 24 in the environs of Montpelier; by Sibthorp, frequent on the Greek islands; by . . . . in Egypt.

Hieracium aurantiacum of middle and Western Europe. Described by Columna ecphr. 2. 30 — (Spreng.), termed "h. fuscum" by Villars (see Steud.), and known to grow in the subalpine woods of middle Europe (Jacq. austr. pl. 410, and Pers.). In Britain, long cultivated for ornament,

but discovered by G. Don escaped from gardens in several localities in Northern Scotland (Engl. bot. pl. 1469), afterwards found in localities in Wales and the North of England, but universally admitted to be exotic (Wats. cyb. ii. 52, and A. Dec.).

Centaurea solstitialis of Austral America? Called in Greece "phalaritha" (Sibth.); termed "spina solstitialis" by Columnæcphr. 1. 31 — (Spreng.), "carduus stellatus luteus foliis cyani" by Tournefort inst. 440, "centaurea sicula" by Leysser (Steud.): observed by Sibthorp, Chaubard, and Fraas, frequent from the Peloponnesus throughout the Greek islands; by Forskal on Malta as well as near Marseilles; and is known to occur in cultivated ground throughout middle Europe (Lam. fl. fr., and Pers.), occasionally making its appearance in the grain-fields of Britain (A. Dec.). By European colonists, was carried to Southeast Australia, where it has become naturalized, occurring far inland (Corder). "C. tomentosa," called "atrogira" at the Dardanelles and Smyrna, and the young shoots eaten, is regarded by Forskal as perhaps not distinct.

"1617 A. D." (art. de verif.), Achmed succeeded by Mustafa, seventeenth Turkish sultan.

"June 17th" (Alst.), Philip III. of Spain having yielded his claim, Ferdinand grandson of the emperor Ferdinand, crowned king of Bohemia. This was regarded by the Bohemians, as interfering with their right of electing a king.

"August" (D. Laing pref. 5), letter from Capt. John Mason "from the plantacion of Cuper's Cove" in Newfoundland to John Scot, in which he expresses the hope to "affoord" a "mapp" of the island "with a particular relacion." — His "Brief discourse of the Newfoundland," written after "three yeares and seuenth monthes residence," was printed in Edinburgh in 1620; and that he spent seven years on the island is stated on the map.

"The common wild herbes" of Newfoundland according to Mason are "angelica." (*Ligusticum actæefolium*), "violets" (*Viola cucullata*, *V. palustris*, and *V. Muhlenbergii*), "mints" (*M. Canadensis*, and *M. aquatica*), "scabius"* "yarrow" (*Achillea millefolium*), "sarsaparilla" (*Aralia nudicaulis*), "with divers other sorts:" of these "we haue only made vse of certain great green leaues plētifully growing in the woods" (*Heracleum lanatum*), "and a great roote growing in fresh water ponds" (*Nymphæa odorata*), "both good against the skiruye; and an other prettie roote with a blew stalke and leaues of the nature of a skirret growing in a dry beachy ground, good meate boyled" (*Ligusticum Scoticum*): "the countrie fruites wild are, cherries small whole groaues of them" (*Cerasus Pennsylvanica*), "filberds good" (*Corylus rostrata*), "damaske roses single very sweet" (*Rosa blanda*), "excellēt straberries" (*Fragaria Virginiana*), "and hartleberries" (*Vaccinium Pennsylvanicum*), "and gooseberries somewhat better than ours" (*Grossularia hirtella*): "also a kind of wild coranies" (*Ribes rubrum?*), "wild pease or feetches" (*Pisum maritimum*): "the North parts most mountanye and woodye very thick of firre trees" (*Abies balsamea*), "spruce" (*Abies nigra*), "pine" (*Strobus vulgaris*), "lereckhout" (*Larix Americana*), "aspe" (*Populus tremuloides*), "hasill" (*Corylus Americana*), "a kinde of stinking wood" (*Acer?*), "the three formest goodly timber:" but "no oakes, ashe, beech, or ellmes, haue we seene or heard of."

Of plants introduced and cultivated, "*wheate*, *rye*, *barlie*, *oates*, and *pease*" have "growen and ripened" as well "as in Yorkshire;" and of garden herbs "*hysope*" (Hyssopus officinalis), "*time*, *parsely*, *clarie*, *nepe*" (Nepeta cataria), "*french mallowes*" (Althæa officinalis), "*buglosse*" (Anchusa officinalis), "collombines" (*Aquilegia vulgaris*), "*wormewood*" (Artemisia absinthium), "etc.: there is at this present of three yeares old of my sowing, likewise *rosemary*, *fenell*, *sweet marierim*, *bassel*, *purselyn*" (Portulaca oleracea), "*lettise*, and all other herbes and rootes, as *torneps*, *pasnepes*, *caretts*, and *radishes* we haue found to growe well there in the sommer season."

"In this year" (Major edit. Strach. p. xvi), Sir George Yeardley succeeded by Captain Argoll, now fifth governor of Virginia.

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* *Erigeron* (*Phalacroloma*) *annuum* of Northeast America. Sometimes called there *sweet scabious* (A. Gray), in which we recognize the "scabius" seen by John Mason in Newfoundland: — P. annuum was observed by Muhlenberg in Pennsylvania (Pers.); by Pursh, "common;" by A. Gray, in "fields and waste places, a very common weed" in central New York; by myself, from 43° to 40° along the Atlantic; by Schweinitz, as far as 36° in Upper Carolina. Eastward, was received from America by Cornuti pl. 194, and termed "bellis ramosa umbellifera:" becoming naturalized, is figured in 1749 by Gmelin ii. 78, from seeds collected in the Ukraine; in 1770 by Oeder fl. Dan. pl 486, found near Altona; but has since become generally distributed throughout Germany, France, and Northern Italy (Pers., and A. Dec.).

Erigeron (*Phalacroloma*) *strigosum* of Northeast America. The leaves more entire and floret-rays invariably white, possibly the "scabius" in question: — observed by Muhlenberg in Pennsylvania; by Pursh, from Canada to Virginia; by A. Gray, "fields, etc., common" in central New York; by myself, from 45° to 40° along the Atlantic; by Schweinitz, as far as 36° in Upper Carolina.

"In this year" (Johns. wond. prov. 8), a remarkable comet, noted throughout Europe and by the natives around Massachusetts Bay; who, "not long before" first saw a ship and spread the alarm in their light canoes "made of birch rindes." The ship brought copper kettles, and readily opened trade with the natives.

"Nov. 12th" (Anders., and Holmes), arrival of Walter Raleigh in Guayana; where he captured a Spanish city, and searched for mines, intending to form a settlement. — In the following year, returning disappointed to England, he was arrested, and on the "29th of October" beheaded: counted (according to Burnet) "a barbarous sacrificing him to the Spaniards." Raleigh and Humphrey Gilbert (see above) are regarded as the founders of the trade and naval power of Britain.

Piratinera Guayanensis of Guayana. Raleigh was accompanied by two Hollanders in search of "*speckled wood;*" called by the natives "paira," — as identified by Schomburgk (edit. Ral.): P. Guayanensis is also described by Aublet.

"1618, May 15th" (Humb. cosm. ii.), demonstration by Kepler, That the squares of the times of revolution of the planets are as the cubes of the mean distances. Kepler also discovered, That the planets move in ellipses, the sun occupying one of the foci.

"June" (Alst.), by the "directors of the kingdom," the Jesuits expelled from Bohemia.

"In this year" (Spreng., and Winckler), Philipp and Albert Menzel publishing their Synon. plant. Ingolst.

Hardly later than this date, Vesling while a youth "cum juvenis" (Spreng.) visiting Egypt, meeting with *Salvia marrubioides* 77: — his account was published in "1638;" and shortly after making a second visit, he died in "1649."

Ipomoea palmata of Equatorial Africa. Called in Egypt "sett el hösch" (Forsk.) or "cherk falek" (Del.); observed there by Vesling pl., and termed "convolvulus Aegyptiacus:" — by Forskal p. 43, and Delile, climbing over trees in gardens, and over reeds along the Nile; by Grant, "common, Nile banks 9° N. etc." Eastward, was observed by Roxburgh frequent in Hindustan, but no native name is given. Transported to Europe, is described by C. Bauhin pin. 295; and is termed "i. tuberculata" by Roemer and Schultes. By European colonists, was carried to the Mauritius Islands, observed by Bojer under cultivation and hardly naturalized (A. Dec.); to Montevideo, Brazil, and Para (Choisy); and to the Hawaiian Islands (Choisy, A. Gray, and Mann).

"In this year" (Major edit. Strach. p. xvii), the administration of Argoll in Virginia causing great dissatisfaction, the captain general Lord de Lawarre was again sent out: but on the way, died in or near the bay which bears his name.

"1619 A. D." (. . . . Stith, and Holmes), a provincial legislature granted to Virginia; enabling the colonists to take part in the government. The first meeting was on "June 19th."

"July" (Relat. du Groenl. 237), under instructions from Christian IV. of Denmark, Captain Munck sailing through Hudson's Strait into Hudson's Sea; where he wintered in "63° 20'." Much suffering was endured from scurvy and want of food; but searching among the snow "they found a kind of strawberry" (*red-snow*, Protococcus nivalis) "which sustained and nourished them after a manner," though withering "a short time after" removal from the snow. — "Apr. 12th," rain fell for the first time in seven months. "July 16th," abandoning the largest of his two vessels, Captain Munck and a few survivors sailed for home; arriving in Norway "Sept. 21st."

"In this year" (Spreng.), plants brought from the "Isle Virgine" described by Io. Robin, including "narcissus virginianus flore albo rubicante" *Amaryllis atamasco* pl. 4, "martagon de Canada" *Lilium superbum* pl. 10. — He published a second edition "in 1620" (introd.).

"Aug. 28th" (Alst. p. 573), Matthias succeeded by the king of Hungary and Bohemia, now Ferdinand II., thirty-fourth emperor of Germany and Italy. "Aug. 29th," by the Bohemians, a new king elected in opposition; soon followed by removing the images from a church in Prague, and open war.

"The same year" (Blair), by William Harvey of England, discovery of the *circulation of the blood*.

"In this year" (Spreng.), Joh. Frank, a friend of C. Bauhin, publishing his Hort. lusat., with Latin, German, and some Wendish names of plants.

"1620 A. D. = 'tai-tchang,' 1st year of Kouang-tsoung II., of the Ming" or Twenty-third dynasty (Chinese chron. table, and Pauth. 414). He reigned "one month" only.

"In this year" (Krusenstern, and Bickmore), the Jesuit Hieronymus de Angelis visiting Yeso and Krafto (Saghalien), being probably the first European who travelled so far through the Japanese empire. In a letter (dated "1622," Sieb. elucid. Vries p. 99) he gives the following particulars respecting Yeso: "as for the appearance of the inhabitants" (Ainos), "they are coarse and of a larger stature than men generally are, more inclining in colour to white than brown; they wear long beards sometimes down to the middle:" instead "of armour they have coats of small planks fastened together, which is ridiculous to look at." The "lord of Matsumay assured me that the inhabitants of Jesso went to three islands not far distant from their country and the inhabitants of which had no

beards and a very different language" (Aleutians) to purchase "raccon" (skins of *sea-otter*, Enhydrys marina): "but he did not know whether those islands were to the South or North of Jesso." — In "1623," Hieronymus de Angelis was burned at Yedo.

"In this year" (Krapf trav.), Ormuz on the Persian Gulf captured from the Portuguese: an event which strengthened the influence of the Arabs of Oman.

"In this year" (Spreng., and Winckl.), C. Bauhin publishing his Prodrom., enumerating *Salix herbacea* 159, *Valeriana tripteris* 86, *V. montana* 87, *Scirpus triqueter* 22, *S.* (*Isolepis*) *fluitans* 23, *Aira caryophyllea* 105, *Festuca? distachya* 19 *Sesleria echinata* 16, *Poa compressa* 2, *P. bulbosa* 6, *Dactylis littoralis* 2, *Triticum rigidum* 17, *Festuca pinnata* 18, *Globularia spinosa* 121, *Asperula Pyrenaica* 146, *Asperula laevigata* 145, *Galium pusillum* 145, *G. glaucum* 145, *G. Bauhini* 146, *Alchemilla pentaphylla* 138, *Potamogeton setaceus* 101, *Lysimachia linum-stellatum* 107, *Campanula stylosa* 35, *C. caespitosa* 34, *C. barbata* 36, *Lobelia urens* 53, *Erythraea spicata* 130, *Rhamnus alpinus* 160, *Ribes alpinum* 160, *Herniaria alpina* 160, *Velezia rigida* 103, *Astrantia minor* 97, *Bupleurum stellatum* 129, *B. petraeum* 129, *B. angulosum* 129, *B. ranunculoides* 129, *Heracleum angustifolium* 83, *H. Austriacum* 83, *Scandix pinnatifida* 78, *Rhus glabra* 158, *Statice cordata* 99, *S. minuta* 99, *Linum Narbonense* 107, *Sedum rubens* 132, *Luzula albida* 16, *Rumex vesicarius* 54, *R. Tingitanus* 56, *Oxyria digyna* 55, *Daphne thymelea* 160, *Elatine alsinastrum* 24, *Monotropa hypopitys* 31, *Saxifraga petraea* 131, *Dianthus sylvestris* 104, *D. suffruticosus* 104, *Arenaria tetraquetra* 105, *A. juniperina* 105, *Sedum atratum* 132, *Cerastium latifolium* 104, *C. tomentosum* 104, *Euphorbia rubra* 133, *Potentilla intermedia* 139, *Papaver alpinum* 93, *P. Cambricum* 92, *Aquilegia viscosa* 75, *A. alpina* 75, *Nigella Hispanica* 75, *N. Orientalis* 75, *Anemone vernalis* 94, *Isopyrum aquilegioides* 75, *Stachys Cretica* 113, *S. arvensis* 111, *Scutellaria alpina* 116, *Linaria repens* 106, *L. arvensis* 107, *L. origanifolia* 106, *L. Dalmatica* 106, *L. linifolia* 106, *Myagrum perenne* 37, *Draba stellata* 51, *Thlaspi hirtum* 47, *Alyssum montanum* 49, *Cardamine resedifolia* 45, *C. parviflora* 44, *Sisymbrium asperum* 41, *Arabis arenosa* 40, *Erysimum hieracifolium* 102, *Cheiranthus trilobus* 103, *Arabis Halleri* 46, *Lavatera trimestris* 132, *Genista Hispanica* 157, *Orobus luteus* 149, *Hedysarum caput-galli* 149, *Astragalus incanus* 149, *A. exscapus* 147, *Trifolium Cherleri* 143, *T. saxatile* 140, *T. scabrum* 140, *T. spumosum* 140, *Lotus diffusus* 144, *Medicago orbicularis* 130, *H. nummularium* 130, *Sonchus maritimus* 61, *S. tenerrimus* 61, *Hieracium praealtum* 67, *H. chondrilloides* 64, *H. grandiflorum* 65, *H. glutinosum* 63, *Crepis foetida* 68, *Andryala cheiranthifolia* 61, *Hyoseris radiata* 62, *Conyza saxatilis* 123, *Senecio linifolius* 107, *Cineraria cordifolia* 69, *Inula provincialis* 69, *Chrysanthemum atratum* 120, *C. Halleri* 120, *Anthemis mixta* 121, *A. altissima* 70, *Achillea macrophylla* 39, *Centaurea alpina* 56, *C. pectinata* 128, *C. cineraria* 128, *C. sonchifolia* 128, *Aceras alpinum* 29, *Chara hispida* 25, *Carex Baldensis* 13, *C. ornithopoda* 9, *Salix retusa* 159, *Neckera pennata* 151, *Trichostomum ericoides* 151, *Mnium roseum* 151, *Fucus bulbosus* 154, *F. saccharinus* 154, *F. palmatus* 155, *F. filum* 155, *Padina pavonia* 155, "gramen junceum folio articuloso cum utriculis" 12 *Juncus sylvaticus*.

Clematis angustifolia of the Uralian plains. An erect species described by C. Bauhin prodr. 135 — (Spreng.): observed by Jacquin rar. pl. 104 in Austria; by Messerschmid 1274 in Siberia (Amman stirp. 108); by Pallas iv. 316 to 701, as far as Daouria.

Thalictrum angustifolium of Europe and the adjoining portion of Asia. Described by C. Bauhin prodr. 146 — (Spreng.); termed "t. pratense angustissimo folio" by Tournefort inst. 271; observed by Sibthorp on the Bithynian Olympus; by Crantz, in Austria; known to grow also in Germany and France (Pers.), and within fifty years between the completion of the Doubs canal and "1822," made its appearance in the environs of Montbelliard (Bern., and A. Dec.).

Sagina nodosa of Subarctic climates. Described by C. Bauhin prodr. 118 — (Spreng.); termed "stellaria nodosa" by Scopoli, "spergula nodosa" by Linnæus (Steud.); and known to grow in marshes and on the seashore from Lapland and Northern Asia to Denmark, Ireland, and Switzerland (fl. Dan. pl. 96, Pers., and Wats.). Westward, was observed by Hooker on Iceland, and received from the Arctic shore at the mouth of Mackenzie river; was observed by Oakes and Robbins along the Atlantic as far South as 43° on the Isle of Shoals; and was received by A. Gray from the "shore of Lake Superior."

Silene rupestris of Northern Europe and mountains farther South. Described by C. Bauhin prodr. 104* — (Spreng.), and termed "lychnis glabra minima, aut caryophyllæi minima species flore

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* *Cornus Canadensis* of Subarctic America. The *dwarf cornel* or *pigeon-berry* is a low woodland herb, transported to Europe. Described by C. Bauhin prodr. 101 — (Spreng.), and termed "solanum quadrifolium bacciferum" in pin. 167 (Linn.). Westward, was received by Collins from Labrador; was observed by Lapylaie in Newfoundland; by Josselyn pl. 80, in New England; by myself, frequent from 48° on the Lower St. Lawrence to 42°; by Torrey, as far as 41° on the Hudson; by Drummond, at Fort Cumberland in 54°; and according to Hooker grows nearly to the Arctic Sea,

albo" in pin. iii. 360, "l. saxatilis alpina glabra pumila" by Tournefort inst. 338; known to grow in Lapland and on the mountains of middle Europe (fl. Dan. pl. 4, and Pers.): observed by Celsius, and Linnæus, in Lapland and on the mountains of Sweden; by Sibthorp, on the mountains of Greece.

Geranium pusillum of Europe? Termed "g. columbinum tenuius laciniatum" by C. Bauhin prodr. 138 — (Linn. sp.); observed by Scopoli 847 in Carniolia, — by Cavanilles iv. pl. 83, in Spain; and known to occur in waste places and cultivated ground throughout middle Europe (Ray angl. iii. 16. f. 2, and Pers.). By European colonists was carried to Northeast America, occurring according to A. Gray in "waste places, New York."

Convolvulus tricolor of Peru? Described by C. Bauhin prodr. 134 — (Spreng.), Morison i. pl. 4, and Linnæus; and further attributed by Persoon to "Africa, Mauritania, Spain, and Italy."

Ipomæa coptica of the Tropical border of the Sahara from Senegal to Hindustan. From transported specimens, described by C. Bauhin prodr. 134 — (Spreng.), Linnæus, and Roth. In its wild state, known to grow in Senegal and Nubia (A. Dec.); and farther East, observed in Hindustan by Roxburgh, and by Graham "in the open glades about Kandalla, creeping among the grass." I. coptica is further attributed by A. Decandolle with a mark of doubt to Cuba; and if really occurring there, has of course been introduced through European colonists.

Sibbaldia procumbens of the Arctic region and mountain-summits farther South. Described by C. Bauhin prodr. 139 — (Spreng.), and Sibbald ii. pl. 6: observed by Gmelin on the mountains around Lake Baikal: — by Bieberstein, on Caucasus; and known to grow in Finland, Lapland, and from Scandinavia to the Faröe Islands and the mountains of Scotland (Ledeb.); also on the Pyrenees (A. Dec.), the Sierra Nevada at the elevation of "9500 feet," and on the Swiss Alps (Koch) Westward, was received by Hooker from the Rocky mountains, and by Ledebour from Unalashka; but I have not met with evidence of its existence on the mountains of New England.

Zannichellia palustris of Temperate climates. An aquatic termed "potamogeton capillaceum capitulis ad alas trifidis" by C. Bauhin prodr. 101, — "Z. p. major foliis gramineis acutis" by Micheli pl. 84, and known to grow from Lapland and Russia to the Mediterranean (Ray angl. iii. 135, Engl. bot. pl. 1844, Pers., and Wats.): observed by Linnæus in Lapland and Sweden, in rivers and ditches; by Decandolle, in France; by Gussone, in Sicily; by Munby, in Algeria; by Sibthorp, in the environs of Constantinople; by . . . . in Egypt (Kunth); by Bieberstein, along the Taurian mountains. Westward, has been received from Virginia (Pers., and Pursh); by Hooker fl. ii. 170, from Oregon; according to A. Gray, grows in New England (A. Dec.) in "ponds and slow streams, rather rare;" and according to Chapman, in "West Florida." In the Southern Hemisphere, was observed by Cl. Gay in Chili; by J. D. Hooker, in New Zealand.

Narcissus dubius of the Mediterranean countries. Described by C. Bauhin prodr. 27 — (Spreng.), and Rudbeck ii. pl. 51 (Pers.); observed by Gouan ill. 22 in the environs of Montpelier; by Gittard, in the Peloponnesus.

"In or about this year" (Markham edit. p. viii), Pachacuti-yamqui Salcamayhua, a native, writing on the Antiquities of Peru.

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also on the Columbia river as far as the Northwest Coast; was received by Decandolle from Unalashka. The berries are abundant, and though insipid are sometimes eaten.

Uvularia perfoliata of Northeast America. Smilaceous and resembling the herb called "Solomon's seal," transported to Europe and termed "polygonatum perfoliatum" by C. Bauhin prodr. 136 — (Spreng.), "polygonatum ramosum flore luteo minus" by Cornuti pl. 41 as received from "Nova Francia;" described also by Morison xiii. pl. 4. Westward, was observed by Pursh from Canada to Carolina; by myself, from 45° to 40° along the Atlantic; by Schweinitz, at 36° in Upper Carolina; by Elliot, rare in Lower Carolina; by Chapman, in "Florida, and northward;" and by Short, in Kentucky.

Trillium erectum of Northeast America. With flowers and ovary mostly dark-purple. Transported to Europe, is described by C. Bauhin prodr. 91 — (Spreng.), and Cornuti pl. 167. Westward, observed by Cleghorn in Canada (Hook.); by myself, from 48° on the Lower St. Lawrence to 40° along the Atlantic, a woodland plant; by Pursh, from Pennsylvania to Carolina; by Elliot, on the Alleghanies of Carolina; by Chapman, "on the mountains of North Carolina, and northward;" and by Short, in Kentucky. Its rhizoma according to Lindley is "violently emetic."

Adiantum pedatum of Northeast America. The *Canada maiden-hair* transported to Europe, described by C. Bauhin prodr. 150 — (Spreng.), and termed "adiantum americanum" by Cornuti pl. 6. Westward, "maiden-hair" ordinarily "half a yard in height," was seen by Josselyn rar. 55 in New England: A. pedatum, by Lapylaie from 51° in Newfoundland; by myself, from 44° to 40° along the Atlantic; by Croom, near Newbern; by Chapman, in "North Carolina, and northward;" by Nuttall, on the Mississippi; and by Drummond, as far as 53° on the Rocky mountains.

"In the beginning of this year" (N. Shaw edit. Champl. p. xlviii), the duke of Montmorency made viceroy of New France, "from Florida along the seacoast to the Arctic circle; to the west, from Newfoundland to the Great Lake called the Freshwater Sea" (Lake Superior). Champlain was appointed his lieutenant, to proceed to the new colony and have entire control (letter from the king "May 7th").

"The same year" (Smith, Chalm., and Holmes), freedom granted to the colonial commerce of Virginia: and a Dutch ship arriving, sold "twenty *negroes*," being the first imported into Virginia. The Dutch West India company chartered in this year; and the island of Margarita seized, and from this time chiefly abandoned by its Spanish inhabitants.

"Nov. 11th" (Bradf., and Holmes), under a pledge from king James "Not to molest them," arrival at Cape Cod of "one hundred" Brownists or Puritan reformers, in the ship Mayflower. Finding themselves contrary to their wishes in "Lat. 42°," beyond the chartered limits of South Virginia, and therefore under no government; an agreement was signed before landing, and John Carver elected governor for one year. On "Wednesday the 15th," a party on shore under Miles Standish "saw five or six persons with a *dogg*." A few days afterwards, a party in the shalop "found more of their *corne* and of their *beans* of various collours" (Phaseolus vulgaris). "Before the close of November" (Holmes), birth of Peregrine White; the first child of European parentage born in New England. — He died in 1704, in his "eighty-fourth year" (Prince chron.).

"Dec. 9th" (Churchill coll. ii.), *eclipse of the moon*. Observed in Anam or Cochinchina by Borri; of the party of missionaries who first entered that country.

"Dec. 23d, Saturday" (Churchill coll., and Holmes), after searching the bay beyond Cape Cod, and selecting a harbour, many of the colonists went on shore to remain permanently; and commenced a settlement, which they called "New Plimouth." — The "twenty-second day of December, new style, corresponding to the eleventh, old style" (Holmes), has long been observed as the anniversary of the Landing.

"The same year" (Spreng.), by H. and Z. Jansen in Holland, *microscopes* invented and first manufactured.

"1621 A. D. = 'thian-ki,' 1st year of Hi-tsoung-tchi-ti, Tchi-ti," or Hi-tsoung, "of the Ming" or Twenty-third dynasty (Chinese chron. table, and Pauth.). Hi-tsoung invited Portuguese soldiers from Macao, to aid him against the Mantchous; but through the jealousy of merchants, was persuaded to order a return (Semedo, and Pauth. 414).

"In this year" (Klapr. mém. i. 323), Japanese establishing themselves on the Northern coast of Formosa.

"In this year" (Stirling, and W. W. Hunter), prince Shah Jahan, rebelling against his father the emperor Jahangir, takes possession of Orissa and Bardwan.

"March 16th" (Holmes), the colonists at Plymouth visited by Samoset, a native who had learned broken English from fishermen. Means of communication were now obtained; and through him, Squanto a native who had been forcibly carried to England, and Hobomack a third friendly native, a treaty was entered into with Masasoit, the most influential chief among the surrounding tribes. "Great store of wild *turkies*" were found in the woods (Bradf.). "June 18th," a *duel* between two servants; who were condemned to lying twenty-four hours the head and feet tied together. "Sept. 13th," visit of nine sachems, who voluntarily subscribed an instrument of submission to king James; partly, it would appear, through fears of the Canadian French. "Nov. 11th," arrival of Robert Cushman with "thirty-five" additional colonists; bringing a charter, procured by friends at home.* — The treaty of friendship with Masasoit and the natives continued inviolate more than fifty years, until 1675.

"The same year" (Purchas, and Holmes), a school for the natives founded in Virginia, endowed with a tract of land, and connected with the college at Henrico. And in England, the policy of favouring colonial over foreign importations, adopted.

"The same year" (Alst. p. 561), by the emperor Ferdinand II., the Protestants banished from "Bohemia, Moravia, Austria, Silesia, and Lusatia." In France (Blair), commencement of civil war against the Protestants: — the war continued seven years, until the capture of Rochelle by Louis XIII.

"In this year" (Linn. fl. suec. p. vii), academic dissertation by J. L. Starchii, the first Swede who wrote on plants; treating them however only in a general way.

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* *Juniperus prostrata* of Subarctic America. The *ground juniper* is clearly the "junipere" of Plymouth Colony mentioned in W. Morell's poem, — and "juniper" of New England described by Josselyn 49 as "very dwarfish and shrubby:" J. prostrata is described by Michaux (Pers.); was observed by myself from 45° to 42° along the Atlantic; by Nuttall, from Lake Huron to Fort Mandan on the Upper Missouri; by Drummond, from the Saskatchewan to 53° on the Rocky mountains; and by Mertens, to 57° on the Pacific at Norfolk Sound.

"In the night of Sept. 12th and 13th, the moon being one day old" (Relat. du Groenl. 207), a remarkable display of the *aurora borealis* in France, observed and described by Gassendi (vit. Peresc. and ex. Flud).

"1622, Sept. 16th" (Alst. p. 585, and Blair), Heidelberg on the Upper Rhine captured by the emperor Ferdinand II., and its Library sent to Rome.

"In this year" (title-page), publication in London of "A briefe relation of the discovery and plantation of New England . : . from 1607 to this present 1622:" enumerating among the products "oake" (*Q. alba*), "firre" (*Abies balsamea*), "masts for ships of all burdens" (*Strobus strobus*), "pitch" (*Pinus rigida*), "walnut" (*Juglans cinerea*), "chestnut" (*Castanea Americana*), "elme" (*Ulmus Americana*), "plum-trees" (*Prunus Americana*), "vines of three kindes and those pleasant to the taste yet some better than other" (*Vitis cordifolia, V. labrusca*, and *V. æstivalis*), "hempe" (*Apocynum cannabinum*), "flax" (*Linum Virginianum*), and "silkgrasse" (*Eriophorum Virginicum*).

"1623, January" (Churchill coll., and Holmes), a settlement commenced by the English on St. Christopher; and one by the French on the same day at the other end of the island, being their first settlement in the West Indies. The settlers were soon driven out of the island by the Spaniards:—but afterwards returned; the French in small numbers, the more enterprising preferring to form settlements on Guadalupe and Martinico.

"The same year" (Holmes, see also Bradford), after long trading with the natives, the Dutch commenced settlements; and at the mouth of the Hudson, built a town which they called "New Amsterdam" (New York). They further established fortified trading-posts; "Fort Orange," a hundred and fifty miles up the Hudson; and "Fort Nassau," on the East side of Delaware Bay.

"The same year" (Hubbard, and Holmes), under patents from England, settlements commenced and a house built within the mouth of the Pascataqua river.—The origin of the State of New Hampshire.

"July 13th," under a charter from king James, a ship sent by Sir William Alexander encour. col. 35 entering Luke's Bay in Nova Scotia. On landing, "meadowes" were met with "hauing roses white and red" (*Rosa blanda* and *R. lucida*) growing "with a kind of wilde lilly which had a daintie smel" (*Lilium Canadense?*), and on ground without wood between the two rivers "goose-beries" (*Grossularia cynosbati*), "strawberies" (*Fragaria Virginiana*), "hind-beries" (*Rubus Occidentalis?*), "rasberies" (*Rubus strigosus*), "and a kind of red wine-berie" (*Vaccinium vitis-Idaea*), also "some eares of wheate" (*Triticum repens?*) "barly" (*Hordeum jubatum?*) and "rie" (*Elymus Virginicus?*) "growing there wilde," and along the coast "pease" (*Pisum maritimum*) "good to eate but did taste of the fitch:" the country for twelve leagues along to Port Negro found full of woods, "the most part oake" (*Quercus rubra?*), the rest "firre" (*Strobus strobus*), "spruce" (*Abies nigra*), "birch" (*Betula papyracea*), "with some sicamores" (*Acer saccharinum*) "and ashes" (*Fraxinus sambucifolia*), "and many other sorts" they had not seen before.

"In this year" (Spreng., and Winckl.), C. Bauhin publishing his Pinax and writing his Theatr., enumerating *Scirpus* (*Isolepis*) *aciculares* theatr. 183, "gramen typhoides spica angustiore" theatr. 53, *Alopecurus agrestis*, *Pollinia gryllus* theatr. 149, *Chrysurus echinatus* theatr. 59, *Aira flexuosa* theatr. 14, *Bromus velutinus* theatr. 143, "gramen caninum arvense" theatr. 9, *Agropyrum repens*, *Pulmonaria suffruticosa* pin. 521, *Linum viscosum* pin. 214, *Tradescantia Virginica* pin. 516, *Aster alpinus* ad Matth. 818, *Rhododendron Lapponicum* pin. 468, *Juncus filiformis* pin. 12, and *Cardamine bellidifolia* pin. 105, *Carex flava* 7, "cannabis virginiana" 320, *Acnida cannabina*.—He died "in 1624," and the first portion of his Theatr. was published by his son "in 1658."

Lathyrus palustris of Subarctic climates. Termed "l. peregrinus foliis viciæ flore subcæruleo pallideve purpurascente" by C. Bauhin pin. 344,—and known to grow in marshes from Lapland throughout middle Europe (fl. Dan. pl. 399, Engl. bot. pl. 169, and Pers.), also in Northern Asia (Wats.): was observed by Linnæus in Lapland and Sweden; by Brotero, in Extramadura in Portugal; by Savi, in Etruria. Westward, by Michaux in Northern Canada; by myself, along the Atlantic as far as 42°, only on the border of salt marshes; but according to Hooker, grows throughout Canada to the Saskatchewan and along the Northwest coast as far South as 48°.

Spiræa hypericifolia of the Uralian plains. An ornamental shrub described by C. Bauhin pin. 517—(Spreng.), seen by Barrelier in Spain (Camb.), by Thunberg in Japan. In its wild state, observed by Pallas trav. from 53° on the Lower Volga; known to grow also on Caucasus (Dec. prodr.). By European colonists was carried to Northeast America, where it continues frequent in gardens (A. Gray).

Leersia oryzoides of Northeast America. A subaquatic grass known perhaps to C. Bauhin*—

* *Blitum capitatum* of North America. Called in Britain *blite* (Prior) or *strawberry-spinage*, in France "blette" (Nugent): described by C. Bauhin ad Matth. 365—(Spreng.), Knorr del. hort. i. pl. E. 3, and Linnæus hort. cliff. 1; termed "morocarpus capitatus" by Scopoli (Steud.); and known to

(though not in his herbarium), and from at least 1705 occurring along streams from Paris throughout middle Europe (Linn., Mieg, Schreb. vi. pl. 22, Web., Spreng., and A. Dec.): termed "homalocenchrus oryzoides" by Pollich (Steud.), and observed by Savi in Etruria; by Delile, in Lower Egypt; known to occur also in Persia (Kunth); and Japan (Thunb.). Westward, observed by myself from 48° on the Lower St. Lawrence to 42°; by Conrad to 40°; by A. Gray, "common" in central New York; by Michaux, from Pennsylvania to Carolina and Kentucky; by Elliot, to 33° in South Carolina; by Chapman, in "Florida, and northward;" by Nuttall, on the Arkansas; and by Beck, on the Mississippi near St. Louis.

Phleum pratense of Northeast America. The *herds-grass* or *timothy* said by Prior to have been introduced by Timothy Hanson from New York "into Carolina, and thence into England;" termed "*gramen typhoides maximum*" by C. Bauhin theatr. 49 — (Spreng.); and attributed to Europe by Linnæus, Schreber pl. 14, and Leers pl. 3; known to occur in meads and cultivated ground from Lapland to Switzerland and North Africa (Pers., and Wats.), and according to Kunth as far as Caucasus and Siberia: Westward, was observed by Hooker in Iceland; by Drummond, in 54° at Fort Cumberland; by myself, from 45° to 42° in wild situations in New England, often within the margin of the forest, but besides regularly cultivated. Var. "nodosum" is termed "gramen spicatum spica cylindracea brevi radice nodosa" by Tournefort inst. 520, is known to occur from Denmark (fl. Dan. pl. 380) throughout middle Europe, and according to Bieberstein in the Tauro-Caucasian countries, was observed by Sibthorp, and Chaubard, around Constantinople, by Hooker in Iceland, and by myself in wild situations in New England. (See Leersia oryzoides and Cornus Canadensis.)

Carex ampullacea of Europe and the adjoining portion of Asia. Termed "gramen cyperoides quartum" by C. Bauhin theatr. 84 — (Spreng.), "cyperoides polystachion spicis teretibus erectis" by Tournefort inst. 529; known to grow in marshes from Lapland and Russia throughout middle Europe, also in Siberia (Engl. bot. pl. 780, Leers pl. 16, Pers., and Wats.): observed by Hooker in Iceland; by Thuillier 490, in the environs of Paris; by Sibthorp, in watery places in the Peloponnesus.

Burserus collected plants throughout Europe, labelled them with the names adopted by his associate and friend C. Bauhin, — and this *herbarium* continued extant at Upsal in the days of Linnæus. The unnamed plants in the Collection were published by Petrus Martin "in 1724" (Linn. fl. suec. p. xi).

"In this year" (Spreng.), Vespasian Robin, successor of his father in the charge of the Royal garden at Paris, publishing his Enchirid. isagog.*

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occur in the Tyrol, Switzerland (Pers.), and other parts of middle Europe. Westward, was observed by myself in cultivated ground in New England; but by A. Gray, indigenous, and in "dry rich ground common from W. New York to Lake Superior and northward."

Solidago limonifolia of the seashore of Northeast America. The *seaside golden-rod* described by C. Bauhin pin. 517 — (Spreng.): observed by myself from 43° to 39° along the seashore especially in salt marshes, rarely exceeding four feet, and the stems more or less oblique; by Pursh, in salt marshes, Canada to Virginia; by Elliot, near salt water in South Carolina; by Chapman, "salt marshes, Florida, and northward;" and by Nuttall, on the Azores.

Rudbeckia laciniata of Northeast America. A *cone flower*, transported to Europe is termed "doronicum americanum" by C. Bauhin pin. 516 — (Spreng.), seems the "aconitum helianthemum Canadense" of Cornuti pl. 179, and is clearly described by Morison vi. pl. 6, Miller, and Linnæus (Pers.). Westward, is known to grow from Lake Huron to the Red river of Lake Winnipeg; was observed by Nuttall towards the sources of the Missouri; by Short, in Kentucky; by Pursh, from Canada to Virginia; by myself, from 44° to 42° along the Atlantic; by W. Barton, to 40°; by Schweinitz, at 36° in Upper Carolina; by Elliot, in the Western district of Georgia.

Ipomoea (Pharbitis) purpurea of the Andes from Mexico to the Equator. Transported to Europe, is described by C. Bauhin pin. 295, — Ehret pict. pl. 7 (Linn.); and escaping from cultivation, has been found growing spontaneously near Saint-Barnabè in France (Castagne, and A. Dec.). Westward, came from America (Pers.); and was observed by Humboldt and Bonpland from the city of Mexico to Chillo near Quito, at the elevation of 1200 to 1350 toises (Kunth). Transported to Northeast America, is one of the two kinds of *morning-glory* planted in gardens, occurs besides "around dwellings, escaping from cultivation" (A. Gray).

* *Robinia viscosa* of the Alleghany mountains. The *clammy locust*, a small tree introduced by Vespasian Robin into the gardens of Paris as early as this year, — the "acacia Americana Robini" having according to Cornuti pl. 172 erect racemes of flowers, and pods "ex omni parte echinatis:" R. viscosa as planted in European gardens, is described also by Duhamel ii. pl. 17, and Ventenat pl. 4. Westward, is known to grow wild on the Alleghanies from about 36° 30′ to their Southern termination. (F. A. Mx., Ell., A. Gray, and Chapm.).

Smilacina stellata of Northeast America. Transported "from Virginia" to Vespasian Robin in

Ampelopsis quinquefolia of Northeast America. The *five-leaved creeper* transported to Europe and cultivated at Paris more than five years before — the account by Cornuti pl. 100 of the "edera quinquefolia Canadensis:" cultivated more generally throughout Europe for ornamenting walls, it has in some localities become naturalized (A. Dec.): was observed by Forskal at Constantinople. Westward, was received by Hooker from Lake Huron; was observed by Michaux from Canada to Virginia; by myself, wild in the forest from 45° to 38° along the Atlantic; by Elliot, in South Carolina; by Baldwin, on Bermuda and to 31° in Florida; by Bartram, to 28°; and by E. James, along the Arkansas.

"The same year" (Lubke and Lutrow), at Madura in Southern Hindustan, commencement of the great hall of the Tschultri of the temple.

"The same year" (art de verif.), Mustafa succeeded by Amurath IV. or Murad IV., eighteenth Turkish sultan. Coins of Murad IV. issued at Cairo, are figured in Marcel p. 215.

"1624 A. D. = 4th year of the 'thian-ki' of Hi-tsoung, and 9th year of Thian-ming," Mantchou ruler of Northern China (Chinese chron. table). To this time (as described by P. Alvarez Semedo), the Chinese wore their hair: but Liao-toung being recaptured by the Mantchous, an edict was issued, compelling the inhabitants to shave the head after the manner of the Mantchous. — The edict was afterwards extended to the whole of China, and the Mantchou fashion becoming universal, has continued so to the present day.

"The same year" (Prince, Hubbard, and Holmes), a settlement commenced on Cape Ann, and a fishing-stage set up there for the Plymouth settlers.

"In this year" (C. Francis biogr. Ell.), publication in London of "Good newes from New-England" by Edward Winslow.

"Aug. 26th" (Rymer, and Holmes), the Virginia charter having been annulled, a new commission for the government, issued by king James: the governor and council to be appointed during the king's pleasure; and no assembly was mentioned, nor allowed.

"In this year" (A. Dec. g. b. 627), Marc. Zuer. Boxhorn publishing his "Origines gallicae." It contains the "Botanologium" of John Davies, in which about a thousand plants are enumerated under their Welsh and Latin names.

"In this year" (title-page), Sir Wm. Alexander publishing his Encouragement to colonies. From information collected, he describes Port Royal in Nova Scotia as having "land fit to be laboured lying betweene" the meadows overflowed by the tide and "the woods, which doe compasse all about with very faire trees of sundry sorts, as oakes" (*Quercus rubra?*), "ash" (*Fraxinus sambucifolia*), "playnes" (*Acer saccharinum*), "maple" (*Acer rubrum*), "beech" (*Fagus ferruginea*), "birch" (*Betula papyracea*), "cypresse" (*Thuya Occidentalis*), "pine" (*Strobus Americanus*), "and firre" (*Abies balsamea*).

"1625, March 27th" (Nicol. p. 340, Alsted p. 587 giving "26th"), James succeeded by his son Charles, second king of United Britain, and a Catholic.

"May 13th" (Chalmers, and Holmes), proclamation of king Charles; placing Virginia under the immediate direction of the crown, and ordering all patents and processes to issue in his own name. Fears now began to prevail, Lest the English ecclesiastical government should be extended over the colonies (Bradf.).

"The same year" (Smith, Dougl., and Holmes), Roger Conant in removing from Nantasket to Cape Ann, found a place called Naumkeak, which he judged suitable for a settlement, and sent notice to his friends in England.

Paris, — and termed "polygonatum spicatum" by Cornuti pl. 32 and 34, and "Virginian's Salomon's seale" by T. Johnson (edit. Gerarde 905); described also by Morison xv. pl. 4, and Stapel. Westward, the "Virginia Salomon's seal" was seen by Josselyn 45 in New England: S. stellata, by Michaux in Canada; by myself, from 47° 30′ on the Lower St. Lawrence to 42° along the Atlantic; by Torrey, to 41° on the Hudson; by Pursh, from Canada to the Alleghanies of Virginia; by Nuttall, from Lake Erie to the Arkansas, the Missouri as far as the Mandans, and the sources of the Columbia.

Bignonia (*Tecoma*) *radicans* of Northeast America. The *trumpet-flower*, a procumbent woody vine climbing by rootlets, transported to Europe and Paris as early as this date, — as appears from the account of the "gelseminum ederaceum" by Cornuti pl. 103; described also by Morison , continues under cultivation for ornament; and according to Graham has been recently introduced into the gardens of Hindustan. Westward, was observed by myself wild in openings and on the margin of the forest from 40° to 38° along the Atlantic; by Catesby i. pl. 65, and Elliot, in South Carolina; by N. A. Ware, in Florida; by Chapman, "Florida to North Carolina, and westward;" by Nuttall, and E. James, on the Arkansas; and by Beck, on the Mississippi near St. Louis.

"In this year" (title-page), in a compilation published at Edinburgh, entitled "Encouragements," and in which North American productions are enumerated, mention is made of dyes, "for blew the herbe woad" (*Baptisia tinctoria*).

"The same year" (Maunder), first permanent settlement of the English on Barbadoes.

"In this year" (Spreng.), Tobias Aldini publishing his Plant. rar. hort. Farnes., enumerating *Helleborus lividus*.

"1626, February" (Henault, and Holmes), by the English Commons, a bill passed for the freedom of fishing along the American coast. The bill not being returned from the House of lords; the commons vindicated its authority by refusing to grant a second subsidy, and was dissolved. Now commenced the quarrels between king Charles and parliament; the latter perceiving that he wished to absorb power and render himself independent.

"The same year" (Blair), League against the emperor Ferdinand II., of the Protestant princes of Germany, the Dutch, and Gustavus Adolphus king of Sweden.

"1627 A. D. = 1st year of Thian-tsoung," Mantchou ruler of Northern China (Chinese chron. table).

"January" (N. Shaw edit. Champl. p. lxii), on the St. Lawrence, death of Hebert, according to Champlain "the first head of a family who lived by what he cultivated."

"March" (Morton, and Holmes), letters of friendship received at Plymouth from the Dutch settlers of New Netherlands.

"September" (Alst.), treaty of peace between the emperor Ferdinand II. and the Turks.

At this time (Spreng., and Winckler), Georg Fuiren writing. — He died "in 1628."

"The same year" (Maunder), Jahangir succeeded by his son Shah Jehan, now emperor of Hindustan. — In whose reign, the Seiks, "a new set of religionists," silently "established themselves along the eastern mountains."

"1628 A. D. = 'tsoung-tching,' 1st year of Hoai-tsoung-ming-ti" or Hoai-tsoung, "of the Ming" or Twenty-third dynasty (Chinese chron. table). In the reign of Hoai-tsoung (official documents quoted by P. Martin Martini, and Pauth. p. 424), China contained "10,728,787 families, and 58,917,683 males."

"September" (Alst. p. 561 and 591), end of the chronicle of Alsted.

"Sept. 6th" (Bradf., Holmes, and Felt, archæol. Amer. p. 8), arrival of John Endecott, bringing a charter for the separate colony of Massachusetts: extending from three miles North of the Merrimack to three miles South of Charles river, and within these limits to the Pacific. Endecott established himself at Naumkeak, founding there the second important town in New England; Plymouth being the first. — "For Salem was the next of any fame, That began to augment New England's name" (poem ascribed to governor Bradford).

Before the close of the year (Prince, and Holmes), by general consent of the New England colonists, Thomas Morton seized, and sent to England: For persisting in selling fire-arms to the natives.

"1629, March 4th" (Blair), nine members of the Commons of England imprisoned for their speeches by king Charles. "The same day" (Holmes), the Massachusetts charter confirmed by king Charles, under the name "The governor and company of the Massachusetts Bay:" to have perpetual succession, and annually elect out of their own number a governor, deputy governor, and eighteen assistants; and to make laws not repugnant to the laws of England.

"April 30th" (Holmes), the above officers of the Massachusetts Company having been elected, a meeting at London, and a form of government for the new colony adopted: to be administered by a Council of the colonists themselves, including John Endecott as governor. "Aug. 29th" (Holmes), several persons "of considerable importance" having resolved to remove to Massachusetts "for the unmolested enjoyment of their religion," and unwilling to be governed by laws made without their consent; an agreement for the transfer of the charter, so that the corporate powers should be executed in New England. In accordance with this arrangement, John Winthrop was elected governor of the Company, to proceed to New England.

"June" (Chalmers i. 142, Holmes, and Higgeson, hist. coll. i. p. 120), arrival of about "two hundred" colonists at Naumkeak or Salem: where they found only governor Endecott and "eight hovels;" the whole colony containing at this time but "one hundred planters."

"The same year" (N. E. prosp. i. 10), arrival of William Wood in New England. Residing it would seem, principally in Plymouth colony, he met with: an ash, "different from the ash of England, being brittle and good for little" (*Fraxinus pubescens*) i. 6; "ever-trembling asps" (*Populus tremuloides*); the "red oake" (*Quercus rubra*); and a third kind, the "blacke" (*Quercus tinctoria*).*

* *Quercus tinctoria* of Northeast America. The *black* or *quercitron oak*, a large tree, clearly the "blacke oake" seen by W. Wood in Eastern Massachusetts: — observed by myself from Lat. 44° throughout New England; by A. Gray, "common" in central New York; by Bartram, in Pennsyl-

"In planted gardens and in woods, sweete marjoram" (*Origanum vulgare?*), "sorell" (*Rumex acetosella*), "penerial, yarrow" (*Achillea millefolium*), "myrtle," were met with by W. Wood i. 5. He further mentions: "hempe" (*Cannabis sativa*) "and flaxe" (*Linum usitatissimum*) "some planted by the English, with rapes;" besides "*turneps, parsnips, carrots, radishes, muskmillions, cucumbers, onyons;*" also *wheat*, and good crops of "*rie, oates*, and *barley*."

The natives tattooed figures of "bears, deer, hawks, etc.," on their "cheeks;" were more grieved "to see an English man take one deere, than a thousand acres of land;" wove "coats of turkie feathers;" built "forts of young timber trees, rammed into the ground" (palisades); in cooking, boiled or roasted, and abandoning the "earthen pots of their owne making," used "brasse" kettles "which they traded for with the French long since." They were exposed to attacks from the "Mowhacks:" who wore "sea horse skinnes, and barkes of trees, made by their art as impenitrable," and who "beate them downe with their right hand tamahaukes, and left hand iavelins, being all the weapons which they use." — At the end of "four years," on the "15th of August 1633," W. Wood i. 10 and ii. 1 to 17, sailed for England.

"July 19th" (Wilmere edit. Champl. p. lxxxii, Holmes), Quebec surrendered by Champlain to a British fleet under the command of David Kertk, a French Protestant; but in place of removing as had been stipulated to France, most of the colonists preferred to remain behind; and it was soon ascertained that peace had been declared "two months" previously. — Champlain returned to Quebec as governor of the colony in "June 1633," bringing with him "a reinforcement of Jesuits," and died "towards the end of 1635." The editor adds, "But for him Quebec would probably have never existed."

"The same year" (Churchill coll.), Francis Pelsart of Holland on his way to India, wrecked on "rocks near some small islands not inhabited and having no fresh water, in upwards of thirty-eight

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vania; by Muhlenberg, and Pursh, from New England to Georgia; by Elliot, in the upper district of Carolina; by Short, near Lexington in Kentucky; by Darby 44, on the Washita; by Nuttall, on the Arkansas; and by Long's Expedition ii. 215, on the Mississippi as far as 43°. Its thick yellow inner bark prepared for dyeing and chiefly exported from Philadelphia.

Nabalus albus of Northeast America. Called *rattlesnake-root* (A. Gray), in Virginia *Dr. Witt's snake-root* (Clayt.), and clearly the "root caled snake weede" mentioned by W. Wood i. 11 as an antidote to the bite of the rattlesnake; — also the "root of an herb called snake-weed, to bite on" within "a quarter of an houre" by "the partie stinged," according to Higgeson (hist. coll. i. 122); the "snakeweed" always carried about by Gov. Winthrop "in summer-time" (diary); the plant is figured by Josselyn rar. pl. 77; and the "radix snaqroel nothæ Angliæ" used against the bite of a serpent that otherwise kills within "twelve hours," reported to Cornuti p. 214: Dr. Witt's "rattlesnake-root" of Virginia, as appears from Clayton, and Pursh, belongs here: N. albus according to Hooker grows from Newfoundland to Quebec and Lake Huron; has been observed by myself from 45° to 40° along the Atlantic; by Pursh, from New England to Carolina; by Schweinitz, at 36° in Upper Carolina; by Chapman, "in the upper districts of Georgia, and northward." (See N. albus, and Hieracium venosum.)

Hedeoma pulegioides of Northeast America. The *American pennyroyal*, named from resemblance in smell and taste (Tuckerm.), clearly the "peneriall" seen by W. Wood i. 5, — and Higgeson, in Eastern Massachusetts, and "upright peniroyal" of Josselyn rar. 44: H. pulegioides, an annual growing in open situations and multiplying in clearings, has been observed by myself from 45° on Mount Desert and in Northern New York to 40° along the Atlantic; by Pursh, from Canada to Carolina; by Schweinitz, at 36° in Upper Carolina; and by Short, in Kentucky.

Smilacina racemosa of Northeast America. Sometimes called *false spikenard* (A. Gray); clearly the "treackleberries" seen by W. Wood i. 5 in Eastern Massachusetts, — and the third kind of "Salomon's seal" called according to Josselyn 45 "treacleberries, having the perfect taste of treacle when they are ripe, and will keep good a long while, certainly a very wholesome berry, and medicinal" (J. L. Russell in Hovey's mag. 1858): S. racemosa was observed by Michaux in Canada and on the Alleghanies of Carolina; by myself, from 45° to 40° along the Atlantic; by Schweinitz, at 36° in Upper Carolina; by Beck, on the Mississippi near St. Louis; and by Nuttall, on the Arkansas. Transported to Europe, is described by Cornuti pl. 37, and Morison xiii. pl. 4.

Smilax glauca of Northeast America. Possibly the "saxifarilla" seen by W. Wood in Eastern Massachusetts: — observed by myself from 42° near Plymouth to 38° near Washington, the leaves edible; by Torrey, from 41° on the Hudson; by Walter, and Elliot, in South Carolina; by Chapman, "Florida, and northward;" by Nuttall, on the Arkansas; and was received by A. Gray from "Kentucky." Transported to Europe, is the "S. sarsaparilla of Linnæus in part" (Pers., Steud., and A. Gray. See Aralia nudicaulis).

degrees of south latitude" (. . . .). After building a deck to the long-boat, the party put to sea and "soon discovered the continent," on "June 8th." In "twenty-four degrees of south latitude" on the "14th," six men "swimming ashore, saw four savages quite naked, who fled" (*Australians*). Continuing along the coast Northward and Eastward, the boat safely arrived among the East India islands.

"In this year" (Spreng.), Parkinson publishing his Parad., enumerating *Canna lutea* 376, *Narcissus laetus* 94. n. 9, *N. viridiflorus* 93. f. 6, *Colchicum Byzantinum* 155. f. 2, *Geranium striatum* 227. n. 7, *Medicago scutellata* 337. n. 5.

Allium triquetrum of the Mediterranean countries. Described by Parkinson parad. 143 f. 6 — (Spreng.), and Rudbeck elys. ii. pl. 159; termed "a. caule triangulo" by Tournefort inst. 385; and known to grow in Spain, about Narbonne (Pers.): observed by Desfontaines i. 288 in Algeria; by Tenore, in Italy; by Sibthorp, in the environs of Rome; and by Gittard, in the Peloponnesus (Chaub.).

Colchicum variegatum of the East Mediterranean countries. A species of *meadow-saffron* called in Greece "spassōhōrtōn" (Sibth.); from transported specimens described by Parkinson parad. pl. 155 as having "leaves for the most part three," "lying close upon the ground," and termed by him "C. fritillaricum Chiense;" — by Tournefort inst. 349, "C. flore fritillariæ instar tesselato:" observed by Sibthorp, and Chaubard, on Helicon, Parnassus, and other mountains of Greece.

"Towards 1630" (art de verif.), Ijesaz succeeded by his son or grandson Fidé-tada, now emperor of Japan. He continued the policy of persecuting Christians and excluding foreigners, the Dutch excepted.

"1630 A. D." (art de verif.), abdication of Kouotei in favour of his daughter Niote or Siote, now dairo of Japan.

After passing the winter of 1629–30 at Salem (hist. coll. i. 121), Higgeson found "divers excellent pot-herbs" growing "among the grasse, as strawberrie leaves in all places," and "pennyroyal, wintersaverie, sorrell, brookelime, liverwort, carvell, and watercresses;" * also "good ash" (*Fraxinus*

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* *Lobelia cardinalis* of Northeast America. The *cardinal-flower*, transported to Europe, described by Parkinson parad. 355, — Jungermann (Spreng.), Miller, and Linnæus. Westward, is known to grow from the Saskatchewan throughout Canada (Hook.); was observed by Pursh from Canada to Carolina; by myself, on marshy margins of streams from 45° to 39° along the Atlantic; by Elliot, in South Carolina; by Baldwin, at 31°; by Bartram, to 30°; by Chapman, "Florida to Mississippi;" by Short, near Lexington in Kentucky.

Asclepias Cornuti of Northeast America. The *milkweed* transported to Europe described by Parkinson parad. 443. n. 2 — (Spreng.), termed "apocynum maius" by Cornuti pl. 90: pods "used to stuff pillows and cushions" were sent from Connecticut by John Winthrop the younger in 1670 (phil. trans. Lond., and arch. Am. iv. 124); and the living plant has become naturalized in France, Corsica, and Dalmatia (A. Dec.). Westward, is known to grow throughout Canada to the Saskatchewan; was observed by myself from 46° 30′ on the St. Lawrence to 40° along the Atlantic; by Croom, as far as Newbern; by Short, in Kentucky; and by Michaux, in Illinois (Pers.).

Cardamine Pennsylvanica of North America. The *American water-cress*, the flowers small and uniformly white, clearly the "watercresses" seen by Higgeson near Salem: — observed by myself frequent around Salem and from 44° to 39° along the Atlantic; by Muhlenberg, and Pursh, from New York to Pennsylvania; by Elliot, in South Carolina; by Baldwin, as far as 30° in Florida; by Chapman, in "wet soil, Florida and northward;" and according to Hooker, grows as far as the Arctic Sea and Columbia river.

Rubus odoratus of Northeast America. Called in New England *mulberry* (C. P.) or *flowering mulberry* (J. Robins.), and doubtless the "mulberries" seen by Higgeson around Salem: — the "raspberry, here called mulberry" was seen by Josselyn rar. 48 in New England: R. odoratus is known to grow from the Saskatchewan throughout Canada (Hook.); was observed by Michaux in Canada and on the Alleghany mountains; by myself, from 45° to the vicinity of Salem; by W. Barton, to 40° near Philadelphia; by McEuen, near Ithaca in central New York; by Short, in Kentucky; by Elliot, on the Alleghanies of South Carolina; and by Chapman, "on the mountains of Georgia." Transported to Europe, is termed "rubus odoratus" by Cornuti pl. 150; and continues under cultivation for ornament.

Osmorhiza longistylis of Northeast America. The *American sweet cicely*, probably the "carvell" seen by Higgeson near Salem; — observed by myself in a rocky precipitous place in the suburb called "Paradise," possibly the spot where it was seen by Higgeson: by Torrey, near Albany on the Hudson (Dec.); by Conrad, near Philadelphia; by Short, in Kentucky; by Beck, on the Mississippi; by Nuttall, on the Arkansas; and according to Hooker, grows throughout Canada to the Saskatchewan and Northwest America.

Apocynum cannabinum of Northeast America. A species of *American dogbane*, probably one

Americana); and "up and downe in the woods," among other fruits, "walnuts" (*Juglans cinerea*), and "smalnuts" (*Carya glabra*). The natives "generally professe to like well of our coming and planting here; partly because there is abundance of ground that they cannot possesse nor make use of; and partly because our being here will bee a meanes of relief to them when they want, and also a defence from their enemies." They "will come into our houses" sometimes "half a score at a time, when we are at victuals, but will ask or take nothing but what we give them." We "neither fear them nor trust them:" but "use them kindly:" and "purpose to learn their language." Their "haire is generally blacke, and cut before," and "one locke longer than the rest, much like to our gentlemen, which fashion" (wearing the *queue*) "I thinke came from hence into England."

In addition to plants already mentioned as introduced by the colonists into New England, Higgeson states, That the governor had "green *pease* growing in his garden."

"In this year also" (Poole introd. Wond. Prov. xxii), publication of White's "Planter's Plea;" a work on New England.

"July 6th" (Prince, and Holmes), arrival in Massachusetts Bay of John Winthrop, governor of

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of the "two kinds of flowers very sweet, which they say are good to make cordage," observed by Higgeson near Salem: — but not known to grow nearer than Middleton Lake, where it was pointed out to me by Mr. Oakes.

Quercus bicolor of Northeast America. The *swamp white-oak*, probably the fourth sort of "oke" seen by Higgeson around Salem: — the frame-timbers of a house erected in 1652, recorded as of "swamp white oak," continue sound, and Q. bicolor has been observed by myself in the immediate vicinity of Salem; by F. A. Michaux, from Lake Champlain and 43° on the Atlantic to Lake Ontario and the Western States; by Darlington, to 40° near West Chester, Penns.; by Schweinitz, and Nuttall, at 36° in Upper Carolina; and by Nuttall, and Pitcher, on the Arkansas.

Veronica Americana of North America. Closely resembling V. beccabunga, but given as distinct; clearly the "brookelime" seen by Higgeson near Salem; — observed by myself in the outlet of Mineral-spring Lake, possibly where it was seen by Higgeson: by Pursh, from Pennsylvania to Virginia; and by Conrad, near Philadelphia; and according to Hooker grows throughout Canada to Fort Norway. (Compare V. beccabunga.)

Pycnanthemum muticum of Northeast America. An aromatic Labiate, perhaps the "wintersaverie" seen by Higgeson around Salem: — the specimen marked "satureja virginica" in the Linnæan herbarium, is referred here with some doubt by Bentham: P. muticum has been observed by myself from 42° 30′ in the environs of Salem; and according to A. Gray, grows from "Maine to Ohio, Kentucky, and southward;" was observed by Drummond at 40° near West Chester, and on the Mississippi near St. Louis (Benth.); by Michaux, in Upper Carolina (Pers.), and by Schweinitz at 36°; by Chapman, "Florida to Mississippi, and northward;" by Short, in Kentucky; by Nuttall, on the Arkansas.

Pycnanthemum lanceolatum of Northeast America. Possibly the "wintersaverie" seen by Higgeson near Salem: — observed by myself from 45° in Northern New York to and beyond Salem; by A. Gray, "common" in central New York; by Torrey, as far as 41° on the Hudson; by Michaux, on the mountains of Pennsylvania and Upper Carolina (Pers., and Benth.); and by Short, in Kentucky.

Salix cordata of Northeast America. Arborescent, with lanceolate leaves heart-shaped at the base only, possibly the "willow" seen by Higgeson around Salem, and its wood commended: — observed there by myself, and from 47° 30′ on the Lower St. Lawrence to 40° along the Atlantic; by Muhlenberg, in Pennsylvania; by Pursh, from New York to Virginia; by J. Carey, and A. Gray, on "inundated banks of rivers, and low meadows, common," becoming "a small tree six to fifteen feet high."

Salix lucida of Northeast America. Arborescent, with shining foliage, possibly the "willow" whose wood is commended by Higgeson: — observed by myself from 47° 30′ on the Lower St. Lawrence to the vicinity of Salem; by Torrey, to 41° on the Hudson; by Muhlenberg, in Pennsylvania; by F. A. Michaux, in the Northern and Middle States; by Pursh, from New York to Virginia; by J. Carey, and A. Gray, on "overflowed banks of streams, rather common," "sometimes becoming a small bushy tree of twelve to fifteen feet."

Salix discolor of Northeast America. Arborescent, with leaves glaucous beneath, possibly the "willow" seen by Higgeson: — observed by myself from 47° 30′ on the Lower St. Lawrence to the vicinity of Salem; by W. Barton, as far as 40°; by Collins, in Northern New York; by Muhlenberg, in New York and Pennsylvania; by Pursh, from New England to Carolina (Ell.); by J. Carey, and A. Gray, "low meadows and river-banks, common, a large shrub or small tree, eight to fifteen feet high."

the Company, and now of the colony. Proceeding to the head of the Bay, he landed at Mishawum or Charlestown, together with "about fifteen hundred" colonists brought in the fleet. Shawmut across the river, being a peninsula where *wolves* could be fenced out (W. Wood), several persons settled there: the governor with most of the assistants followed before the close of the year, and the name was changed to "Boston." Thomas Morton had returned to New England: but "Nov. 24th," a proclamation by king Charles, forbidding disorderly trading with the natives, and especially supplying them with fire-arms.

"The same year" (Chalm., and Holmes), by Robert Heath, attorney general of king Charles, a grant obtained of the region South of Virginia "from the thirty-sixth degree" of Latitude, under the name "Carolana." — Heath however appears "to have made no settlement;" and in 1663, his patent was declared to have become void.

"1631, March 19th" (Trumbull, and Holmes), a grant of that part of New England extending from Narragansét river one hundred and twenty miles on a straight line along the coast, and Westward to the Pacific, after confirmation by king Charles, made over to viscount Say and Seal and his associates: being the original charter for Connecticut. — A governor was sent over in 1635.

"The same year" (Chalmers, and Holmes), George Calvert Lord Baltimore, visiting the Chesapeake and finding that the Virginians had formed no settlements North of the Potomac, obtained on application to king Charles a charter for Maryland: but died before the formalities could be completed. — The charter was issued in the following year to his son Cecilius Calvert.

"Sept. 3d" (Churchill coll. ii.), discovery by Thomas James of the Southern prolongation of Hudson's Bay. Sailing to its termination, he wintered there in "lat. 52° 3′:" the prolongation has received the name of "James' Bay."

"1632, March 17th" (Chalmers, and Holmes), treaty of St. Germain, by which the English conquests and claims on Acadie, New France, and Canada, were ceded to Louis XIII. of France. — The source of a long train of colonial difficulties.

"In this year" (Johns. wond. prov. 26), the colonists on Charles river in want of food, but found some relief in "wild onions" (*Allium Canadense*) and other herbs.*

"June 14th" (M. Russell p. 291), proclamation of Socinios restoring to the Abyssinians their ancient faith, also abdicating in favour of his son Facilidas. The Catholic missionaries were now banished and excluded from Abyssinia; an abuna consecrated at Alexandria being already on his way, to resume the ecclesiastical government.

At this time, "1631 to 1637" (Lubke and Lutrow), in Hindustan, building of the Jamna mosque at Delhi.

"1633, Jan. 17th" (Chalm., and Holmes), pursuant to the treaty of St. Germain, the trading house of the Plymouth colonists at Penobscot seized and plundered by the French. Forts were now hastened and commenced at Boston and Nantasket; and the planting of Agawam (Ipswich) was also hastened, lest the French should get possession. "October," the frame of a house taken in a vessel up the Connecticut river, notwithstanding menaces from a Dutch fort, and set up about a mile beyond: being the first house erected in Connecticut.

"Feb. 21st" (Hubbard, and Holmes), by the English government alarmed at the increase of emigration, an Order of the council, to stay several ships in the Thames.

"In this year" (Spreng., and Winckler), after his Itin. Cant. "in 1632," Thomas Johnston publishing his edition of Gerarde.† — He published his Mercur. bot. from "1634-41," and died "in 1647."

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* *Antholyza Æthiopica* of Austral Africa. Transported to Europe, first flowered in this year at Paris — (Cornuti pl. 79); described also by Linnæus, and Andrews repos. pl. 210. Known to grow wild in Austral Africa (Thunb. prodr. p. 7, and Pers.). By European colonists, recently introduced by the way of the Cape of Good Hope into Hindustan (Graham).

Amaryllis falcata of Austral Africa. Transported to Europe, cultivated at this time at Paris, — and named "narcissus pumilus polyanthos" by Cornuti pl. 154; described also by Linnæus, Jacquin hort. iii. pl. 60, L'Heritier sert. 13, and Ker. Known to grow wild in Austral Africa (Thunb., and Pers.).

Hypoxis stellata of Austral Africa. Transported to Paris about this time, — according to Cornuti pl. 165, and named by him "sisyrnchium Robini;" described also by Miller, Linnæus, Jacquin rar. ii. pl. 368, and Andrews pl. 101. Known to grow wild in Austral Africa (Thunb., and Pers.).

† *Pelargonium triste* of Austral Africa. Transported to Europe, termed "geranium triste" by T. Johnston (Ger. emend.), — described also by Cornuti pl. 110 and p. 122, Linnæus, and Cavanilles iv. pl. 107. Known to grow wild in Austral Africa, its tuberous roots said to be eaten by the natives. The flowers odorous at night (Pers.).

"In this year" (title-page, and iii. 22), De Laet publishing his Nov. Orb., having received from the Hudson river *Polygonum sagittatum*, and *P. arifolium* iii. 10. pl. — The date "1635" occurs in the French edition xvi. 2, issued "in 1640."

Advent in Plymouth colony of the seventeen-years locust, *Cicada septemdecim*, witnessed in this year by Bradford p. 198. The insect is peculiar to Northeast America, and is remarkable for its longevity; known to extend throughout the whole intervening seventeen years.

One hundred and seventy-eighth generation. May 1st, 1634, onward mostly beyond youth: the Chinese historians Fou-y-tchang, and Kou-yng-tai (Pauth. 400): the Jewish writers, Manasseh ben Israel; Zacutus Lusitanus; Chajjim Benevniste: the Greek writers, Agapius of Crete d. after 1643, Andreas Troilus d. 1647: Riccioli; Fabri de Peiresc; Caspar Barthius; Henry Spelman; cardinal Bentivoglio; Gerard John Vossius; Ericius Puteanus; Quevedo; Grotius; archbishop Usher; Gabriel Naudé; John Selden; Descartes; Famianus Strada; Petavius; Voiture; Balzac; Chillingworth; Salmasius; Paul Scarron; Henry Hammond; Samuel Bochart; Blaise Pascal: the botanists, Balthas. and Mich. Campius, Joseph Bonfiglioli, Petrus Carrera d. 1647, Ovid. Montalbanus, Io. Ant. Bumaldi, Thomas Brown, Kenelm Digby d. 1665, Levinus Fischer, Ioach. Jungius d. 1657, P. Dionys. Vellia, Bartholomæus Ambrosinius d. 1657, Io. Bapt. Ferrarius d. 1655, Petr. Castellus, Io. Royerus, Adolph. Vorstius d. 1663, Io. Chemnitz d. 1651, Sim. Paulus d. 1680, Petrus Firens and Dan. Rabel, Antonius Vallot and Dionysius Joncquet d. 1671, Otho Sperlingius d. 1681, Thomas Pancovius d. 1665: the painters, Guido Reni d. 1642, Rubens d. 1640, Vandyck d. 1641, Nicholas Poussin d. 1665, Adrian Brower or Brauwer d. 1640, Diego Velasquez de Silva d. 1660, Dominico Zampieri called Domenichino d. 1641: the architect Inigo Jones.

"The same year" (Chalmers, Hubbard, and Holmes), Roger Williams, a clergyman of Salem, holding tenets regarded as heretical and seditious, "tending equally to sap the foundation of the establishment in church and state," and being found irreclaimable, banished from Massachusetts. In Boston, select men first chosen to manage the town affairs; a market established; a house of entertainment set up; and the first merchant's shop opened.

"The same year" (relat. Jes. i.), letter from Quebec of the jesuit Paul le Jeune, enumerating among the animals of the surrounding country "orignaux" (Cervus Canadensis; *moose*), "caribous" or "asnes sauvages" (*Cervus rangiferinus*), "blereaux" (*Gulo luscus*), "siffleurs ou rossignols" an animal "plus gros qu'un lieure" (*Arctomys Marilandica*), and three species of "ecurieux" (*Sciurus cinereus*, *S. rufus*, and *Tamias striatus*).

"In this year" (Klapr. mem. i. 324), by permission of the Japanese, Fort Zelandia built by the Dutch at the entrance of the harbour of Thay ouan in Formosa. — The Japanese soon afterwards abandoned the island and all their foreign possessions.

"In this year" (Stirling, and W. W. Hunter), a firman granted by the emperor Shah Jahan, allowing the English to trade with their ships in Bengal. But Azim Khan, governor of Orissa, Behar, and Bengal, restricted them to the single port of Pippli, where they built their first factory.

"1635 A. D." (univ. hist., and Holmes), landing of French colonists under M. Bretigny on Cayenne Island and the adjacent continent.

"The same year" (Winthrop i. 162, archæol. Amer. iv. 229), sailing from Massachusetts Bay of "Mr. Graves in the James, and Mr. Hodges in the Rebecka, for the" outlying "Isle of Sable for sea-horse, which are there in great number." — In 1642, John Webb "with his company," sailed for the Isle of Sables "with commission from the Bay to get sea-horse teeth and oyle" (Lechford, hist. coll. iii. 3d ser. p. 100). And even in the days of Josselyn voyag. p. 106 and rar. p. 97, "*morse*, or sea-horse" (Trichecus rosmarus), "smooth-skinned, and impenetrable," having "tushes as white as ivory," continued "frequent at the Isle of Sables."

"About this year" (narrat., and Murdoch hist. Nov. Scot. i. 130 to 536), Denys, one of the companions of Razilly "in 1632," remaining or again visiting Nova Scotia: — "in 1636" he was appointed "governor in the bay of St. Lawrence and isles adjacent:" he founded Miramichi in the "Bay des Chaleurs;" published his account of the country "in 1672," and was living at Miramichi "in 1690."

"In this year" (Spreng.), Cornuti publishing his Plant. Canadens., enumerating of North American plants, "filix baccifera" (*Cystoperis bulbifera*) pl. 4; * "origanum fistulosum Canadense" (*Monarda fistulosa*) pl. 14; "eruca maxima Canadensis" (. . . .) pl. 17; "valeriana urticæfolia

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* *Archangelica atropurpurea* of Canada. The *great angelica* transported to Europe is termed "angelica atropurpurea Canadensis" by Cornuti pl. 199, — described also by Linnæus. Westward, "wild angelica, majoris" was seen by Josselyn rar. 45 in New England: and A. atropurpurea has been observed by myself from 45° to 42° in Eastern and Western Massachusetts; by Darlington, as far as 40° near West Chester; by Michaux, in Canada; by Pursh, from Canada to the Alleghanies of

flore albo" of Canada (*Eupatorium ageratoides*) pl. 21; "verbena urticæfolia flore violaceo" of Canada (*Verbena hastata?*) pl. 23; "polygonatum ramosum flore luteo majus" (*Uvularia grandiflora*) pl. 39; "hedysarum triphyllum Canadense" (*Desmodium Canadense*) pl. 45; "fumaria siliquosa sempervirens" (*Corydalis glauca*) pl. 58; "fumaria tuberosa insipida" (*Dielytra Canadensis*) pl. 126; "aster luteus alatus" of North America (*Helenium autumnale*) pl. 63. "asteriscus latifolius autumnalis" (*Aster cordifolius*) pl. 65; "aconitum baccis niveis et rubris" (*Actæa Americana*) pl. 77; "apocynon minus rectum Canadense" (*Asclepias incarnata*) pl. 93; "trifolium asphaltion Canadense" (. ∴ .) pl. 131; "pimpinella maxima Canadensis" (*Sanguisorba Canadensis*) pl. 174; "cerefolium latifolium Canadense," esculent, and perishing in the third year (. . . .) pl. 177; "thalictrum Canadense" (*T. Cornuti*) pl. 187; "eupatoria foliis enulæ" (*Eupatorium purpureum*) pl. 191; "calceolus Marianus Canadensis" (*Cypripedium spectabile*) pl. 205; and "herbatum Canadensium, sive panaces moschatum" (. . . .) p. 212; *Plantago cucullata* 163, *Smilacina racemosa* 37, *Scutellaria peregrina* 129.

Crambe Hispanica of the West Mediterranean countries. An annual received by Cornuti pl. 148 from Spain and termed "rapistrum maximum monospermum," — described also by Morison iii. pl. 13; known to grow in maritime situations in Spain (Dec. syst), also on Sardinia (Moris), Sicily (Guss.), and observed by Chaubard among rubbish at Modon and Pylos in the Peloponnesus: received by Achille Richard from Gabdia in Tigre in Northeastern Abyssinia (A. Dec.).

"In this year" (inscript., and Krapf trav.), Francisco de Xeixas de Cabreira appointed to the command of the fortress at Mombasa. "He reduced into submission" the coast of Malindi, and "made the kings of Tondo, Mandra, Lazieva, and Jaca, tributaries:" — "visited Paté and Sio with a punishment never before witnessed in India, levelling the walls thereof to the ground:" "imposed a fine on the Muzungulos, and punished Pemba and its rebel people, killing the petty king:" and at the end of four years rebuilt the fortress.

"1636 A. D. = 1st year of Tsoung-te," Mantchou ruler of Northern China (Chinese chron. table, and Pauth. p. 417). *Suspension bridges*, some of iron, in use in China and Thibet; such structures being as yet unknown in Europe (Pauth. 234).

"In this year" (Spreng.), after the death of Michael Boym, Jesuit missionary in China, publication of his Flor. Sinens.

"In this year" (Relat. du Groenl. 227), by the Greenland Company of Copenhagen, two vessels sent "to that part of New Greenland which is on the coast of" Davis' Gulf. While trading with the natives, a *sea-unicorn* (Monoceros unicornu) was observed on the "grass" (Zostera) which "the tide had left dry," these animals it was said allowing themselves to be temporarily stranded: it was immediately attacked by a crowd of natives, killed, and its "horn" sold to the Danes.

"The same year" (Hutchinson, and Holmes), Roger Williams finding himself excluded from both Massachusetts and Plymouth Colonies, and land being offered by Narragansèt chiefs, commenced a settlement with several of his friends at Mooshausick; changing the name to "Providence." — The beginning of the fourth important town in New England, and of the separate State of Rhode Island.

"The same year" (Hubbard, and Holmes), a murder by aboriginals of Block Island, who sought refuge among the Pequots: giving rise to the first serious war against a native Tribe. — The Pequots were in the following year broken up and dispersed.

"In this year" (Stirling, and W. W. Hunter), a daughter of the emperor Shah Jahan healed by surgeon Gabriel Boughton. As a reward, the English were allowed to trade in Bengal and Orissa free of all duties.

Virginia; and according to A. Gray, grows from "New England to Pennsylvania, Wisconsin, and northward," a "popular aromatic."

Angelica lucida of Northeast America. Transported to Europe is termed "angelica lucida Canadensis" by Cornuti pl. 197, — described also by Morison ix. pl. 3, and Jacquin hort. iii. pl. 24: Westward, was received by Muhlenberg from Carolina and the Cherokee country, and according to Pursh grows in Pennsylvania. The "thaspium actæifolium" of Nuttall, or *nondo*, observed by Short in Kentucky, and growing according to A. Gray in "rich woods, Virginia, Kentucky, and southward along the mountains," may be compared.

Solidago sempervirens of Northeast America. A tall *golden-rod*, transported to Europe termed by Cornuti pl. 169, "solidago maxima Americana" three to four cubits high, its stem smooth and somewhat purplish; described also by Morison vii. pl. 23, and Plukenet alm. pl. 235, the leaves according to Linnæus "subcarnosis tota hyeme persistentibus" (Pers.). Westward, observed by Michaux in Canada and New York (Pers.); by Pursh, from Canada to Pennsylvania; by A. Gray, sometimes "eight feet" high, in "less brackish swamps, with thinner and elongated linear-lanceolate leaves;" by Elliot, in South Carolina; by Baldwin, as far as 30° in Florida.

Smilax Zeylanica of Tropical Eastern Asia. Called in the environs of Bombay "gootee wail" (Graham), in Burmah "ku-ku" (Mason); and among the natives as early perhaps as this year substituted for sarsaparilla: — observed by Rheede vii. pl. 31 in Malabar; by Graham, in both "Deccan and Concans;" by Roxburgh, in Eastern Hindustan; by Mason v. 501, in "jungles" in Burmah, "used by the natives as a medecine, to supply the place of a species of sarsaparilla, whose dried roots are sold in the bazars;" the "china Amboinensis" of Rumphius v. pl. 161 is also referred here by writers.

"1637, April" (Hazard coll. i. 421, and Holmes), proclamation by king Charles, prohibiting emigration, unless under a certificate of having "taken the oaths of supremacy and allegiance, and conformed to the discipline of the Church of England."

"In this year" (Spreng., and Winckl.), Wilhelm Piso, in an Expedition under Maurice of Nassau, arriving in Brazil, meeting with *Costus spicatus* 214, *Thalia geniculata* 224, *Piper caudatum* 197, *P. peltatum* 197, *P. rugosum* 216, *Xyris Americana* 238, *Cyperus Surinamensis* 238, *Kyllinga odorata* 231, *Dichromena ciliata* 238, *Spermacoce linifolia* 199, *Callicocca Mutisii* 231, *Physalis pubescens* 223, *Solanum Bahamense* 182, *S. paniculatum* 181, *S. macrocarpon* 210, *Sabicea cinerea* 184, *Plumbago scandens* 200, *Genipa Americana* 138, *Atropa arborescens* 224, *Philoxerus vermicularis* 243, *Hydrocotyle umbellata* 260, *Bromelia acanga* 293, *B. humilis* 192, *B. bracteata* 194, *Paullinia pinnata* 250, *Gomphia jabotapita* 166, "paionariba" 185 *Cassia longisiliqua*, *C. sericea* 185, *Guarea trichilioides* 170, *Malpighia faginea* 169, "caapongo" 243 *Portulaca halimoides*, *P. pilosa* 244, *Psidium aromaticum* 15, *Plinia crocea* 187, *Cereus flagelliformis* 189, *C. Royeni* 189, *C. triangularis* 190, *Opuntia Curassavica* 190, *Pereskia portulacifolia* 191, *Lecythis parviflora* 137, "ianipaba" 138 *Acioa dulcis*, *Nymphaea odorata* 219, *Apeiba tibourbou* 123, *Bignonia chrysantha* 148, *B. alba* 164, *B. orbiculata* 165, *Jacaranda Braziliensis* 165, *Tanaecium jaroba* 173, "murucuia" 247 *Passiflora filamentosa*, *P. angustifolia* 247, *P. maliformis* 248, *Melochia pyramidata* 222, *Gustavia augusta* 172, *Gossypium vitifolium* 186, *Geoffraea spinosa* 174, *Hedysarum supinum* 201, *Vernonia scabra* 176, *Eupatorium ivaefolium* 217, *E. odoratum* 218, *Aristolochia ringens* 260, "aninga" 220 *Arum lingulatum*, *Caladium arborescens* 220, *C. bicolor* 237, *Janipha Loeflingii* 179, *Urtica baccifera* 235, *Cucumis anguinus* 262, *C. anguria* 263, *Dioscorea sativa* 255, "pindova" *Canarium decumanum*, *Licualia spinosa* 126, *Carica spinosa* 160, *Morus? tinctoria* 163, *Feuillea cordifolia* 259, *Cecropia palmata* 147, and *Cissampelos caapeba* 261, *Cnidoscolus stimulosa* 79. f. 2. — He was joined by Marcgraf in the following year: the Expedition returned "in 1641;" Marcgraf died "in 1644," and the Hist. Nat. Bras. was published by Joan de Laet "in 1648;" Piso published a second edition "in 1658," and Maurice died "in 1679."

Vismia guttifera of Eastern Equatorial America. A bush about ten feet high, observed by Piso and Marcgraf 96. f. 1, in Brazil, — and by Aublet ii. pl. 311 in Guayana: yielding with other species a purgative gum-resin resembling gamboge, and imported into Europe under the name of *American gamboge*.*

Mimosa asperata of Equatorial Africa. Known to grow there both in the Eastern and Western portion (fl. Nigr.), and probably by European colonists carried to Tropical America; observed by Piso 203 in Brazil, and called "caaco" — (Spreng.); was thence introduced into Jamaica according to Browne, and was seen by Macfadyen in gardens only; continues on the continent from Venezuela to Brazil (Benth., and A. Dec.). Clearly by European colonists, was carried to the Mauritius Islands, observed under cultivation by Bojer.

Mucuna urens of Tropical Atlantic-shores. A woody-stemmed climbing bean, its pods covered with stinging hairs called *cowich*, observed by Piso 307 in Brazil — (Spreng.); by Sloane i. 79, Plumier, and Jacquin, in the West Indies; and known to grow on the neighbouring portion of South America (A. Dec.). Instances of its seeds carried by ocean-currents to the coast of Scotland being

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* *Vandellia diffusa* of Equatorial Africa and Madagascar. Probably by European colonists carried to Tropical America; observed by Marcgraf xv. pl. 32 in Brazil, — by Aublet ii. pl. 251 in Guayana, and known to occur "frequentissima ad vias" as far as the West Indies and Guyaquil (Pers., and A. Dec.); called in Arowak "haimarada," by the Dutch settlers "bitter blain," and "of great value in Guayana as an antibilious emetic and febrifuge, and a most efficacious remedy in malignant fevers and dysentery" (Hancock med. bot. trans. 1829). Eastward, known to grow in Guinea (Hook. fl. Nigr.), and on Madagascar (Benth.); but possibly by European colonists, carried to the Mauritius Islands (Lindl.).

Remirea maritima of the Equatorial shores of the Atlantic. A *reed* observed by Piso 238 in Brazil — (Spreng.), by Aublet pl. 16 in the maritime sands of Guayana. Known to grow also on the opposite African seashore (Kunth, and Benth. fl. Nigr.), seeds doubtless transported from one continent to the other by ocean-currents (A. Dec.).

known to Sloane, the plant probably crossed the Atlantic without human intervention: was observed by Adanson in Senegal (Steud.); is known to grow also in Guinea, and on Fernando Po (Benth. fl. Nigr.).

Iresine vermicularis of the Atlantic seashore of Tropical America and Africa. A branching prostrate Amaranthaceous plant called in Brazil "caaoponga" (Pis. 243) or "parexxil" — (Marcg. 14, and Willd. i. 2322): observed by Swartz obs. 101 in the West Indies; known to grow on Key West (Torr.), and "sandy sea-shores, South Florida" (Pursh, and Chapm.). Eastward, on the seashore of Senegal and Guinea (Moq., A. Dec., and Benth. fl. Nigr.), doubtless transported from one continent to the other by ocean currents.

Smilax siphilitica of the Upper Orinoco. Among other species substituted for sarsaparilla, a kind was observed by Marcgraf and Piso iii. 258 in Brazil: — S. siphilitica, known to grow on the Cassiquiare branch of the Orinoco (Pers., and Lindl.), is said to have been found farther South by Martius, on the Rio Negro and at Yupura, and according to Pareira furnishes the *Brazilian* or *Lisbon sarsaparilla.*

"1638, April 12th" (art de verif., and Thunb. trav. iv. 30), capture of the fortress of Sinabaro, in which the Christians of Japan had all taken refuge. They were put to death, "thirty-seven thousand" in number, and the extinction of Christianity in Japan completed.

"In this year" (Linn fl. suec. p. viii), J. Frankenius publishing his "Speculum Botanicum:" in which Swedish plants are for the first time enumerated, intermingled however with exotic. He mentions *Chrysosplenium alternifolium* 27, *Rubus arcticus* 14, *Betula nana* 32. — He published a Second edition "in 1659," and died "in 1661."

"April" (H. C. Murphy note to Vanderd. vertoogh 77), arrival of Swedes in the Delaware, where they commenced a settlement and fort, notwithstanding the protest of the Dutch governor Kieft at New Amsterdam.

"May" (Hazard coll. i. 422, and Holmes), an order staying eight ships on the point of sailing: by which, John Hampden, and Oliver Cromwell, among other persons, were prevented from coming to New England. Before the close of the year (Pemberton, and Holmes), arrival in the Thames of the first New England-built ship.

"June 1st" (Holmes), a violent *earthquake* in New England, — long remembered in the annals of the colony.

"The same year" (Winthrop, and Holmes), legacy by John Harvard, a clergyman of Charlestown, to the college founded the previous year; and the name of "Cambridge" given to the site selected. Josselyn voy. 29 arriving "July 3d" found Boston consisting of "not above twenty or thirty houses." "Oct. 11th," he was treated with "half a score very fair pippins" from Governor's Island in Boston harbour, "there being not one *apple* tree nor *pear* planted yet in no part of the country but upon that island."

"The same year" (. . . .), at Gizeh, the coating of the Second pyramid continuing entire; the sides described by Greaves, as rising "not with degrees like" the First pyramid, "but are all of them plain and smooth." — At the time of my own visit, the coating remained only on the apex.

"The same year, Pedro de Silvoa being viceroy" (Krapf trav.), date of the above-mentioned inscription over the gateway of the fortress at Mombas.

"1639 A. D." (Winthrop, and Holmes), the first *printing-press* in North America set up at Cambridge. The settlers at Windsor, Hartford, and Wethersfield, three towns on the Connecticut, finding themselves without the limits of the Massachusetts charter, conceived the idea of forming by voluntary compact a distinct commonwealth: the constitution framed, — is much celebrated; and after being extended to all Connecticut, "has continued with little alteration to the present time" (Hazard coll. i. 437, and Holmes).

"The same year" (Chalm., and Holmes), by king Charles, William Berkeley appointed governor of Virginia, and civil privileges restored; including "a provincial legislature, a regular administration of justice, a government of laws." In Maryland, the House of Assembly established; its acts to be "of the same force, as if the proprietary and freemen had been personally present:" in one of these acts "the people" are defined, as consisting of all Christian inhabitants "*slaves* only excepted." — Arriving in Virginia, Berkeley continued governor from "1642–77" (hist. Virg.).

"1640 A. D." (art de verif.), Murad IV. succeeded by Ibrahim, nineteenth Turkish sultan. Coins of Ibrahim, issued at Cairo, are figured in Marcel p. 219.

"In this year" (Krapf trav.), Portugal restored to independence by John IV.; too late to save the colonies.

"In this year" (Spreng., and Prior), Parkinson publishing his Theatr., enumerating* *Gladiolus*

* *Polygonum acre* of Northeast America. The *American water-pepper*, transported to Europe, termed "polygonum persicaria acris of Virginia" by Parkinson herb., — described also by Kunth.

Byzantinus 191, *Ipomaea lacunosa* 164 n. 5, *Asclepias amoena* 386, *Heracleum elegans* 954, *Selinum peucedanoides* 904 n. 2, *Caucalis leptophylla* 920, *Statice mucronata* 1235, *Tovaria Virginiana* 875 f. 6, *Euphorbia isatifolia* 188 n. 11, *Erodium petraeum* 709 n. 4, *Astragalus Baeticus* 1084 n. 23, *Prenanthes spinosa* 804, *Serapias microphylla* 218 n. 8, *Helianthus frondosus* 130 n. 8, *Aster Tradescanti* 132.

Crocus biflorus of the East Mediterranean countries. Transported to Britain, is described by Parkinson theatr. 162 n. 10 — (Spreng.), and Miller — (Steud.); escaping from cultivation has been found growing spontaneously in a single park (A. Dec. g. plant. 691). Eastward, was observed by Chaubard around the Saronica gulf of the Peloponnesus.

Narcissus incomparabilis of the West Mediterranean countries. Transported to Britain, is termed "nonpareille" by Parkinson theatr. 68; — and escaping from cultivation, has maintained itself for probably two centuries in a park near Swansea (Dillw., and Wats.), occurs also in a locality in the county of Worcester, as well as in Normandy (A. Dec.). In its wild state, is known to grow in Portugal and Spain (Pers.), was observed by Gouan near Montpelier (Steud.).

"The same year" (Winthrop, and Holmes), settlers from Lynn near Salem, removing to the Eastern end of Long Island, erected themselves into a civil government.

"In this year" (Stirling, and W. W. Hunter), one of the wives of Sultan Shujar, governor of Behar, Orissa, and Bengal, healed by surgeon Boughton. As a reward, the English were now allowed to build factories at Balasor and Hugli.

"In this year" (Sieb. elucid: Vries p. 102), Françoys Caron chief of the Dutch trade in Japan describes the land of Yeso as "very large, has often been explored by Japanese, deeply and far travelled through, but no one has ever come to the end or come to any certainty respecting it, so that they have generally come short of food and each time been obliged to return: the reports of visitors have been such that his majesty's curiosity to know more about it has been restrained, for the land (as is said) is wild, and in some parts inhabited by a people with hairy bodies, wearing long hair and beards, as brutal as the Chinese, more like savages than like other men."

"1641 A. D." (art de verif.), the Dutch excluded from Japan, confined to the islet of Desima opposite Nangasaki; where under strict guard they were allowed to continue their trade.

"April 16th" (H. C. Murphy note to Vanderd. vertoogh 83), the value of good sewan (wampum) fixed by director Kieft in New Netherland at four pieces for a stiver, and of loose sewan at six. This Indian money in the absence of coin long continued in use even among the Whites.

"In this year" (Pauth. 418), in China, civil war; and by the Imperial general, the dykes of the Hoang-ho cut on the "9th of October," destroying great numbers of rebel troops, and contrary to his expectations the city of Kai-foung, in all "more than three hundred thousand persons." P. Martin Martini visiting the site soon afterwards, found in place of a city "only a large lake."

"Oct. 23d" (Blair), in Ireland, beginning of the massacre of the Protestants.

"1642, Jan. 4th" (Blair), five members of the Commons of England demanded by king Charles: initiating civil war. A memorable resolve of the Commons in favour of New England (Hutchinson i. 114, and Holmes), in consideration of having "had good and prosperous success without any public charge to this state," exempting its imports and exports from custom, subsidy, or taxation.

"The same year" (Winthrop journ. ii. p. 67 and 89, and Tuckerm. archæol. Amer. iv. p. 140), the White Mountains of New England first ascended by a European; by Darby Field, "an Irishman, living about Pascataquack."

"In this year" (Poole introd. Wond. Prov. xxii), publication of Lechford's "Plain dealing," a work on New England.

"In this year" (Spreng., and Winckler), Iac. Bontius publishing his Medecin. Indor., enumerating *Justicia betonica* 146, *Calanchoe laciniata* 132.

Cyathula prostrata of the Malayan archipelago and islands of the Pacific. Observed by Bontius 150, — and Blume, on Java; by Rheede x. pl. 79 in Malabar; by Graham, "annual, a weed" in the environs of Bombay; by Loureiro, in Cochinchina; by Rumphius vi. pl. 11, and received by Roxburgh from the Moluccas; was observed by myself, frequent around dwellings on Luzon; by Brackenridge, at Savu-Savu in the Feejeean Islands; by myself, on the Samoan Islands not far inland, but on Taheiti in the deep mountain-forest. Westward from Hindustan, is known to occur in Western Equatorial Africa (fl. Nigr. p. 492): but probably by European colonists, was carried to the West Indies and Brazil (Moq., and A. Dec.).

Westward, was observed by Michaux (Steud.); by Pursh, from Canada to Carolina; by myself, from 43° to 40° along the Atlantic, subaquatic, forming beds on the margin of slow-moving streams; by Elliot, in South Carolina; by Chapman, "Florida, and northward; by Short, in Kentucky;" and by Nuttall, along the Arkansas.

"The same year" (Flacourt ii. 1), the French East India Company formed: and "about September," arrival in Madagascar of a ship sent by them. Continuing on, the two commissioners on board, Pronis and Foucquembourg, took possession of Mascareigne Island and Diego Roïs in the name of the French king; and returning to Madagascar, established a colony at Manghafia in "S. Lat. 24° 30′," which was joined by "six or eight" of the survivors of a shipwrecked French vessel. — "The following year," the colony was removed to Fort Dauphin in "Lat. 25° 6′."

"Nov. 24th" (Churchill coll.), by Abel Jansen Tasman sailing from Mauritius East, land discovered in "forty-two degrees twenty-five minutes" and named "Antony van Diemens lands:" he remained on the coast some days, and anchored, but saw "only the footing of wild beasts and some smoaks" (kindled by Tasmanians). Continuing East to "the country called on the maps New Zealand," and anchoring there, four of his men were killed by the natives: — "the northwest cape of this land" was reached "Jan. 4th," and a cluster of outlying islets was named "Three kings." Sailing thence Northeast, a small island was seen in "twenty-two degrees thirty-five minutes," which could not be reached but was called "Pülstreet's" Island. "Jan. 21st," two islands in "twenty-one degrees twenty minutes" were named "Amsterdam" and "Zealand;" and on the first, "many *hogs*, *hens*, and all sorts of fruit" were procured; the inhabitants (Tongans) being "friendly, had no weapons, and seemed to know no evil, but that they would steal." Thence sailing Northward, many islands were seen; and in "seventeen degrees nineteen minutes," eighteen or twenty islands on the charts called "Prince William's Islands or Hemskirk's Shoals." Inclining now Westward, "March 22d, in five degrees two minutes south latitude," about twenty islands were in sight "called in the charts Onthong Java, about ninety miles from the coast of New Guinea." Passing the Islands of Mark, already known, the natives of which "are savage and have their hair tied up" (Papuans); passing also Green Island, and St. John's Island, New Guinea was reached "April 1st" in "four degrees thirty minutes," at the "cape called by the Spaniards Santa Maria:" the West end of New Guinea was reached "May 18th;" and the voyage terminated at Batavia.

"1643 A. D." (Spreng.), Oelhafen publishing his Elench. plant. dantisc., enumerating "three hundred and forty-eight species."

"May 19th" (Winthrop, and Holmes), union of the New England colonies, Massachusetts, Plymouth, Connecticut, and New Haven: for amity, offence and defence, mutual advice and assistance. Rhode Island petitioning to be admitted, was refused, unless on condition of submitting to the jurisdiction of Plymouth. Massachusetts was in this year divided into counties or shires.

"June 8th" (Sieb. eluc. p. 34), after leaving the supposed Northern point of Japan, the Dutch navigator Maerten Gerrits Vries in sight of the island of Yeso at Cape Eroen. Continuing along the Eastern coast, on the "13th" he saw mount Tsiuna on Kunasiri; two wooden crosses were found on this island (marking probably the graves of Christian converts). On the "17th," he sailed along land named by him "Staetenlant" or "Staeten eylant" (Yeterop), the "high mountains very sparkling from the snow." On the "19th," he caught "a glimpse of land," found to contain "very high mountains which shone much with the snow," and named it "Compagnyslant" (Urup), the land in many places "still covered with snow down to the water's edge;" landing "June 20th," Spring appeared to be just beginning, the *alder*-trees began to bud, and among other herbs met with was "sorrel just the same as grows at home" (*Acetosa pratensis?*). There being no land in the Northwest, he proceeded in this direction, and on the 27th having reached "N. Lat. 47° 27′," decided to return Southward; he reached the West end of Yeterop, discovered the strait separating this island from Kunasiri; and thence proceeding Westward, "from the 13th to the 14th of July" was in the middle of the strait separating Yeso from Krafto (Saghalin), but supposed the land in the West continuous and entered Aniwa Bay; on the "21st," he doubled Cape Aniwa (on Krafto); steering North and afterwards Northwest, he entered Patientie Bay, and reached the mouth of the river (Boronai in "N. Lat. 49° 15′"); leaving Cape Patientie, it was decided on the "3d of August" to return South, and passing through the strait between Yeterop and Urup he reached the harbour of Tayouan in Formosa. "Nov. 18th."

The Ainos are described by Vries and his companions as gaining "their subsistance in a small boat which is cut out of a thick tree, strengthened on each side with four planks one foot high;" have their boats towed by dogs, as also ice-sledges, and the dogs are besides taught to capture salmon; fire is procured by means of "square planks with a hollow," in which they put a "short stick" inserted in a reed, "and rub it between the hands so that it turns round, and so being dipped in melted sulphur they hold that to it and soon have burning fire."

"The same year (= 2303d of Synmu," art de verif.), abdication of Niotè in favour of her brother Gotto-mio, now dairo of Japan.

The following particulars respecting the aboriginals of New England are given by Roger Williams (key, the vocabulary "framed chiefly after the Narroganset dialect," hist. coll. iii. 203): "There is a mixture of this language, north and south, from the place of my abode" (Providence) "about six hundred miles." The natives "constantly anoint their heads, as the Jews did:" they "gave dowries

for their wives, as the Jews did:" and apparently in common with the Jews alone, they "separate their women, during the time of their monthly sickness, in a little house alone by themselves, four or five days, and hold it an irreligious thing for either father, or husband, or any male, to come near them;" for the "practice they plead nature and tradition." In accordance with "the Greeks and other nations," they call the seven stars "mosk or paukunnawaw," the bear. "They have many strange relations of one Wetucks, a man that wrought great miracles amongst them, walking upon the sea, etc." The "southwest, Sowwaniu, is the great subject of their discourse; from thence their traditions; there," is "the court of their great god Cawtantowwit; at the southwest, are their forefathers souls;" and there, "they go themselves, when they die: from the southwest, came their *corn* and *beans*, out of the great god Cawtantowwit's field." Some connexion is inferred with the Southwest wind being the "pleasingest" and most desired by the natives, "making fair weather ordinarily." They "are exceedingly delighted with salutations in their own language;" are "remarkably free and courteous to invite all strangers into their houses;" and he "acknowledged amongst them an heart sensible of kindnesses," having "reaped kindness again from many, seven years after, when" he himself "had forgotten." Their provision for a journey of three or four days, is "nokehick" parched meal: of their other dishes, parched corn, "msickquatash" (succotash) boiled corn whole, "manusquussedash" beans, and "nawsaump" (samp) a kind of meal pottage unparched, are mentioned. "They generally all take *tobacco*;" one of the causes alleged being "against the rheum, which causeth the *tooth-ake*." Howling "and shouting is their alarm, they having no drums nor trumpets." When "they have had a bad dream, which they conceive to be a threatening from God, they fall to prayer at all times of the night, especially early before day." Having "no letters nor arts, it is admirable how quick they are in casting up great numbers, with the help of grains of corn, instead of Europe's pens or counters:" the names of numbers up to "nquittemittannug" thousand, are given; and even by combination, up to one hundred thousand. "They hold the band of brother-hood so dear, that when one had committed a murder and fled, they executed his brother; and it is common for a brother to pay the debt of a brother deceased;" their "virgins are distinguished by a bashful falling down of the hair over their eyes: there are no beggars among them, nor fatherless children unprovided for: their affections, especially to their children, are very strong;" and this, "together with want of learning, makes their children saucy, bold, and undutiful. 'Nickquenum' I am going home, is a solemn word amongst them; and no man will offer any hinderance to him, who after some absence, is going to visit his family, and useth this word:" two "families will live comfortably and lovingly in a little round house, of some fourteen or sixteen feet over, and so more and more families in proportion:" they "are as full of business, and as impatient of hinderance, in their kind, as any merchant in Europe:" they "have amongst them natural fools, either so born, or accidentally deprived of reason." They "are much delighted after battle, to hang up the hands and heads of their enemies." Their "desire of, and delight in news, is great as the Athenians;" and "upon any tidings," I have "seen near a thousand in a round," and many "will deliver themselves" with "very emphatical speech and great action, commonly an hour, and sometimes two hours together:" in "time of war, he that is a messenger runs swiftly, and at every town the messenger comes, a fresh messenger is sent:" their word for letter is from "wussuckwhommin" to paint, "for having no letters, their painting comes the nearest." They "have thirteen months, according to the several moons; and they give to each of them significant names." It "is admirable to see, what paths their naked hardened feet have made in the wilderness, in most stony and rocky places:" I have "known many of them run between fourscore or an hundred miles in a summer's day, and back within two days:" they "are joyful in meeting of any in travel, and will *strike fire* either with stones or sticks, to take tobacco, and discourse a little together:" I have travelled "many a hundred miles among them, without need of stick or staff, for any appearance of danger amongst them; yet it is a rule amongst them, that it is not good for a man to travel without a weapon, nor alone:" if justice be refused in case of robbery between persons of different states, "they grant a kind of letter of mart to take satisfaction themselves; yet they are careful not to exceed in taking from others, beyond the proportion of their own loss: I could never hear that murders or robberies are comparably so frequent, as in parts of Europe, amongst the English, French, etc." Some "of them account seven winds; some, eight or nine." A certain small bird is called "sachim," from its "courage and command over greater birds" (the *king-bird*, Muscicapa tyrannus): a hawk "wushowunan" is kept "tame about their houses, to keep the little birds from their corn" (compare origin of *falconry*). They "are very exact and punctual in the bounds of their lands, belonging to this or that" people, "even to a river, brook, etc.; and I have known them make bargain and sale among themselves for a small piece or quantity of ground:" when "a field is to be broken up," all "the neighbours, men and women, forty, fifty, a hundred, etc. join, and come in to help freely: with friendly joining they break up their fields, build their forts, hunt the woods, stop and kill fish in the rivers:" the "women to this day, notwithstanding our hoes, do use their natural hoes of shells and wood." The "variety of their dialects and proper speech, within thirty or forty

miles of each other, is very great, as appears in" the word for *dog:* "anum" in the Cowweset dialect, "ayim" in the Narroganset, "arum" in the Quunnipieuck, and "alum" in the Neepmuck: "moos-soog" is the name of the "great ox, or rather red deer" (*moose*). "Paumpagussit" is the "name which they give that deity or god-head, which they conceive to be in the sea;" a sail is called "sepakehig," and "their own reason hath taught them to pull off a coat or two, and set it up on a small pole, with which they will sail before the wind ten or twenty miles:" some of their canoes will carry "twenty, thirty, forty men;" and "I have known thirty or forty of their canoes filled with men, and near as many more of their enemies, in a sea fight." I have heard a native lamenting the loss of a child, "cry out, 'O God, thou hast taken away my child! thou art angry with me; O turn thine anger from me, and spare the rest of my children:' if they receive any good in hunting, fishing, harvest, etc., they acknowledge God in it; yea, if it be but an ordinary accident, a fall, etc., they will say, God was angry and did it: but" they "branch their godhead into many gods," and "have given me the names of thirty-seven, all which in their solemn worships they invocate," as the great southwest god Cautantowwit, the eastern god, the western god, the northern god, the southern god, the house god, the woman's god, the children's god "Muckquachuckquand;" the last-named, believed by a dying native to have appeared to him "many years before, and bid him, when he was in distress, call upon him:" they also worship created things, in which "they conceive doth rest some deity," as the sun god, the moon god, the sea god, the "fire god; 'Can it, say they, be but this fire must be a god, or divine power, that out of a stone will arise in a spark, and when a poor naked Indian is ready to starve with cold in the house, and especially in the woods, often saves his life, doth dress all our food for us, and if it be angry, will burn the house about us, yea if a spark fall into the dry wood, burns up the country:' besides there is a general custom amongst them, at the apprehension of any excellency in men, women, birds, beasts, etc., to cry out 'manittoo,' that is, it is a god;" and further, "they conceive that there are many gods, or divine powers, within the body of a man, in his pulse, his heart, his lungs, etc.:" in sickness, the "powwaw" or priest "comes close to the sick person, and performs many strange actions about him, and threatens and conjures out the sickness:" they "have an exact form of king, priest, and prophet;" their "priests perform and manage their worship; their wise and old men, of which number the priests are also, make solemn speeches and orations, or lectures, to them concerning religion, peace, or war, and all things:" besides the public feasts or dances, individuals give private ones, expending "sometimes beyond their estate:" the word for soul "cowwewonck" is "derived from 'cowwene' to sleep, because, say they, it works and operates, when the body sleeps; 'michachunck' the soul, in a higher notion, which is of affinity with a word signifying a looking glass or clear resemblance." Besides "their general subjection to the highest sachims, to whom they carry presents, they have also particular protectors, under-sachims, to whom they also carry presents, and upon any injury received, and complaint made, these protectors will revenge it: the sachims, although they have an absolute monarchy over the people, yet they will not conclude of ought that concerns all, either laws, or subsidies, or wars, unto which the people are adverse, and by gentle persuasion cannot be brought:" the "most usual custom with them in executing punishments, is for the sachim either to beat, or whip, or put to death with his own hand; to which the common sort most quietly submit." Marriage "they solemnize by consent of parents and publick approbation, publickly:" the "number of wives is not stinted; yet the chief nation in the country, the Narragansets, generally have but one wife:" the "men put away frequently for other occasions beside adultery; yet I know many couples that have lived twenty, thirty, forty years together." They have *money:* the white, called "wompam," made "of the stem or stock of the periwinkle, when all the shell is broken off" (*Dentalium?*); and the black, called "suckauhock," made of the shell of the "poquauhock" (*Venus mercenaria*); and for this money, the natives "bring down all their sorts of furs, which they take in the country:" they have great difference in their money; "some that will not pass without allowance; and some again, made of a counterfeit shell; and their very black, counterfeited by a stone and other materials; yet I never saw any of them much deceived." Of their occupations, some "follow only making bows; some, arrows; some, dishes; and the women make all their earthen vessels; some follow fishing; some, hunting; most on the sea side make money, and store up shells in summer against winter," and before obtaining awl-blades, "they made shift to bore their shell money with stone: they also felled their trees with stone set in a wooden staff." They have games, "private and publick:" one, "like unto the English cards, yet instead of cards, they play with strong rushes; secondly, they have a kind of dice, which are plumstones painted, which they cast" in a tray; "ntakesemin, I am telling or counting, for their play is a king of arithmetick:" their "publick games are solemnized with the meeting of hundreds, sometimes thousands:" the "chief gamesters amongst them much desire to make their gods side with them in their games; therefore I have seen them keep" a kind of stone "which is like unto a crystal, which they dig out of the ground, under some tree thundersmitten, and from this stone they have an opinion of success:" besides gambling-houses, "puttuckquaponck, a playing arbour," on "which they hang great store of

their stringed money, have great stakings town against town, and two chosen out of the rest by course to play the game," they "have great meetings of *foot-ball* playing, only in summer, town against town," at "which they have great stakings, but seldom quarrel:" they "will sometimes stake and lose their money, clothes, house, corn, and themselves, if single persons; they then become weary of their lives, and ready to make away themselves." The "mocking between their great ones is a great kindling of wars amongst them; yet I have known some of their chiefs say, 'What should I hazard the lives of my precious subjects, them and theirs, to kindle a fire which no man knows how far and how long it will burn, for the barking of a dog:' their wars are far less bloody than the cruel wars of Europe, and seldom twenty slain in a pitched battle;" and yet, "all that are slain, are commonly slain with great valour and courage, for the conqueror ventures into the thickest, and brings away the head of his enemy." They have sweating-houses, "pesuponck, a hot house;" into which, after being heated with fire on "a heap of stones in the middle," the men "ten, twelve, twenty, more or less, enter at once stark naked;" and "which doubtless is a great means of preserving them, and recovering them from diseases:" in sickness, "their only drink in all their extremities is a little boiled water." At "the first being sick, all the women and maids black their faces;" and "upon the death of the sick, the father, or husband, and all his neighbours, the men also, as the English, wear black mourning clothes, wear black" faces; "sequuttoi, he is in black, that is, he hath some dead in his house:" as "they abound in lamentations for the dead, so they abound in consolation to the living," using different expressions, "because they abhor to mention the dead by name; and therefore if any man bear the name of the dead, he changeth his name; and if any stranger accidentally name him, he is checked; and if any wilfully name him he is fined; and among states, the naming of their dead sachims is one ground of their wars" (see Metacom): "mockuttasuit, one of chief esteem, who winds up in mats and coats, and buries the dead; commonly some wise, grave, and well descended man hath that office."

"1644, March 14th" (Hazard col. i. 538, and Holmes), by Roger Williams now in England, a charter obtained for Rhode Island: incorporating the towns of Providence, Newport, and Portsmouth, and conferring the power of governing themselves, but agreeably to the laws of England. The king taking the part of the banished colony, and declaring, "That he would experiment, whether civil government could consist with such libertie of conscience" (R. Williams in lett, hist. coll. i. p. 281).

"The same year" (Chinese chron. table, and Pauth. 419), the rebel chieftain Li-tseu-tching, after his capture of Pekin and the death of the Chinese emperor, defeated by the Mantchous under Tsoung-te. Who thus became head of the new dynasty of the Tai-thsing. Dying almost immediately afterwards, Tsoung-te was succeeded as emperor by his son Chun-tchi; a child under the guardianship of an uncle, A-ma-van.

"At this time" (chin. hist., and Klapr. mem. i. 9), the Russians furtively in possession of the country on the Amoor, and had built there a palisaded town.

"1645 A. D." (Spreng.), the London Society, an academy of arts and sciences, founded by Theodore Hake. (The founding of this society is placed by Blair in "1662, July 15th.")

"In this year" (Jap. mann. 386), a Japanese vessel driven to the coast of Mandshuria, at Olankai north of Corea. A piece of unprepared *ginseng* being offered them, some of the party, wishing to see "the region where the ginseng grows," landed under the direction of three Mandshu guides, but were ambushed, most of them slain, and "thirteen" survivors carried to Pekin. These were afterwards told that ginseng "is found only in two parts of the mountains between China and Corea," and that "gatherers must begin by hunting the tigers."

"1646 A. D." (Hutchinson i. 161, and Holmes), in Massachusetts, the first legislative act to encourage carrying the gospel to the natives. A mission was commenced "Oct. 28th" by John Eliot, at Nonantum on the South side of Charles river.

"The same year" (Anderson ii. 404, and Holmes), by the English parliament, merchandise for the colonies in America exempted from duty for three years; on condition, that the colonial exports should be sent to foreign countries only in English ships. The beginning of the British Navigation acts.

"About October" (Flacourt ii. 8), in Madagascar, seventy-three Negroes employed about or visiting Fort Dauphin kidnapped by Pronis, put on board vessels, and sold most of them to the Dutch governor of Mauritius.* — From this time, the Negroes would no longer approach the French settlement while there was a vessel in the harbour.

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* *Justicia* (*Andrographis*) *paniculata* of the West Indies. Growing on Cuba, St. Vincent, and Jamaica, in mountainous situations (Nees, and A. Dec.). Carried from Mauritius to Southern Hindustan, — and called in Sanscrit "kairata," in Tamul and Canarese "kiriat," in colonial French "crèate," in Cingalese "attadie" (Ainsw. mat. ind.), in Telinga "nella-vemgoo," in Bengalee "kala-

"In this year" (Spreng.), Henr. Munting publishing his Hort. groning. cat., and in his Phyt. mentions *Prinos verticillatus* pl. 51 (Linn. sp.). — He died "in 1658."

"1647 A. D." (Gookin, and Holmes), aid against the Mohawks * solicited by the French of Canada, and declined by the government of Massachusetts. A legislative act was passed, against Jesuits.

"Towards 1648" (art de verif.), Fide-tada succeeded by his son Iemitz or Ijetiruko, now emperor of Japan.

"1648 A. D." (univ. hist., and Holmes), proposal from the New England colonists to the governor and council of Canada, That there should be perpetual peace between the colonies, even though their mother countries were at war. The proposal was accepted, on condition of assistance against the Iroquois; and the negotiation fell through. "June" (Josselyn, and Hutch.), the first execution in New England for the supposed crime of witchcraft; Margaret Jones of Charlestown being the victim.

"The same year" (Marcel), Ibrâhim succeeded by Mohammed IV., twentieth Turkish sultan.

"In this year" (Spreng.), Jacob Bobart publishing his Indic. hort. Oxon., — and "in 1658" an improved edition published.

"Dec. 3d" (Flac. ii. 21), Stephan de Flacourt arriving at Fort Dauphin on Madagascar, superseding Pronis as French governor, and meeting with *Carphalea corymbosa* p. 137, *Endrachyum Madagascarense* 137, *Lisianthus trinervis* 135. n. 87, *Combretum purpureum* 130. n. 42, *Deidamia alata* 133. n. 70, *Schizolaena rosea* 130. n. 44, *Euphorbia lophogona* 138. n. 106, and *Limonia Madagascarensis* 131: — his Hist. Mad. was published at Paris "in 1661" (Spreng.).

"1649 A. D." (Flac. ii. 21), the ship sent by Flacourt to Mascareigne Island and its name changed to Bourbon. The island was found fertile, covered with beautiful woods of various kinds of trees including palms, no undergrowth of bushes vines or thorny plants to impede walking, and *land-tortoises* of great size "extremement grosses" abounding; there were no crocodiles, nor venomous serpents, nor rats, nor mice, nor fleas, nor flies, nor mosquitos, nor ants; *swine* were very numerous, also *goats* "cabrits" on the hills (both of course introduced by previous visitors): Flacourt now caused to be landed "four *cows* and a bull," — which in 1654 had increased to "more than thirty."

"Jan. 30th" (Blair, Holmes, and Nicol. p. 340), in England, king Charles beheaded: and succeeded by a form of government termed the "Commonwealth;" all power falling into the hands of the people. The oaths of allegiance and supremacy were abolished; the House of lords suppressed; and Oliver Cromwell declared captain general of the troops of the state.

"At this time" (Robertson iii. 409, and Holmes), the Spanish settlements in America containing "one patriarch, six archbishops, thirty-two bishops, three hundred and forty-six prebends, two abbots, five royal chaplains, and eight hundred and forty convents." — New England in the following year, contained "about forty churches" and "seven thousand seven hundred and fifty communicants" (Stiles, and Holmes).

"August" (H. C. Murphy introd. to transl. 5), the "Vertoogh van Nieu Nederland," a remonstrance against director Stuyvesant and the mere trading policy of the government of New Netherland, carried to Holland by a deputation consisting of Adrian Vanderdonck and two colleagues. Among the productions of the new country, "post-oak" and "white rough bark" (*Quercus obtusiloba*), "grey bark" (*Q. prinus ?*), "black bark" (*Q. tinctoria*), and "butter oak the poorest of all and not very valuable" (*Q. rubra*), "oil-nuts large and small" (*Juglans nigra* and *J. cinerea*),

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megh" or "kalup-nath" or "muha-tita" (Lindl.); observed by Rheede ix. pl. 56 in Malabar; by Graham, an "herbaceous plant common in gardens," called "kreat" or "kuriatoo" or "kulpa" or "kala metee" or "mahatita," *king of bitters*, "and much used in medecine by the natives;" observed also in Hindustan by Burmann ind. 9, Roxburgh, and Wallich; and according to Lindley, "has been much celebrated as a stomachic, and used as a remedy for cholera and dysentery, and in intermittent fevers," and "is the basis of a French mixture called 'drogue amère.'" Eastward, mentioned by Mason v. p. 494 as "often confounded with Agathotes chirayta," but not seen by him in Burmah: according however to Lindley, occurring in "dry places in the East Indies, beneath the shade of trees; China."

* *Lobelia siphilitica* of Northeast America, "Nearly two hundred years ago" (Pursh) "introduced into Europe" on account of its supposed "medicinal virtues;" — is described by Dodart 104, and Morison 5. 5. f. 55; but its reputation according to Lindley has not been confirmed by "European practice." Westward, L. siphilitica was observed by Eaton as far as 44° on Lake Champlain; by McEuen, on the Genessee river; was received by Muhlenberg from Kentucky, by Elliot from the Alleghanies of Carolina and Georgia; was observed by myself frequent in the environs of Philadelphia, but seems unknown in Eastern New England.

"water beech" (*Carpinus Americana*), "common beech" and "beechnuts" (*Fagus ferruginea*); "hedge beech" (*Celtis Occidentalis?*), "axe-handle wood" (. . . .), "two species of canoe wood" (*Liriodendron tulipifera*, and . . . .), "linden" (*Tilia Americana*), "willow" (*Salix nigra*), "thorn" (*Crataegus tomentosa*), "elder" (*Sambucus Canadensis*), "plums but not many" (*Prunus Americana*), "black currants" (*Ribes floridum*), "gooseberries" (*Grossularia hirtella*), "small apples" (*Malus coronaria*), "artichokes which grow under ground" (*Helianthus tuberosus*), "grapes" some "very large" (*Vitis labrusca*) "and others small" (*V. æstivalis*), are enumerated: and of medicinal plants, "the true snake-root" (*Aristolochia serpentaria*), "Venus' hair" (*Adiantum pedatum*), "hart's tongue" (*Scolopendrium officinarum*), "lingwort" (*Hudsonia ericoides*), "polypody" (*Polypodium vulgare*), "priest's shoe" (*Cypripedium acaule?*), "sea-beach orach" (*Atriplex hastata*), "water germander" (*Teucrium Canadense*), "tower-mustard" (*Turritis glabra*), "crowfoot" (*Ranunculus acris* and *R. repens*), "crane's bill" (*Geranium maculatum*), "false eglantine" (*Rosa Carolina?*), "laurel" (*Kalmia latifolia*), "violet" (*Viola cucullata* and *V. sagittata*), "blue flag" (*Iris versicolor*), "wild indigo" or "indigo silvestris" (*Baptisia tinctoria*), "solomon's seal" (*Polygonatum pubescens*), "dragon's blood" (*Sanguinaria Canadensis*), "milfoil" (*Achillea millefolium*), "wild lilies of different kinds" (*L. superbum*, *L. Canadense*, and *L. Philadelphicum*), "agrimony" (*Agrimonia eupatoria*), "white mullein" (*Verbascum thapsus* introduced), "garden orach" (*Atriplex hortensis* introd.), "plantain" (*Plantago major* introd.), "shepherd's purse" (*Thlaspi bursa-pastoris* introd.), "mallows" (*Malva rotundifolia* introd.), "marsh-mallows" (*Althæa officinalis* introd.), "wild marjoram" (*Origanum vulgare* introd.), "comfrey" (*Symphytum officinale* introd.), "blessed thistle" (*Carduus marianus* introd.), and "tarragon" (*Artemisia dracunculus* cult.).

"1650, Oct. 3d" (Chalm., and Holmes), Charles II. although excluded from England, exercising jurisdiction in Virginia and several West India islands, an ordinance by parliament; Prohibiting trade with Barbadoes, Virginia, Bermuda, and Antego. — A similar legislative act was passed in the following year in Massachusetts, until their "compliance with the Commonwealth of England," or further order (Hazard coll. i. 553).

"In this year" (Spreng.), William How publishing his Phytolog. britann., an alphabetical Catalogue of all the plants growing in England, "twelve hundred and twenty" in number: — he died "in 1656." A second edition was published by Christopher Merrett "in 1667" under the title of Pinax britann., professedly increasing the number of plants to "fourteen hundred," but these were reduced by Ray to "ten hundred and fifty."

"Nov. 26th" (Martini, and Pauth. 421 to 431), surrender of Canton, leaving the Mantchous undisputed masters of all China. P. Gabriel de Magalhan at this time in China, and from official documents consulted by him, the population under the first Mantchou emperors found to include "11,502,872 families and 59,788,364 males;" there being also "272 libraries and 3,636 distinguished men."

In or about 1650 (= 1680 — "30 years," art de verif.), Iemitz succeeded by Jetznako, now emperor of Japan; — and who reigned "thirty" years.

"1651 A. D." (Pauth. 432), in China, death of the regent A-ma-van, and the cares of government assumed by Chun-tchi. A Jesuit missionary P. Adam Schaal, was placed by Chun-tchi at the head of the tribunal of mathematics, To reform the Chinese astronomy upon the European methods.

"In this year," John Endicott chosen governor, and Tho. Dudley deputy governor "of the English inhabiting the colony of the Mattachusets." The latest date in the "Wonder-working Providence," attributed to Edward Johnson of Woburn, — and published in London in 1654.

"The same year" (Robertson ix. 111, and Holmes), by the parliament of England, a noted Navigation act: Prohibiting imports from Asia, Africa, or America, "in any but English built ships, and belonging either to English or English plantation subjects, navigated also by an English commander, and three fourths of the sailors to be Englishmen; excepting" imports "from the original place of their growth or manufacture in Europe solely."

"1652, March 12th" (Hazard coll. i. 560, and Holmes), by an English squadron, Virginia "the last of all the king's dominions" reduced to obedience. The government of Maryland was also taken from Lord Baltimore, for disloyalty to the "Commonwealth."

"Nov. 22d" (Hazard coll. i. 575, and Holmes), the inhabitants of Maine at their own request taken under the protection of Massachusetts: sending from this time deputies to the legislature. Also "upon occasion of much counterfeit brought in the country" (Hull diar., Hutch., archæol. Amer. iii. p. 145), *money* first coined in New England. John Hull was appointed mint-master; — and on all the successive issues for "thirty years," the date "1652" was continued (Holmes).

"The same year" (relat. Jes. præf.), in ascending the Saguenay, lake St. John called by the natives Pacouagami, discovered by the jesuit Jean Dequen.

"The same year" (Spreng.), the Academia Curiosorum of Germany founded by Io. Laur. Bausch.

"1653, Dec. 16th" (Nicol. p. 341), in England, the supreme authority seized by Oliver Cromwell: now entitled "Protector of the Commonwealth."

"The same year," Navarrete at Manila.

"1654 A. D. (= 2314th of Synmu," art de verif.), Gotto-mio succeeded by his third brother Sinin, now dairo of Japan.

"The same year" (Chalm., and Holmes), by an English fleet, reduction of "the country from Penobscot to Port Royal;" including the French forts about the river St. Johns. — The territory in question was confirmed in the following year to England.

"The same year" (Spreng. rei herb.), *oxygen* gas discovered by Rad. Bathurst and Nathan Henshaw.

"In this year" (Spreng., and Winckl.), Johann Loesel publishing his Plant. Boruss. sponte nasc., enumerating * *Hierochloa Borealis* 111. n. 26, *Carex canascens* or *curta* 117. n. 32, *Hypnum cristacastrensis* 167. n. 42, *H. recognitum* 167. n. 43, *Fontinalis antipyretica* 173. n. 53, *Jungermannia asplenioides* 167. n. 45, *Cyathus striatus* 98. n. 16, *C. olla* 98. n. 16, and *Clavaria alvearis* 99. n. 17. — He died "in 1656," and an improved edition under the name of Flor. Pruss. was published by Gottsched "in 1703."

Koeleria cristata of Northern climates. A grass described by Loesel 110. n. 22 — (Spreng.); termed "gramen spica cristata hirsuta" by Tournefort inst. 519, "aira cristata" by Linnæus sp. plant. 94, and known to grow from Sweden, Russia, and Ireland to the Mediterranean (Engl. bot. pl. 648, and Wats.): received by Richard from Switzerland (Pers.); observed by Sibthorp in the Peloponnesus, by Chaubard, covering the stony summits of mount Diaforti; known to grow also on Caucasus and in Siberia (Kunth). Farther East, was received by Pursh from the Columbia river; was observed by Nuttall from the Red river to the Arkansas and Missouri; by E. James, on the Lower Missouri; and according to A. Gray, grows on dry hills from Illinois as far as Pennsylvania.

"1655, March 25th" (Humb. cosm. ii. and iv.), a satellite of Saturn discovered by Huygens, by means of an object-glass polished by himself: the sixth in the order of distance — as afterwards appeared.

"May 2d" (Blair, and Holmes), by an English fleet under Penn, landing of a force on Jamaica; and possession soon obtained of the whole island.

"Sept. 16th" (Smith, and Holmes), Fort Casimir on the Delaware, captured from the Swedes by the Dutch under governor Stuyvesant. — The site is at the present day called "Newcastle."

"In this year" (Spreng.), after the first issue of "1653," Brunyer publishing a second edition of his Hort. Blesensis.

"1656, July" (Chalmers i. 190, Hazard i. 630 to 638, and Holmes), Quakers make their first appearance in New England, coming from Barbadoes: being regarded as hostile to civil order and Christian truth, they were banished from Massachusetts to the number of "twelve" by the legislature. Proposal of Cromwell for the removal of colonists to Jamaica, declined by the same legislature.

"In this year" (Spreng.), publication of the Museum Tradescantianum, in which are enumerated *Jasminum odoratissimum*.

"The same year" (Ait.), John Tradescant the younger in Virginia, meeting with *Henchera Americana* (Spreng.). — He died "in 1662" (biogr. univ.).

Lonicera sempervirens of the Marginal alluvial of Northeast America. The *coral* or *trumpet honeysuckle* observed by Tradescant in Virginia — (Spreng.); transported to Europe is described by Hermann lugd. pl. 483, and Miller; continues to be cultivated for ornament, as far even as Bombay, where it was found by Graham "in gardens pretty common." Westward, according to A. Gray, grows wild as far as 40° 40′, "copses, New York, near the city;" was observed by myself at 40° in the New Jersey forest, and frequent throughout the forest at 32° beyond Charleston; by Schweinitz, at 36° near Salem in Upper Carolina; by Croom, wild near Newbern and as far as 30° 30′ in Florida; by N. A. Ware, also in Florida.

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* *Potentilla Norwègica* of North America. Termed "quinquefolium hirsutum luteum paucioribus laciniis" by Loesel pruss. pl. 70, — "trifolium norwegicum majus serratum foliis crenatis flore luteo" by Kyllingius (in Act. Hafn. for 1673 pl. 346), and known to occur in waste and fallow ground in Northern Europe and Siberia (Moris. ii. 2. pl. 20, fl. Dan. pl. 171, Pers., and Dec.): observed by Linnæus abounding on the Dalekarlian mountains, but in cultivated ground in other parts of Sweden, having migrated from Norway. Westward, according to Hooker, grows from Labrador and 65° at Bear Lake to the mouth of the Columbia and throughout Canada; was observed by myself, from 45° to 38° along the Atlantic, often in marshes and wild situations, but multiplying in clearings and becoming a weed in cultivated ground; by Pursh, from Canada to New York; by Short, in Kentucky; by Nuttall, on the Arkansas; by Beck, on the Mississippi near St. Louis; by Long's Expedition ii., as far up as the St. Peter's (Schw.): but probably an introduced weed on "Charleston neck" (Ell.), and in other "waste places" in our Southern States (Chapm.).

"The same year = 13th of Chun-tchi" (Pauth. 443), edict by the Chinese emperor against Christian missionaries. At Pekin (Pauth 432), first arrival of a Russian ambassador: but refusing compliance with the ceremonies of introduction, he was not received at Court. The Dutch ambassador was in like manner unsuccessful: the commander of the Chinese fleet, abandoning further resistance to the Mantchous, having withdrawn to Formosa and dispossessed the Dutch.

"The same year" (Blair), by Huygens, the *pendulum* applied to clocks, a great improvement.

In the poem attributed to Governor Bradford (hist. coll. iii. p. 77), mention is made of fruit trees now bearing in New England: "*pears*, *cherries*, *plumbs*, *quinces*, and *peach;*" also, of "the fair white lily" (*Lilium candidum*) "and sweet fragrant rose" (*Rosa rubiginosa*); and of additional garden herbs, as "skirets" (*Sium sisarum*), "*beets*, coleworts and fair cabbages" (*Brassica oleracea*).

"1657 A. D." (Belknap i. 160, and Holmes), by the Massachusetts legislature, a licence to certain persons to supply the Eastern natives with arms and ammunition for hunting, on paying an acknowledgment. Death of Governor William Bradford; "the very prop and glory of Plymouth colony during all the whole series of changes that passed over it" (Hubbard 62).

"December 17th" (Humb. cosm. iv.), the real form of the ring of Saturn made out by Huygens. — The eighth or outermost satellite was discovered by Cassini in "October 1671;" the fifth, by him "Dec. 23d 1672;" the third and fourth, by him at the "end of March 1684;" the first, by Herschel "Aug. 28th 1789;" the second, by him on the following "Sept. 17th;" and the seventh, by "Bond at Cambridge U. S. Sept. 16 to 19" and "Lassell at Liverpool Sept. 19 to 20, 1848."

"1658 A. D." (Churchill coll.), at Macasar in Celebes, Fernandez Navarrete vi. 8 found an ambassador from the "great nababo of Golconda" in Hindustan. Showing commercial relations; and that the people of Celebes had already acquired political importance.

A *bird of paradise* (Paradisea) was seen by Navarrete at Terranate: and at Macassar, many "cacatua" (*cockatoos*, Psittacus), all white, easily made tame and learned to talk. — Dampier bought cockatoos at the island of Bouton, farther South (both kinds of birds having of course been brought originally from the Eastward).

"In this year" (Krapf trav. 521-9), Muscat recaptured from the Portuguese by the Arabs under Sultan bin Seif bin Malik.

"Sept. 3d and 13th, Friday" (Nicol.), death of Oliver Cromwell. Who was succeeded as "Protector" by his son Richard.

"In this year" (Smith ed. fl. lapp.), Olaus Rudbeck publishing his Cat. hort. Upsal., enumerating *Pedicularis sceptrum-carolinum* 4.

"1659 A. D." (Chalm., and Holmes), Charles II., although excluded from England, proclaimed king by the Virginia colonists. The Spanish town of Campeachy captured by the English under Christopher Mims (Harris voy. ii. 903).

"The same year" (Hazard coll. ii. 565 to 572), in Massachusetts, William Robinson and Marmaduke Stephenson, Quakers, returning "after banishment upon pain of death," were executed. Mary Dyer, a Quakeress, was reprieved on condition of leaving the jurisdiction: — but she returned in the following year, and was executed.

"1660, May 29th" (Blair, and Nicol.), Richard Cromwell having resigned, the "Commonwealth" succeeded by the restoration of monarchy, with Charles II. as king. By the English parliament, the Navigation act was rendered more stringent: the export of various colonial products to countries not belonging to England, being prohibited.

In Denmark (Blair), the government was in this year made absolute.

"July" (Chalm., and Holmes), arrival at Boston of Whalley and Goffe, regicide judges: having left England before the Restoration, they did not at first conceal themselves. New England, Maryland, and Virginia, at this time "the only English colonies on the American continent;" and estimated to contain "no more than eighty thousand inhabitants" (Chalm. i. 239).

"The same year" (Maunder), Shah Jehan dethroned by his son Aurungzebe, now emperor of Northern Hindustan.

"1661 A. D." (Chalm., and Holmes), by the governor and legislature of Massachusetts, Charles II. formally acknowledged king. In accordance with a letter from him, the penal laws against Quakers were suspended: on which occasion, "twenty-eight" Quakers were released from prison and conducted beyond the jurisdiction of Massachusetts (Hazard ii. 595). The translation by John Eliot of the New Testament into the aboriginal language, completed in this year, and printed.

"In this year" (Spreng.), Gabr. Grisley at Lisbon, publishing his Viridar. Lusitan., enumerating *Myrica Faya* (of Madeira) 305, *Salvia polymorpha* 751-5, *Gratiola linifolia* 698, *Iris Lusitanica* 1560, *Milium multiflorum* 692, *Avena pallens* 601, *Hordeum hystrix* 639, *Exacum filiforme* 310, *Nonea nigricans* 97, *Anagallis parviflora* 92, *Parietaria platyphyllos* 1111, *Anagallis linifolia* 88, *Verbascum blattarioides* 202, *Echium plantagineum* 449, *Eryngium ilicifolium* 476, *E. odoratum* 479,

E. pentanthum 481, *Angelica montana* 101, *Caucalis elongata* 303, *Athamantha verticillosa* 437, *Oenanthe apiifolia* 124, *Statice angustifolia* 876, *Armeria fasciculata* 1361, *A. cephalotes* 1360, *A. humilis* 1362, *Linum tenue* 891, *Scilla monophyllos* 1552, *Ornithogalum roccense* 1596, *O. chloranthum* 1595, *Leucoium trichophyllum* 1572, *Polygonatum ambiguum* 1175, *Colchicum tesselatum* 1525, *Rumex thyrsoides* 18, *Alisma trinervium* 1166, *Dianthus attenuatus* 290, *Silene arenaria* 921, *S. sabuletorum* 922, *S. psammitis* 923, *Lythrum meonanthum* 936, *Geum Atlanticum* 286, *Cistus verticilliflorus* 371, *Delphinium pentagynum* 26, *Linaria dealbata* 457, *L. multipunctata* 880, *L. amethystina* 881, *L. linogrisea* 882, *L. bipunctata* 883, *L. Lusitanica* 885, *Antirrhinum meonanthum* 108, *Bartsia maxima* 57, *Euphrasia scabra* 496, *E. filifolia* 495, *Cochlearia acaulis* 377, *Cheiranthus longisiliquis* 860, *Malva tuberculata* 55, *Lathyrus helodes* 740. 837, *Genista triacanthos* 543, *Astragalus cymbaecarpos* 171, *Anthyllis hamosa* 106, *Ornithopus sativus* 1089, *O. repandus* 1281, *Hypericum linariaefolium* 765, *H. tomentosum* 768, *Cichorium divaricatum* 355, *Helminthia spinosa* 230, *Scorzonera multifida* 1295, *S. pinifolia* 1294, *Anthemis fuscata* 323, *Centaurea uliginosa* 771, *C. polyacantha* 774, *C. limbata* 775, *Aceras anthropomorpha* 1592, *Quercus phellodrys* 787, *Mercurialis elliptica* 1025.

"In the reign of Chun-tchi" (according to Chinese historians, Pauth. 433), the population of China amounting to "14,883,858 families."

"1662 A. D." (Chalm., and Holmes), by the assembly of Maryland, a law for establishing a mint: being, with one in Massachusetts already noticed, the only laws in the country for *coining money* — until the Revolution.

"Aug. 24th" (Neal, and Holmes), in England, enforcement of the Act of uniformity in religion: by which about "two thousand" dissenting clergymen were ejected, without provision for themselves or families. Many, for exercising their ministry in private, died in prison; but a considerable number found an asylum in New England.

"In this year" (Klapr. mem. i. 324), the Dutch driven out of Formosa and the Pescadores by the Chinese pirate Tching-tching-koung or Koxinga; — who with his successors held possession twenty-one years.

"The same year" (Chinese chron. table, and Pauth. 433), Chun-tchi succeeded as emperor by his child Khang-hi, under the guardianship of "four regents." One of their first measures was the expulsion of eunuchs from the palace and all posts of honour and dignity. The abandonment of the seacoast was also ordered by the regents: on account of the depredations of Koxinga, the pirate-chief of Formosa.

"In this year" (Spreng.), Georg a Turre, after visiting Crete, publishing his Cat. hort. Padua, enumerating "rubia arborescens cretica" *Ernodea montana*, and "petroselinum creticum radice tuberosa" *Bunium ferulaceum*.

"1663, Jan. 26th" (Josselyn, and Holmes), a severe *earthquake* throughout Canada, New England, and the New Netherlands.

"July 27th," Josselyn on his Second voyage arriving in the harbor below Boston. He proceeded to Black point "six mile to the Eastward of Saco," * — and remained in New England until "Oct. 10th, 1671."

During the governorship of Berkeley (Spreng. gesch.), John Banister in company with William Vernon and David Krieg, arriving in Virginia, meeting with *Xyris bulbosa* (Ray pl. 2), "cyperus miliaceus marilandicus" *Trichophorum eriophorum*, *Elymus Canadensis* (Ray suppl. 599), *Lechea minor* (R. s. 132), *Houstonia cærulea* (R. s. 502), *Hedyotis purpurea* (R. s. 262), *Plantago Virginica* (R. hist. ii. 188), *Onosmodium Virginianum* (R. s. 272), *Phlox pilosa* (R. s. 490), *Spigelia Marylandica* (R. dendr. 32), *Ceanothus Americanus* (R. dendr. 69), *Euonymus Americanus* (R. d. 57), *Sanicula Marylandica* (R. s. 260), *Cicuta bulbifera* (R. s. 260), *Oenothera pumila* (R. s. 416), *Gaultheria*

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* *Platanus Occidentalis* of the Mississippi and its tributaries. The *button-wood* or *American sycamore* possibly brought and planted by the natives in Eastern New England: observed by Josselyn voyag. 70, "a stately tree, growing here and there in valleys, not like to any trees in Europe, having a smooth bark, of a dark brown colour, the leaves like great maple, in England called sycamor, but larger:" — "a button-wood tree which measured nine yards in girth," is mentioned by Paul Dudley writing from New England in 1726 (phil. trans. xxxiii. 129, and arch. Am. iv. 125): P. Occidentalis was observed by F. A. Michaux as far East as Portland, and from 44° on Lake Champlain throughout the Western States, but rare in the lower portion of Carolina and Georgia; by myself, not clearly indigenous along the Atlantic in New England and our Middle States, but wild along the banks of the Ohio; by Catesby i. pl. 56, and Elliot, in South Carolina; by Bartram, as far as 30° in Florida; by Darby 77, to 31° in Louisiana; by Nuttall, at 34° on the Arkansas; by Long's Exp., as far up the Mississippi as 41°; and by E. James, on the Missouri and the Canadian.

hispidula (R. h. 685), *Tovaria Virginiana* (R. h. 183), *Cercis Canadensis* (R. dendr. 100), *Epigæa repens* (R. s. 596), *Silene stellata* (R. h. 1895), *Euphorbia polygonifolia* (R. s. 431), *Spiræa tomentosa* (R. s. 330), *Gillenia trifoliata* (R. s. 330), *Clematis viorna* (R. h. 1928), *Fedia radiata* (R. s. 3, p. 244); "rubia tetraphylla glabra latiore folio bermudensis seminibus binis atropurpureis" (Pluk. alm. pl. 248, R. s. 261), *Galium Bermudense* ("G. latifolium" of Mx.?); *Pycnanthemum incanum* (R. h. 1229), *Trichostema dichotoma* (R. s. 311), *Scutellaria integrifolia* (R. s. 310), *Euchroma coccinea* (R. s. 400), *Gerardia purpurea* 1926, *G. flava* 1926, *G. pedicularia* (R. s. 397), *Chelone glabra* (R. s. 397), "digitalis flore pallido transparente foliis et caule molli hirsutie imbutis" 1928 *Pentstemon hirsutum* ("P. pubescens" of Willd.?), *Gelsemium sempervirens* (R. h. 1769), *Bignonia capreolata* (R. h. 1329), *Obolaria Virginica* (R. s. 595), *Epiphagus Virginianus* (R. s. 595), *Orobanche uniflora* (R. s. 595), *Mimulus ringens* (R. h. 769), *Napæa dioica* 1928, *Dielytra cucullaria* (R. s. 475), *Polygala incarnata* (R. s. 639), *P. lutea* (R. s. 639), *P. verticillata* (R. s. 639), *P. cruciata* (R. s. 639), *Desmodium canescens* (R. s. 458), *D. marilandicum* (R. s. 455), "hypericum pumilum sempervirens caule compresso ligneo ad bina latera alato flore luteo tetrapetalo" (Pluk. mant. 104 and Ray suppl. 495) *Ascyrum pumilum;* "sonchus sylvestris folio laciniato glauco costa non spinosa" (R. s. 137) *Lactuca Canadensis; Vernonia Noveboracensis* (R. s. 208); "jacea altera non ramosa tuberosa radice foliis latioribus flores ferens pauciores majores" 1929 *Liatris scariosa*, "jacea non ramosa tuberosa radice floribus plurimum rigidis perangustis" 1927 *L. spicata; Cirsium Virginianum* (R. s. 197); *Eupatorium hyssopifolium* (R. s. 189), *E. sessilifolium* (R. s. 188), *E. rotundifolium* (R. s. 189), *E. altissimum* (R. s. 187), *E. trifoliatum* (R. s. 189), *E. perfoliatum* (R. s. 189), *Baccharis halimifolia* (R. hist. 1799), *Senecio aureus* (R. s. 180), *Diplopappus linarifolius* (R. s. 175), *Solidago cæsia* (R. s. 168), *Verbesina sigesbeckia* (R. s. 213), *Borrichia frutescens* (R. s. 211), *Heliopsis lævis* (R. s. 211), *Rudbeckia hirta* (R. s. 210), *R. purpurea* (R. s. 218), *Coreopsis auriculata* (R. s. 212), *C. tripteris* (R. s. 215), *Actinomeris alternifolia* (R. h. 337), *Silphium trifoliatum* (R. s. 211), *Chrysogonum Virginianum* (R. s. 213), *Platanthera psychodes* (R. s. 582), *Tragia urticifolia* (R. s. 205), *Betula nigra* (R. dendr. 12), *Quercus phellos* (R. dendr. 8), *Q. prinus* (R. h. 1916), *Q. nigra* (R.), *Smilax glauca* (R. s. 345), *S. herbacea* (R. s. 345), *Cenchrus tribuloides* (R. s. 602), *Osmunda cinnamomea* (R. s. 86), *Lycopodium* (*Selaginella*) *rupestris* (R. s. 32), *L. alopecuroides* (R. s. 32), *Verbena Caroliniana* (R. s. app. 249. n. 10, Willd.), *Dichromena leucocephala* (R. h. iii. 624). — He remained behind as a missionary, and after his death his collection of plants fell into the hands of Sloane, and some of them were published by Ray hist. "in 1686" (Brendel in Am. nat. 1870).

Isnardia palustris of North America. An aquatic, usually submerged, found by Banister in Virginia * — (Ray hist. 1102 suppl. 635); but by Zanoni 67 in Southern Europe (Spreng.), and

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* *Hypericum quinquenervium* of Northeast America. A small annual observed by Banister in Maryland and termed "hypericoides ex terra mariana floribus exiguis luteis" — (Pluk. mant. 104 and Ray suppl. 496); by Walter (Pers.), Michaux, and Elliot in Carolina; by Croom, as far as 30° 30′ in Florida; by Nuttall, along the Arkansas; by Beck, on the Mississippi near St. Louis; by myself, throughout New England; and is known to grow in Canada as far as Lake Winnipeg (Hook.); in our Southern States, according to Chapman, "a foot high" "branching above," the capsule remaining "green." Transported to Europe, was observed by Savi naturalized near Pisa (Treviran., and A. Dec.).

Hieracium venosum of Northeast America. Its leaves mostly radical and veined with red, called *poor Robin's plantain* (Ph.) or *rattlesnake-weed* (A. Gray); observed by Banister 1926 in Virginia and termed "hieracium fruticosum latifolium foliis punctis et venis sanguineis notatis;" — by Pursh, from Canada to Carolina; by A. Gray, "common" in central New York; by myself, from 45° to 38° along the Atlantic; by Schweinitz, at 36° in Upper Carolina; by Elliot, in the upper district of Carolina and Georgia; and by Short, in Kentucky. In regard to its alleged "medicinal powers" (Ph.), I have seen a young Pennsylvanian allow himself to be bitten by a rattlesnake that had just killed a hen, and applying this herb no ill effects followed, but I cannot recommend a repetition of the experiment. (See H. nudicaule.)

Pycnanthemum incanum of Northeast America. The *horse-mint* is a pubescent hoary aromatic herb, observed by Barrelier in Virginia — (Ray suppl. 298); growing according to A. Gray from "New England to Michigan, and southward;" observed by Torrey as far North as 41° on the Hudson; by Pursh, from New York to Carolina; by Elliot, in South Carolina; by Chapman, "Florida to Mississippi;" by Drummond, in Alabama (Benth.); by Short, in Kentucky; and by Nuttall, on the Arkansas. Transported to Europe, is described by Morison iii. 11. 8. 4, and Plukenet mant. 344. f. 7.

Cenchrus tribuloides of Northeast America. The *bur grass* observed by Banister in Virginia — (Ray suppl. 602); by Torrey as far North as 41°; by myself, frequent and troublesome in sandy

Boccone mus. pl. 84; by Desfontaines, in Algeria; by Soleirol, in Corsica (A. Dec.); by Savi, in Etruria; by Roth, in Germany; by Sibthorp, in Southern Greece; by Ledebour, South of Caucasus, occurring according to Decandolle as far as Persia and Siberia; and by Drège, in Austral Africa. Westward, according to Hooker, grows throughout Canada to the Saskatchewan; was observed by myself from 45° to 40° along the Atlantic, clearly indigenous; by Schweinitz, at 36° in Upper Carolina; by Elliot, in South Carolina; by Baldwin, as far as 31°; by Short, in Kentucky; was received by Torrey from Oregon, and by Decandolle from Mexico.

Cyperus compressus of Tropical and Subtropical America. Observed by Banister in Virginia — (Ray suppl. 623), by Sloane pl 76 in the West Indies, known to grow also in the warm district of Mexico and on Jorullo (Kunth): was received by Muhlenberg from Georgia; was observed by Pursh from Pennsylvania to Carolina; by Baldwin, from Delaware to Florida; by Chapman, in "cultivated grounds, Florida to North Carolina, and westward," the umbel "sometimes reduced to few spikelets or a single one." Possibly through European colonists, was carried across the Atlantic to Equatorial Africa (Benth. fl. Nigr.); to Madagascar (Ad. Juss., and A. Dec.); to Bombay (Graham) and Eastern Hindustan (Roxb.). "C. Nuttallii," growing according to A. Gray in "salt or brackish marshes, Massachusetts to Virginia, and southward," may be compared.

"The same year" (Holmes), by the legislature of Rhode Island, all men professing Christianity, though of different judgment in religious affairs, Roman Catholics only excepted, admitted as freemen, with power to hold office.

"The same year" (Chalm., and Holmes), a charter from Charles II. for the territory South of Virginia, under the name "Carolina:" permitting even some religious freedom. Proposals for settlers were issued, agreeably to the request of New England colonists residing for three years around Cape Fear. And a small plantation, established for several years on the Chowan river received the name "Albemarle."

"In this year" (Spreng., and Winckler), Io. Siegesmund Elsholtz publishing his Flor. Marchica. — He died "in 1688."

"The same year (= 2323d of Synmu," art de verif.), Sinin succeeded by his youngest brother Kinsen, son of Kouotei, and now dairo of Japan.

The same year = "2d year of Khang-hi" (topog. Cant., and Pauth. 474), by the English, an admiral sent, to assist against the pirates of Fou-kien: with a request, for opening trade. Leave was granted them, to come once in every two years. — At the end of three years, they were forbidden; on account of proposing to bring tribute only once in eight years. The next year, contrary to law, they sent the tribute by Fou-kien.

"The same year," Navarrete in China.*

"1664, March 12th" (Smith, and Holmes), a charter for extensive tracts of land in America, granted by Charles II. to his brother, duke of York and Albany. A portion was conveyed to other persons "June 23d" under the name "Nova Cæsarea" or New Jersey. Stuyvesant, the Dutch governor of New Netherlands surrendered "Aug. 27th;" and the name of the fort and town of New Amsterdam, was changed to "New York." The Dutch garrison at Fort Orange surrendered "Sept. 24th," the name was changed to "Albany;" and the reduction was completed by the surrender "Oct. 1st" of the Dutch and Swedes on the Delaware Bay and river. Before the close of the year, Elizabethtown was founded by colonists from Long Island: — and soon afterwards by various colonists, Newark, Middletown, and Shrewsbury, in the same portion of New Jersey.

"The same year" (Josselyn, and Holmes), in New England, the translation of the Bible into the aboriginal language by John Eliot, completed and printed.

"May 11th" (narrat.), arrival at Cayenne of F. De la Barre, lieutenant-general of French Guayana:

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soil along the tide-waters of the Delaware; by Pursh, on the seashore of New Jersey; by Michaux, on the seashore of Virginia (Pers.); by Baldwin, from New York to Florida; by A. Gray, "along the Great Lakes;" by Nuttall, on the Arkansas; by E. James, as far as the sources of the Canadian; and according to Kunth, grows also in Mexico, and at Rio Janeiro and Montevideo. Transported to Europe, is described by Morison iii. 8. 5. f. 4 (Linn. sp.).

* *Rosa arborea* of China. The "rose" seen by Navarrete in China, becoming a tree and putting forth new flowers every month, — may be compared. R. arborea is otherwise known only from Olivier, who brought seeds "from Persia" to France; the growing plants young when seen by Persoon.

Lonicera Japonica of Japan. The "honeysuckles" wild according to Navarrete i. 16 in the Northern provinces of China, — may be compared. L. Japonica, a climbing species, is described by Thunberg 89 as observed in Japan. By European colonists, was carried to Burmah, observed "exotic" there by Mason; and to Northeast America, where it continues in gardens.

the remnant of Dutch colonists were sent to France; leaving behind "more than one thousand and sixty" colonists White and Black, including "not forty" women. In regard to the climate, not a drop of rain fell from the "10th of July to the 10th of November." In Indian Guayana, nearer to and as far as the Equator, rains are more frequent and abundant, the native tribes in general living by cultivating the soil, making and drinking several kinds of beverages: the Aracarets are enumerated as having no enemies; the Palicours are continually warring against the Caribs; and the Arrouagues, a considerable tribe on Berbice river, have had long wars against the Caribs, and have often defeated them.

"Nov. 17th" (Josselyn, and Holmes), a very large *comet:* which continued visible in New England — until "Feb. 4th." The comet "was conspicuous to the whole world."

"In this year" (Linn. fl. suec.), after his Hort. Upsal. "in 1658" Olaus Rudbeck publishing his Delic. Hort. Jacob. — He published Auct. Hort. Upsal. "in 1666," Hort. Botan. "in 1685," commenced Camp. Elys., and died "in 1702" (Spreng.).

1665 A. D. (= "3d year of Kinsen," art de verif.), the inquisitorial tribunal Jesumi established by Kinsen and the cubo: by which every inhabitant of Nangasaki and of the province of Bungo, the only parts of Japan where there remained suspicion of Christianity, was compelled to trample on the cross.

"July" (Blair), London desolated by pestilence.

"The same year" (Spreng.), founding of the Academy of Sciences of Paris. — The first meetings were held in the following year (Blair).

"In this year" (Spreng.), John Rea publishing his Florilege, enumerating *Erythronium Americanum*.

"The same year" (tradit. by Z. Macy, hist. coll. iii. p. 159), Metacom or Philip having come alone to Nantucket, to kill a native for "speaking the name of the dead," it was supposed, of a near connexion (see R. Williams' key): the English interceding, all the money they were able to collect "was barely sufficient to satisfy" Metacom for the native's life.

"The same year" (Maunder), the French obtain footing on the West coast of Haiti or Hayti.

"1666 A. D." (Pauth. 434), in China, one of the four regents dying, the cares of government assumed by Khang-hi, now "thirteen" years old. — P. Verbiest was appointed by him chief of the Bureau of astronomers.

"Sept. 2d" (Blair), the great fire in London.

"In or about this year" (Harris voy., and Holmes), beginning of the depredations of the "buccaneers:" adventurers combined together, principally English and French, for the purpose of plundering Spanish settlements in the West Indies.

"In this year" (Spreng.), after his Hort. Stud. in "1657," Hyacinth Ambrosini publishing his Phytol., enumerating * *Passiflora hederacea* 91, *Anthemis tomentosa* 100, and *Centaurea amberboi* 187. — He died in "1672."

"In this year" (Winckl.), Chabré publishing his Stirp. Sciagraph., taken principally from J. Bauhin.

Selinum Chabraei of middle Europe. Described by Chabré — (Spreng.); observed by Crantz, and Jacquin austr. i. pl. 72, in Austria; by Moench, in Germany; by Allioni, in Piedmont; by Villars, in Dauphiny; by Thuillier, as far as the environs of Paris (Steud.); and within fifty years, after the opening of the Doubs canal "to 1822," made its appearance in the environs of Montbelliard (Bern., and A. Dec.).

1667 A. D. = "6th year of Khang-hi" (topog. Cant., and Pauth. p. 473), reception of an ambassador; bringing a letter written on leaves of gold, the king's portrait, a sword ornamented with gold,

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* *Tripsacum dactyloides* of North America. The *gama grass*, reedy with leaves an inch wide, transported to Europe described by Hyacinth Ambrosini 516 — (Spreng.), Miller, and Linnæus. Westward, was observed by Torrey, and A. Gray, from 41° in Connecticut "near the coast," "sometimes used for fodder at the South;" by Pursh, in Virginia, Carolina, and Illinois; by Nuttall, from 40° on the Atlantic and the "prairies of the West" to Red river of Louisiana; by Schweinitz, at 36° in Upper Carolina; by Walter, and Elliot, in South Carolina; by Chapman, in "rich soil, Florida, and northward;" by Baldwin, as far as 29°; and according to Kunth, grows also as far as Hayti, Mexico, and California. "T. monostachyum," regarded by Nuttall as only a variety, was observed by him on the Arkansas; by Pursh, near salt water from New York to Carolina.

Colladea monostachya of the West Indies. A grass, transported to Europe, described by Hyacinth Ambrosini 235 — (Spreng.), termed "tripsacum hermaphroditum" by the younger Linnæus, "antephora elegans" by Schreber and Beauvois (Steud.). Westward, is known to grow wild on Jamaica (Pers.).

a scabbard of gold and precious stones, many other costly articles; and for the empress, a large looking-glass, a collar of *coral*, also *amber*, *rose-water*, and other perfumes. In return the emperor gave silver, eighty pieces of silk, etc.; and besides, sixty-six pieces of silk and a hundred taels of silver to the ambassador; eighteen pieces of silk and fifty taels, to the second in rank; the same, to the priest; and ten pieces of silk and twenty taels, to each of the nineteen attachés.

"The same year" (Walpole trav. p. 181), near Tabriz in Northern Persia, death of the traveller Thevenot. — "In 1813," the English traveller W. G. Browne was also buried at Tabriz.

July 20th (= 128 + 1539 years), should be the end of the fourth *Great Year* of the Egyptians.

"July 31st" (Anderson, and Holmes), treaties of peace at Breda: the Dutch ceding New Netherlands to the English, and the English ceding Surinam to the Dutch; the French ceding their portion of St. Christopher with the neighbouring islands of Antigua and Montserrat, to the English, and the English ceding Acadie to France. A treaty of commerce was also concluded between England and Spain; comprehending all interests, both in Europe and America.

One hundred and seventy-ninth generation. Sept. 1st, 1667, mostly beyond youth: the Greek writers Georgius Chortatzes d. 1676, Matthaeus bishop of Myra d. 1683: Joseph Penco de la Vega: Mothe le Vayer; duke de Rochefoucauld; Thomas Hobbes; Mezeray; Dr. John Wallis; J. Frederick Gronovius; John Milton; Thomas Bartholin; Edmund Waller; Peter Corneille; Molière; Du Cange; Algernon Sidney; Sir John Marsham; Samuel Butler; Lewis Maimbourg; Ralph Cudworth; Giles Menage; Charles de St. Evremond; Benedict de Spinosa; Isaac Barrow; Sir William Temple; René Rapin; Dr. Thomas Sydenham; Robert Boyle; Samuel Puffendorf; Daniel George Morhoff; John de la Bruyere; John de la Fontaine; Sir George Mackenzie; Bouhours; John Dryden; Racine; John Locke; Edward Stillingfleet; archbishop Tillotson; Bossuet: the microscopic observers, Robert Hook d. 1702, Nehemiah Grew d. 1711, Marc. Malpighi d. 1694: the botanists, Herbertus de Jager, Maurit. Hofmannus d. 1698, Guerner Rolfinck d. 1673, Elias Peine, Marcus Mappus d. 1701, Henr. Regio d. 1679, Abr. Muntingius d. 1683, Carol. Schaffer d. 1675, Iacobus Roggeri, Christopher Merrett d. 1695, Robert Plot d. 1696, Franc. Sterbeeck, Dedu: the painters, Carlo Maratti, Charles le Brun, Jacob Ruysdael d. 1681, Claude Gelée of Lorraine d. 1682, Rembrandt van Ryn d. 1674, David Teniers the younger d. 1694, Bartolome Estevan Murillo d. 1685, Salvatore Rosa d. 1673, Caspar Poussin d. 1675: the architect Christopher Wren.

"The same year" (Anderson, and Holmes), Captain Gillam after passing through Hudson's Straits to the head of James' Bay, building a fort at Rupert's river: the beginning of the *fur trade* in those countries. — In the following year, "May 2d," the Hudson's Bay Company was chartered.

"1668 A. D." (Chalm., and Holmes), on application to the Massachusetts legislature, commissioners accompanied by a troop of horse sent into Maine; and the colonial authority re-established.

"The same year" (univ. hist., and Holmes), by Lord Willoughby, governor of Barbadoes, forces sent to the islands of St. Vincent and Dominica, and the natives compelled to submit to the English government.

"1669 A. D." (Chalm., and Holmes), in accordance with the constitution granted, an assembly first convened in Carolina. Meeting in Albemarle County.

"In this year" (Spreng.), Morison publishing his Hort. Blés. auct., enumerating *Staphylea trifolia* 295, "virga aurea americana foliis serratis angustis subtus nervosis" 322. *Solidago Canadensis*, *Helianthus strumosus* 250.

"In this year" (Humb. cosm. ii.), rocky strata hardened before the existence of plants and animals and therefore never containing organic remains, distinguished from "turbida maris sedimenta" by Nicolaus Steno or Stenson. Who also thought he could distinguish "six" great geological epochs or revolutions in Tuscany.

"Sept. 6th" (Blair), the island of Candia or Crete captured by the Turks.

In a letter to the Royal Society of London (phil. trans. for 1670, Tuckerm. archæol. Amer. iv. 123), governor John Winthrop of Connecticut mentions as sent: specimens of "fir-balsam" (*Abies balsamea*), "which grows in Nova Scotia, and, as I hear, in the more easterly part of New England." *

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* *Populus monilifera* of the Mississippi and its tributaries. The *cotton-wood*, a lofty tree, probably the "cotton-tree bearing a kind of down, which also is not fit to spin," a branch of which was sent by John Winthrop the younger from Connecticut: — P. monilifera is known to grow from "New England to Illinois" (A. Gray); was observed by F. A. Michaux from the Genessee to Virginia and islands in the Ohio, but rare in the Atlantic States; by myself, along the banks of the Ohio; by Nuttall, along the Arkansas; by Lewis and Clark, along the Mississippi and Missouri; by Long's Expedition ii. 141, as far as 48°; by E. James, as far as the Rocky mountains and sources of the Columbia; and is perhaps the shrubby cotton tree seen by Pike app. 22 along the Del Norte "throughout New Biscay."

Quercus ilicifolia of Northeast America. A rigid straggling shrub called *bear oak* or *scrub oak*,

"Sept. 20th" (introd. letter, see also Spreng.), Rumphius in Amboyna meeting with (some plants observed on Ceylon intermingled) *Amomum echinatum* vi. pl. 61. 1, *A. villosum* vi. 61. 2, *Kaempferia pandurata* v. 69, *Maranta tonchat* iv. 7, *Alpinia Malaccensis* v. 71. 1, *Curanga amara* v. 170, *Dicliptera bivalvis* vi. 22, *Piper diffusum* v. 119, *P. subpeltatum* vi. 59, *Fimbristylis polytrichoides* vi. 7. 1, *Oplismenus polystachyus* vi. 7. 2, *Anthistiria arguens* vi. 6. 1, *Andropogon caricosus* vii. 2, *Cissus crenata* v. 166. 2, *Hedyotis crutaeogonum* vi. 10, *Pothos pinnata* v. 183. 2, *Tournefortia argentea* iv. 55, *Convolvulus peltatus* v. 157, *C. bifidus* v. 158, *Nauclea purpurea* iii. 55, *Flindersia radulifera* iii. 129, *Erithalis timon* iii. 140, *Ventilago Maderaspatana* v. 2, *Pittosporum Moluccanum* vii. 7, *Aegiceras majus* iii. 77, *A. minus* iii. 82, *Desmochaeta muricata* v. 83. 2, *Achyranthes sanguinolenta* vii. 27. 2, *Damnacanthus Gaertneri* vii. 19, *Dischidia nummularia* v. 176. 1, *Apocynum reticulatum* v. 40, *Panax fruticosum* iv. 33, *Musa troglodytarum* v. 61, *Commersonia echinata* iii. 119, *Crinum nervosum* vii. 60. 1, *Dianella ensifolia* v. 73, *Corypha rotundifolia* i. 8, *Licuala spinosa* i. 9, *Calamus verus* v. 54, *C. equestris* v. 56, *Bambusa verticillata* iv. 1, *Sophora heptaphylla* iv. 22, *Guilandina microphylla* v. 49. 2, *Cynometra cauliflora* i. 64, *Adenanthera falcata* iii. 111, *Melastoma asperum* iv. 43, *Garcinia* (*Oxycarpus*) *Celebica* i. 44, *G. cornea* ii. 30, *Pemphis acidula* iii. 84, *Psidium pumilum* i. 49, *Eugenia cymosa* i. 4, *E. Javanica* i. 38. 2, *Rubus parvifolius* v. 47. 1, *Eleocarpus integrifolius* iii. 102, *Coleus Amboinensis* v. 72, *Dillenia elliptica* ii. 45, *D. serrata* ii. 46, *Unona ligularis* ii. 66. 2, *Mentha auricularia* vi. 16, *Ocymum tenuiflorum* v. 92. 2, *O. scutellarioides* v. 101, *Ruellia repanda* vi. 13, *Dilivaria ebracteata* vi. 71. 1, *Sida hirta* iv. 10, *Erythrina picta* ii. 77, *Dolichos lignosus* v. 136, *Litsaea glabraria* iii. 44, *Bidens Chinensis* vi. 14. 2, *Conyza pubigera*, *prolifera*, and *Chinensis* v. 103. 2 to vi. 14. 2, *Orchis Susannae* v. 99. 2, *Cymbidium tenuifolium* vi. 49. 1, *Epidendrum scriptum* vi. 42, *E. amabile* vi. 43, *Dendrobium crumenatum* vi. 47. 2, *Coix agrestis* vi. 91. 1, *Scleria tesselata* vi. 6. 2, *Hernandia ovigera* iii. 123, *Begonia tuberosa* v. 69. 2, *Quercus Moluccana* iii. 56, *Acalypha betulina* iv. 37, *A. mappa* iii. 108, *Croton aromaticum* iii. 127, *Exocarpus Ceramicus* vii. 12, *Areca spicata*, *glandiformis*, and *globulifera* i. 5 to 6, *Plukenetia corniculata* i. 79, *Momordica trifoliata* v. 152. 2, *Pandanus humilis* iv. 76, *Trophis spinosa* v. 15. 2, *Canarium mininum*, *balsamiferum*, *sylvestre*, and *hirsutum* ii. 49 to 54, *Dioscorea nummularia* v. 162, *Stratiotes acoroides* vi. 75. 2, *Myristica microcarpa* ii. 7. 8. 9, *M. salicifolia* ii. 6, *Nepenthes phyllamphora* v. 59. 2, *Cheilanthes tenuifolia* vi. 34. 2, *Acrostichum auritum* vi. 35. 1, *Pteris thalictroides* vi. 74. 1. *Botrychium Zeylanicum* vi. 68. 3, *Ophioglossum pendulum* vi. 37. 3, and *Leucas Zeylanica*.* — He became blind in the "following year, the forty-third" of his age, but continued his observations, completed his Herbarium amboinens. "in 1690," died "in 1706," and the work was published by Burmann in seven volumes "in 1741–51."

Oxalis (*Biophytum*) *sensitiva* of Tropical Eastern Asia. Described by Rumphius v. pl. 104: — and frequent in many places in the Philippines, supposed to induce sleep to an invalid if placed under the pillow, and called in Tagalo "macahiya" or "damonghiya," in Ylocano "mahihiin" (Clain, and Blanco). Westward, enumerated by Mason as indigenous in Burmah; observed in Hindustan by Rheede ix. pl. 19, Wight, and by Graham "a small annual, almost stemless plant, common on pasture grounds during the rains." Farther West, perhaps aboriginally introduced into Equatorial Africa; but clearly by European colonists carried to the Mauritius Islands and the West Indies (Boj., J. D. Hook., Benth., and A. Dec.).

Spilanthus acmella of the Mauritius Islands. A yellow-flowered Composite herb, called in Tagalo "hagonoi," in Bisaya "agonoi," in Pampango "palunai" (Blanco), in Burmah "hen-ka-la"

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and specimens were sent by John Winthrop the younger from Connecticut: — Q. ilicifolia is termed "q. nigra pumila" by Marshall (Steud); was observed by Pursh in Virginia; by myself, in barren gravelly soil from 45° to 40° along the Atlantic; was received by Muhlenberg from Georgia, the upper district according to F. A. Michaux, Elliot, and Chapman; and according to A. Gray, grows in West Virginia and Ohio.

* *Cacalia* (*Emilia*) *sonchifolia* of Tropical Eastern Asia. Observed in Amboyna by Rumphius v. pl. 103: — farther North, by Blanco in the Philippines, in waste ground and the beds of streams, used by the natives medicinally as refrigerant, and called in Tagalo "tagolinao," in Pampango "tagulinao," and in Bisaya "libun;" known to grow also in China (Lindl.). Westward, observed by Rheede x. pl. 68, Roxburgh, and Wight, in Hindustan; by Graham, in "waste places" flowering "in the cold weather;" and by myself, a weed around one of the villages on the Deccan. By European colonists, carried to the Mauritius Islands (Lindl.); and as transported to Europe, described by Plukenet alm. pl. 144.

Ipomaea mammosa of the Moluccas. Termed "batata mammosa" by Rumphius ix. 131 as observed on Amboyna wild as well as cultivated for its esculent root: — observed also by Loureiro in Anam, where its root is much esteemed (A. Dec.).

(Mason): observed by Rumphius vi. pl. 65 on Ceylon — (Pers.); by Prevost voy. xx. 152; Sta. Maria, Mercado, and Blanco, frequent on the Philippines, celebrated as an antidote in wounds with poisoned weapons and for its diuretic and other medicinal properties; by Mason v. 495, "exotic" in Burmah, "cultivated by the natives for its medicinal properties;" by Roxburgh, in Eastern Hindustan; by Nimmo, in the Concan South from Bombay (Graham); is attributed by Richard to the Mauritius Islands and termed "acmella mauritiana" (Pers.). Transported to Europe, is described by Plukenet alm. pl. 159, Seba i. pl. 9 and 10, and Linnæus; and according to Clot-Bey has recently been introduced by the way of France into Egypt.

Vandellia crustacea of the countries around the Indian Ocean. Observed by Rumphius v. pl. 170 on the Moluccas; — known to grow also in Tropical Australia and in China (Benth.). Westward, seems devoid of a Sanscrit name (Pidd.), but was observed by Rheede ix. pl. 58 in Malabar; by Graham, "common in the rains" in the environs of Bombay, and by Roxburgh in other parts of Hindustan; is known to grow also about the Red Sea, and on Madagascar and the Mauritius Islands (Benth.). By European colonists, was carried to Brazil and Guayana (A. Dec.).

Oplismenus Burmanni of Tropical climates. A grass observed by Rumphius iv. pl. 5; — by myself, on the Philippines, and from the Feejeean to the Taheitian and Hawaiian Islands, to all appearance indigenous in the forest. Westward from the Malayan archipelago, is described by Burmann ind. pl. 12 and was observed in Hindustan by Roxburgh; by Graham, in the environs of Bombay "generally found under the shade of trees;" and is known to grow in Equatorial Africa along the Atlantic (Benth. fl. Nigr.). Farther West, is known to grow in Tropical America (H. and Bonpl., Kunth, and A. Dec.), and in "shady woods Florida to North Carolina" (Chapm.).

"1670 A. D." (Chalm., and Holmes), treaty of Madrid, between Spain and England: each to retain of American territory the portion in its possession; and the subjects of neither, to enter the fortified places of the other for purposes of trade. The buccaneers were in consequence no longer protected by England, and all commissions to them were annulled.

"In this year" (Humb. cosm. ii.), measurement of a degree by Picard. Leading Newton to resume his theory of *gravitation*, that had occurred to him four years previously.

"In this year" (San-kokf transl. Klapr.), letters patent issued to Nori-firo, now at the age of "eleven," hereditary prince of Matsmaye. Without asking leave, Siyam-siya-in made himself chief, built a strong castle on the East side of Yeso, and was joined by a Japanese miner who married his daughter. Other miners and falconers were living in the Northern portion of Yeso, but from this time all Japanese quit the territory, being unwilling to live under the Aino government.

"The same year" (Pauth. 443), in China, report from the president of the tribunal of rites on the Christians: That having no ceremony relating to ancestors, in disregard of their own precept of honouring father and mother, and the missionaries professing to forgive sins, the religion cannot be true. A decree in consequence by the emperor Khang-hi, prohibiting Christianity.

1671 A. D., Josselyn residing at "Scarborow," about 43° 40′ on the seacoast of New England *

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* *Angelica triquinata* of Northeast America. The wild angelica "minoris" seen by Josselyn 45 in New England, — may be compared: A. triquinata was observed by Torrey as far South as 41° on the Hudson; by myself recently on Starucca creek; by Pursh, from Canada to the mountains of Virginia; by Short, in Kentucky; by Nuttall, probably on the Arkansas: is termed "archangelica hirsuta" by Torrey and Gray, growing in "dry open woods, New York to Michigan, and southward."

Oxalis stricta of North America. The "wood-sorrel with the yellow flower" is enumerated by Josselyn rar. 47 as peculiar to North America: — has been observed by myself to all appearance indigenous from 45° to 40°, though often springing up in clearings and cultivated ground; by A. Gray, "borders of woods, fields, and cultivated grounds common;" by Pursh, in cultivated ground from Pennsylvania to Virginia; and according to Hooker, grows to the Saskatchewan and West of the Rocky mountains. Transported to Europe, is described by Linnæus, Jacquin pl. 4, and in the fl. Dan. pl. 873; has become a weed in cultivated ground in Britain (A. Dec.), occurring also in Switzerland, Russia, Western and Eastern Asia (Wats.).

Goodyera pubescens of Northeast America. A woodland Orchid called *rattlesnake-plantain* (A. Gray), its ovate leaves spreading on the ground and conspicuously reticulated with white, described by Josselyn pl. 67 as "a kind of pirola," its leaf "embroydered, as it were, with many pale-yellow ribs:" — growing according to Pursh from Canada to Florida; observed by myself from 44° throughout New England; by Schweinitz, at 36° in Upper Carolina; by Elliot, in the middle and upper district of Carolina and Georgia; by Chapman, "Florida, and northward;" and by Short, in Kentucky.

Sambucus racemosa of North America. The *red-berried elder*, distinguished by Josselyn 50 as the "dwarf-elder," — observed by Michaux in Canada and on high mountains in Pennsylvania and

He left "Oct. 10th,"—and in the following year published his "New England's Rarities." He afterwards wrote a Supplementary account, and continued his Chronological record to "1674."

The following plants distinguished by Josselyn as North American: "stichwort" (*Stellaria longifolia*), "commonly taken here, by ignorant people, for eye-bright," rar. p. 41; "blew flower-de-luce" (*Iris versicolor*); "yellow-bastard daffodil," the "green leaves are spotted with black spots" (*Erythronium Americanum*); "dogstones, a kind of satyrion, whereof there are several kinds groweth in our salt-marshes" (*Platanthera lacera* and *P. flava*); "red lillies grow all over the country innumerably amongst the small bushes" (*Lilium Philadelphicum*) p. 42; "lilly convallie, with the yellow flowers, grows upon rocky banks by the sea" (*Uvularia sessilifolia?*); "autumn bell-flower" (*Gentiana linearis*) p. 43; "arsmart, both kinds" (perhaps *Polygonum acre* and *P. mite*, see below); "spurge-time," growing "upon dry, sandy sea-banks," is "very like to rupter-wort," and "is full of milk" (*Euphorbia polygonifolia*); "rupter-wort, with the white flower" (*Euphorbia maculata*); "jagged rose-penny wort" (*Hydrocotyle Americana?*); "St. John's-wort" (*Hypericum corymbosum*, see below) p. 44; "St. Peter's wort" (*Elodea Virginica*); "speedwell chick-weed" (*Stellaria borealis?*); "male fluellin, or speedwell" (*Helianthemum Canadense*); "wild mint" (*Mentha borealis*); "the white violet, which is sweet, but not so strong as our blew violets" (*Viola blanda*); "blew violets, without sent" (*V. ovata*); and "a reddish violet, without sent" (*V. cucullata*); "Salomon's seal," the "first" kind (*Polygonatum pubescens*); "woodbine, good for hot swellings of the legs" (*Ampelopsis hederacea*) p. 45; "dove's-foot" (*Geranium Carolinianum*); "raven's claw," which "is admirable for agues" (*Geranium maculatum*); "cink-foil" (*Potentilla Canadensis*), and "tormentile" (*Potentilla simplex*); "avens, with the leaf of mountane-avens, the flower and root of English avens" (*Geum Virginicum*); "oak of Cappadocia" (*Ambrosia artemisiæfolia*) p. 46; "line-tree" (*Tilia Americana*), "the other kind I could never find," voyag. p. 69; "blackberry" (*Rubus villōsus*) rar. p. 48; "dewberry" (*R. Canadensis*); "mouse-ear minor" (*Krigia Virginica?*); "spurge-lawrel, called here poyson-berry" (*Kalmia angustifolia*) p. 49; "elder" (*Sambucus Canadensis*); the "filberd" with "hairy husks upon the nuts" (*Corylus rostrata*) p. 50; "quick-beam, or wild ash" (*Sorbus Americana*) p. 51; "a solar plant, as some will have it" (*Sisyrinchium Bermudianum*) p. 53; "Homer's molley" (*Allium Canadense?*); "lysimachus, or loose-strife," the "flowers purple, standing upon a small sheath, or cod, which, when it is ripe, breaks, and puts forth a white silken down" (*Chamænerium Americanum*) p. 56; "marygold of Peru," a kind "bearing black seeds" (*Helianthus divaricatus*); "the other black and white-streak'd," or "the small sunflower" (*H. decapetalus?*) pl. 82 and 83; "sea-tears," growing "upon the sea-banks," and "good for the scurvy and dropsie, boiled and eaten as a sallade, and the broth drunk with it" (*Cakile maritima*) p. 56; "New England daysie, or primrose," it "flowers in May, and grows amongst moss upon hilly grounds and rocks that are shady" (*Erigeron bellidifolium*) p. 58; "sweet fern" (*Comptonia asplenifolia*); plant "with a sheath, or hood, like dragons, but the pestle is of another shape" (*Symplocarpus fœtidus*) pl. 71; and an herb "between twelve and thirteen foot" high, "the top of the stalk runs out

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Carolina; by myself, from 47° to 44°; by Oakes, to 42° 30′ along the Atlantic; by Chapman, "mountains of North Carolina, and northward;" and according to Hooker, grows throughout Canada to the Saskatchewan and Rocky mountains, and as far as the mouth of the Columbia. Transported to Europe, is termed "s. racemosa rubra" by Tournefort inst. 606; was observed by Forskal in gardens at Constantinople, called "kōuphōxulia," and "aqua" and "acetum" prepared from its berries; by Sibthorp, on mountains in Arcadia, and called "anthruanōs;" by Jacquin rar. i. pl. 59, on wooded mountains as far as middle Europe (Pers.).

Chelone glabra of Northeast America. The *snake-head* was observed by Josselyn rar. pl. 78 "about three or four foot in height," growing "in wet ground" and flowering "in August;"—by myself, on the marshy border of streams from 44° to 41° along the Atlantic; by Croom, as far as Newbern; by Pursh, from New England to Carolina; by Schweinitz at 36° in Upper Carolina; by Chapman, "Florida and northward, rare in the lower districts;" by Short, near Lexington in Kentucky; by Nuttall, on the Arkansas; and was received from Canada by Linnæus (Pers.).

Verbena hastata of Northeast America. The *blue vervain*, termed by Josselyn rar. 69 "clowne's all-heal of New England," the "flowers are blew, small, and many, growing in spoky tufts at the top, and are not hooded, but having only four round leaves,"—is known to grow throughout Canada to the Saskatchewan (Hook.); was observed by myself from 46° to 41°, chiefly along roadsides; by Pursh, from Canada to Carolina; by Elliot, in the middle district of Carolina and Georgia; by Baldwin, as far as 30° 30′ near St. Mary's; by Chapman, "in the upper districts, Mississippi, and northward;" by Michaux, in Upper Carolina and in Illinois; by Beck, on the Mississippi near St. Louis; and by Nuttall, on the Arkansas. Transported to Europe, is described by Hermann parad. pl. 242, and Linnæus.

into a spike, beset about with flowers like sow-thistle, of a blew or azure colour" (*Mulgedium leucophæum*) p. 74.

The following plants enumerated by Josselyn as common to Europe and New England: "hedge-hog grass" (*Carex flava*) rar. p. 41; "mattweed" (*Psamma arenaria*); "cat's-tail" (*Typha latifolia*); "wild sorrel" (*Acetosa acetosella*) p. 42; "adder's-tongue" (*Ophioglossum vulgatum*); "one-blade" (*Smilacina bifolia*); "water-plantane" (*Alisma plantago*), "bears feed much upon this plant, so do the moose-deer; sea-plantane, three kinds" (*Plantago maritima, P. major* in salt marshes? and *Triglochin maritimum*) p. 43; "soda bariglia, or massacote, the ashes of soda, of which they make glasses" (*Salsola kali*) p. 44; "glass-wort, here called berrelia, it grows abundantly in salt marshes" (*Salicornia herbacea*); "egrimony" (*Agrimonia eupatoria*); "the lesser clot-bur" (*Xanthium strumarium*); "yarrow, with the white flower" (*Achillea millefolium*) p. 46; "goose-grass, or clivers" (*Galium parine*) p. 47; "fearn" (*Athyrium filix-fœmina, Aspidium spinulosum* and *A. thelypteris*); "brakes" (*Pteris aquilina*); "dew-grass" (*Drosera rotundifolia*, and *D. longifolia*); "blew-flowered pimpernel" (*Veronica anagallis*) p. 48; "noble liverwort, one sort with white flowers, the other with blew" (*Hepatica triloba*); "gaul, or noble mirtle" (*Myrica gale*) p. 49; "bastard calamus aromaticus" (*Acorus calamus*) p. 53; "knot-berry, or clowde-berry, seldom ripe" (*Rubus chamæmorus*) p. 60; "pirola, or winter-green, that kind which grows with us in England is common" (*Pyrola rotundifolia*) p. 67; and "red currans" (*Ribes rubrum*) p. 51.

The following plants according to Josselyn brought by European colonists to New England: "arsmart, both kinds" (*Polygonum hydropiper*, and *P. persicaria*, see above) p. 43; "St. John's-wort" (*Hypericum perforatum*, see above) p. 44; "cat-mint" (*Nepeta cataria*); "herb Robert" (*Geranium Robertianum*) p. 45; "oak of Hierusalem" (*Chenopodium botrys*) p. 46 and 56; "toad-flax" (*Linaria vulgaris*) p. 48; "pellamount, or mountain-time" (*Thymus serpyllum*); and "water-mellon" p. 57. Of plants expressly enumerated as having "sprung up since the English planted and kept cattle in New England" p. 85: "nettles stinging, which was the first plant taken notice of" (*Urtica dioica*); "couch-grass" (*Holcus lanatus*); "shepherd's-purse" (*Capsella bursa-pastoris*); "dandelion" (*Taraxacum dens-leonis*); "groundsel" (*Senecio vulgaris*); "sow-thistle" (*Sonchus oleraceus*); "wild arrach" (*Atriplex hortensis*); "nightshade, with the white flower" (*Solanum nigrum*); "mallowes" (*Malva rotundifolia*); "black henbane" (*Hyoscyamus niger*); "wormwood" (*Artemisia absynthium*); "sharp-pointed dock" (*Rumex crispus*); "patience" (*R. patientia*, see below); "bloodwort" (*R. sanguineus*, see below); "and, I suspect, adder's-tongue" (*Ophioglossum vulgatum*); "knot-grass" (*Polygonum aviculare*); "cheek-weed" (*Stellaria media*); "compherie, with the white flower" (*Symphytum officinale*); "may-weed, excellent for the mother, some of our English housewives call it iron-wort, and make a good unguent for old sores" (*Maruta cotula*); "the great clot-bur" (*Arctium lappa*); and "mullin, with the white flower" (*Verbascum blattaria*).

Of additional "garden-herbs" under cultivation: "lettice" (*Lactuca scariola*); "parsley" (*Petroselinum sativum*); "marygold" (*Calendula officinalis*); "French mallowes" (*Althæa officinalis*); "chervel" (*Anthriscus cerefolium*); "burnet" (*Poterium sanguisorba*); "winter savory" (. . . .); "summer savory" (*Satureja hortensis*); "time" (*Thymus vulgaris*); "sage" (*Salvia officinalis*); "parsnips, of a prodigious size" (*Pastinaca sativa*); "garden beans" (*Faba vulgaris*); "oats," and "naked oats, there called silpee, an excellent grain, used instead of oat-meal" (*Avena sativa*, and *var. nuda*); "rew will hardly grow" (*Ruta graveolens*); "fetherfew prospereth exceedingly" (*Matricaria parthenium*); "southern wood is no plant for this country" (*Artemisia abrotanum*), "nor rosemary" (*Rosmarinus officinalis*), "nor bayes" (*Laurus nobilis*); "white satten groweth pretty well" (*Lunaria rediviva*), "so doth lavender-cotton" (*Santolina chamæcyparissus*); "but lavender is not for the climate" (*Lavandula vera*); "pennyroyal" (*Mentha pulegium*); "smallege" (*Apium graveolens*); "ground-ivy, or ale-hoof" (*Nepeta glechoma*); "gilly-flowers will continue two years" (*Matthiola incana* and *Cheiranthus cheiri*); "fennel must be taken up, and kept in a warm cellar all winter" (*Foeniculum vulgare*, see below); "houseleek prospereth notably" (*Sempervivum tectorum*); "hollyhocks" (*Althæa rosea*); "enula campagna, in two years' time, the roots rot" (*Inula helenium*); "coriander" (*Coriandrum sativum*) "and dill" (*Anethum graveolens*) "and annis thrive exceedingly" (*Sison anisum*), "but annis-seed, as also the seed of *fennel*, seldom come to maturity" (see above); "clary never lasts but one summer, the roots rot with the frost" (*Salvia sclarea*); "sparagus thrives exceedingly" (*Asparagus officinalis*), "so does garden-sorrel" (*Acetosa acetosa*), "and sweet-bryer, or eglantine" (*Rosa rubiginosa*); "bloodwort but sorrily" (*Rumex sanguineus*, see above); "but patience" (*R. patientia*, see above), "and English roses very pleasantly" (*Rosa canina* and others); "celandine, by the west-countrymen called kenningwort, grows but slowly" (*Chelidonium majus*); "muschata as well as in England" (*Malva moschata*); "dittander, or pepperwort, flourisheth notably" (*Lepidium latifolium*), "and so doth tansie" (*Tanacetum vulgare*). And of additional fruit-trees: "quinces, cherries, damsons set the dames a work, marmalad and preserved damsons is to be met with in every house" (*Prunus domestica*); and "barberry-trees" (*Berberis vulgaris*).

In his Supplementary account, Josselyn 2d voy. 77 mentions the "mandrake, it is a very rare plant, the Indians know it not, it is found in the woods about Pascataway" (*Podophyllum peltatum*); "the yellow lysimachus of Virginia" called "tree-primrose" (*Oenothera biennis*); "herba-paris, one-berry, herb true love, or four-leaved night-shade" (*Trillium erectum*); and "fuss-balls . . . . bigger by much than any I have seen in England" (*Lycoperdon*). — In the preceding identification of the plants mentioned by Josselyn, it will be observed, that I have in most instances followed Russel in trans. agricult. and Tuckerman in archæolog. amer. iv.

"In this year." (Chalm., and Holmes), governor Sayle of Carolina, dissatisfied with Port Royal, removing Northward to the neck of land between Ashley and Cooper rivers, where he laid out a town to be called in honour of the king "Charleston."

"The same year" (Charlev., and Holmes), at St. Mary's Fall, congress between the French and the aboriginal Tribes; and submission professed by the latter to the king of France.

"June 14th" (narrat., A. White edit. 7), Frederick Martens of Hamburg, on a whaling voyage, arriving in Spitzbergen. Among the plants observed, he mentions "four crowsfeet," the fourth having "but one long stalk whereon sprouted out one single leaf" (*Ranunculus nivalis*), another, fig. 10 (*R. sulphureus*), another, burning the tongue, its flowers "small and the seed-vessels are like one another" (*R. Lapponicus*), the third, burning the tongue, very small and white-flowered, its "leaves are thick and juicy" (*R. pygmaeus*); a "small plant exactly like to these, only the flowers" purple, "and the leaves not so juicy" (*Saxifraga cernua*); "the white poppy whereof we stuck the flowers in our hats" (*Papaver nudicaule*); scurvy-grass, "much weaker than the scurvy-grass of our countries so that we eat it instead of salad" (*Cochlearia Groenlandica*); an herb with "smooth-edged leaves by pares, they are rough and like mouse-ear" (*Cerastium alpinum*); a plant with "roundish leaves by pairs on creeping stalks," which are "somewhat knotty and woody" (*Andromeda tetragona*); an herb that "agreeth in its leaves with the strawberry," but "the flower is yellow" (*Potentilla nivea*); "a kind of stone-crap, but the leaves are rough and hairy," the flowers "purple" (*Saxifraga biflora*); "a very pretty herb" with "thick prickly and sad green leaves like those of aloes, a brown naked stalk" whereon "hang round heads of flesh-coloured flowers" (*S. stellaris*); a "small house-leek" with leaves "indented and very like those of our dasies" (*S. nivalis*); *S. rivularis* t. H. f. c (Spreng.); "red sorrel," the "leaves of that of Spitzbergen are red" (*Oxyria digyna*); "a small snake-weed," the root "lieth twisted in the ground" (*Polygonum viviparum*) and *Salix Polaris* t. G. f. b (Spreng.).

"In this year" (Winckl.), arrival of Paul Hermann in Ceylon, meeting with *Justicia Moretiana* B. 3. 1, *Isolepis tristachya* 47. 2 or *Scirpus* (*Oncostylis*) *capillaris* (Pers.), *Mollugo pentaphylla* 7, *Samara laeta* 31, *Elaeagnus latifolia* 39. 2, *Spermacoce articularis* 20. 3, *Ardisia humilis* 103, *Chironia trinervia* 67, *Impatiens cornuta* 16. 1, *Lahaya spadicea* 65. 2, *Quirivelia Zeylanica* 12. 1, *Wrightia Zeylanica* 12. 2, *Drosera Burmanni* 94. 2, *Burmannia disticha* 20. 1, *Asparagus falcatus* 13. 2, *Memecylon capitellatum* 30, *Tribulus lanuginosus* 106. 1, *Euphorbia parviflora* 105. 2, *Gomphia Zeylonica* 56, *Cistus Aegyptiacus* 36, *Leucas biflora* 63. 1, *Cleome dodecandra* 100. 1, *Connarus Asiaticus* 109, *Polygala theezans* 85, *Dolichos medicagineus* 84. 2, *Stylosanthes mucronata* 106. 2, *Alysicarpus vaginalis* 49. 1, *Desmodium biarticulatum* 50. 2, *D. heterophyllum* 54. 1, *Indigofera hirsuta* 14, *Tephrosia maxima* 108. 2, *Inula Indica* 55. 2, *Antidesma Zeylanica* 10, *Acacia pennata* 1, *Asplenium falcatum* 43, *Pteris crenata* 87, *Adiantum caudatum* 5. 1, and *Menispermum peltatum* pl. 101. — After residing there as a physician he returned "in 1679," and the plants he collected were published by Burmann "in 1737" under the title of Thesaur. ceilan.

Waltheria Indica of Tropical climates from Africa throughout the Malayan and Polynesian archipelagoes. Suffruticose, yellow-flowered, and two to three feet high, called in Burmah "penlay htse" (Mason); observed by Hermann — (Burm. pl. 68), and Moon, on Ceylon; by Nimmo in both Concans, and by Law "common on sandstone hills at Badamee, Bagulkote," in the environs of Bombay (Graham); by Mason in Burmah, enumerated as indigenous; by Blanco, in the street of a town on the Philippines; by myself, to all appearance indigenous on Feejeean, and Hawaiian Islands. Westward, by Bojer on the Mauritius Islands; by myself, on Zanzibar; and is known to grow in Equatorial Africa along the Atlantic (R. Brown cong., and Webb in fl. Nigr.). Farther West, was observed by myself along roadsides and in open situations around Rio Janeiro; is known to occur in other parts of Tropical America (A. Dec.), and according to Chapman as far North as the point of Florida. Transported to Europe, is described by Plukenet pl. 150.

"1672 A. D." (art de verif.), in Japan, the Dutch subjected to new exactions depriving them of expected profit. They however persisted in maintaining trade.*

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* *Melianthus major* of Austral Africa. Brought in this year to Europe — (Linn.), and somewhat later described by Hermann lugd. 117 (Spreng.); continuing under cultivation, and thence introduced into the greenhouses of Northeast America. Known to grow wild in Austral Africa (Pers.).

"In this year" (Sieb. elucid Vries p. 69), the Kurils first made known to the Japanese, a coaster driven by a storm among the Southernmost islands.

"In this year" (Winckl.), Georg Frank von Frankenau publishing his Lex. veget. usual. — He died "in 1704."

"The same year" (Blair), by the French under Louis XIV., Utrecht captured and a great part of Holland overrun.

"Aug. 12th" (Mather, and Holmes), *eclipse of the sun*, total in New England.

"The same year" (Blair), by Cassini and Picard, the Longitude determined by *eclipses* of Jupiter's satellites; and for the first time, the relative position of places on the Earth's surface satisfactorily ascertained.

At this time (Spreng.), Barrelier writing his account of plants observed in Italy, France, and Spain, enumerating *Salvia Barrelieri* n. 186, *S. multifida* 220, *S. valentina* 1317, *S. Lusitanica* 167, *Valeriana supina* 868, *Phleum asperum* 28. f. 2, *Bromus erectus* 13. f. 1, *Achnodonton tenue* 14. f. 1, *Briza humilis* 15, f. 2, *Chrysurus cynosuroides* 4, *Melica pyramidalis* 95. f. 1, *Koeleria phleoides* 123. f. 1, *Festuca stipoides* 76. f. 1, *Avena fragilis* 905, *Poa Cilianensis* 743, *Galium linifolium* 583, *G. maritimum* 81, *Anchusa stylosa* 578, *Campanula diffusa* 453, *C. cochlearifolia* 454, *Trachelium coeruleum* 683, *Atropa frutescens* 1173, *Viola Zoysii* 691, *Atriplex glauca* 733, *Salsola polyclonos* 275, *Ligusticum ferulaceum* 836, *Statice dichotoma* 805, *Daphne vermiculata* 231, *Polygonum Bellardi* 560. f. 2, *Gypsophila perfoliata* 1002, *Dianthus ferrugineus* 497, *Silene longiflora* 380, *Oxalis Barrelieri* 1139, *Reseda undata* 588, *Euphorbia terracina* 833, *E. pilosa* 885, *Cistus sericeus* 1315, *Helianthemum Italicum* 366, *H. torosum* 446, *H. racemosum* 293, *H. hirtum* 488, *Teucrium thymifolium* 1062, *T. flavescens* 1072, *T. Valentinum* 1048, *T. pycnophyllum* 1091, *T. libanotis* 1090, *T. pumilum* 1092, *T. angustissimum* 1080, *T. coeleste* 1081, *Sideritis glauca* 250, *S. linearifolia* 172, *Marrubium candidissimum* 686, *Phlomis purpurea* 405, *Nepeta graveolens* 735, *Bartsia viscosa* 665, *B. spicata* 774, *Linaria villosa* 597, *Anarrhinum crassifolium* 1315, *Iberis rotundifolia* 1305, *Biscutella longifolia* 841, *Cardamine chelidonia* 156, *Hesperis alyssoides* 804, *Sisymbrium Barrelieri* 1016, *Cleome violacea* 865, *Ononis Cenisia* 1104, *O. minutissima* 1107, *O. viscosa* 1239, *Oxytropis Pallasii* 557, *Trifolium sphaerocephalum* 859, *T. badium* 1024, *Scorzonera calcitrapifolia* 800, *Atractylis humilis* 1127, *Santolina alpina* 522, *Anthemis Barrelieri* 457, *Artemisia Arragonensis* 447, *Senecio crassifolius* 261, *S. Nebrodensis* 401, *S. Barrelieri* 801, *S. rotundifolius* 145, *Cineraria longifolia* 266, *C. minuta* 1153, *Chrysanthemum pectinatum* 421, *Centaurea linifolia* 139, *C. abrotanifolia* 149, *C. hyssopifolia* 306, *C. argentea* 218, *C. leucantha* 1229, *Fucus volubilis* 1303, *Phallus Hadriani* 1258, *Clathrus flavescens* 1265, *Boletus umbellatus* 1269, *B. polycephalus*, *Physostegia Virginiana* 1152. — He died "in 1673," and his work was published "in 1714."

Diplotaxis muralis of Western Europe. Described by Barrelier pl. 131, — termed "sisymbrium murale" by Linnæus, "S. erucastrum" by Gouan, "sinapis muralis" by others, "eruca decumbens" by Moench, and known to grow in Italy and France (Pers.): observed by Thuillier near Paris; by Gouan, near Montpelier; by Chaubard, at Patras in the Peloponnesus. To all appearance wild in Britain (A. Dec.), though regarded by some writers as probably exotic.

Viola arborescens of the Mediterranean countries. A woody-stemmed species observed by Barrelier pl. 568 in Spain, — and termed "v. Hispanica fruticosa longifolia" by Tournefort inst. 421: observed by Gittard at the base of the heights of Philatra in the Peloponnesus (Chaub.).

Salsola vermiculata of the Uralian plains. Observed by Barrelier rar. pl. 215, — and Cavanilles iii. 215, in Portugal and Spain (Pers., and Steud.); termed "kali fruticosum incanum folliis exsuccis" by Buxbaum. cent. i. pl. 15; observed by Pallas trav. i. 337 on the Lower Volga; by Gmelin iii. pl. 18, in Siberia.

Phalaris aquatica of the Mediterranean countries. Described by Barrelier rar. pl. 700; — termed "gramen spicatum perenne semine miliaceo tuberosa radice" by Tournefort inst. 519; and known to grow in the Tiber and in Algeria (Pers., and A. Dec.). Eastward, was observed by Sibthorp in watery places in Asia Minor; and by Delile in Egypt, from Alexandria to Cairo. By European colonists, was carried to Southwest Australia, where according to J. Drummond it has become naturalized.

Beckmannia erucaeformis of Subarctic Asia and America. A grass described by Barrelier rar. pl. 29 — (Pers.). Observed by Bieberstein along the Taurian mountains; by Pallas iv. 443 abounding along tributaries of the Yenisei; by Gmelin, throughout Siberia to Kamtchatka. Farther East, by E. James on the Platte; by Nuttall, at Fort Mandan on the Upper Missouri; and is known to grow at Hudson's Bay (Pers.).

"1672, A. D." (Minot, and Holmes), a fort built by the French at Michilimackinac. "May 13th" (Churchill coll.), leaving the "Lac des Puans" (Michigan), the Jesuit F. Marquette with six other Frenchmen proceeded in two canoes through the territory of the "Folle Avoine and Iliquois," tribes at peace with France. Sometimes carrying their canoes, and sometimes carried in them, they dis-

covered "June 17th" (Charlev., and Holmes) the "great river Mississippi." Entering and descending, "at the end of several days solitude, they came among savage Indians, were friendly received, and heard that the sea was within two or three days sail of them; which was the gulph of Mexico. Thus he discovered all that inland part of North America along the river, from thirty-eight to thirty-four degrees of north latitude, lying on the back of Canada, Virginia, etc. down to Florida."

"In this year" (Humb. cosm. ii.), experiments on the length of the seconds' pendulum at Cayenne by Richer, and on the West coast of Africa by Varin: demonstrating, decrease of gravity from the pole to the Equator.

"In this year" (Linn. fl. suec.), Til-lands publishing his Catalogue of plants around Aboa, enumerating *Ranunculus reptans* 57: — a Second edition with plates "in 1683," and died "in 1692" (Spreng.).

"In this year" (Spreng.), Kyllingius publishing his memoir in the Act. Hafn.; — "in 1688," his Virid. Dan.; and died "in 1696."

"1674, Feb. 9th" (Chalm., and Holmes), signing at Westminster of a treaty of peace between England and Holland.

"In this year" (Linn. fl. suec.), Nic. Grimmius of Gothland resident physician on Ceylon. — He enumerates Ceylon plants in Acad. nat. Cur. and Act. Haffn. as "planta mirabilis distillatoria" (*Nepenthes distillatoria*) "zedoaria Zeylanica" (. . . .); "planta stercoraria" (. . . .), "convolvulus syriacus" (*Ipomaea obscura*). He died "in 1711" (Spreng.).

"In this year" (J. E. Smith, and Spreng.), Boccone publishing his plants observed in Sicily, Malta, Italy, and France, enumerating *Conyza Aegyptiaca* sic. 7, *Poa Sicula* t. 33, *Andropogon distachyos* t. 11, *Scabiosa ureeolata* t. 52, *Parietaria Lusitanica* 24, *Plantago macrorhiza* t. 15, *Tillaea muscosa* t. 29, *Campanula mollis* 45, *Achyranthus argentea* 9, *Paronychia echinata* t. 20. f. III. 39, *Eryngium tricuspidatum* 47, *Athamantha Sicula* 14, *Bubon Siculus* 27. 28, *Statice monopetala* 16. 17, *Allium Siculum* 33, *Glinus lotoides* 11, *Nepeta Apuleii* 25, *Linaria multicaulis* 19, *Biscutella raphanifolia* 23, *Cardamine Graeca* 44, *Hesperis Africana* 42, *Malope malacoides* 8, *Ononis variegata* 38, *Senecio delphinifolius* 51, *S. chrysanthemifolius* 36, *Inula foetida* 13, *Centaurea sempervirens* 39, *Cynomorium coccineum* 43, *Ambrosinia Bassii*, *Poterium hybridum* 30.

Sida rhombifolia of Tropical Africa. Transported to Europe, was observed by Boccone rar. sic. 6 on Sicily — (Spreng.), and was received by Cavanilles i. pl. 3 from the Canaries (Webb). Known to grow on the Cape Verd Islands (Webb), and from Guinea (J. D. Hook.) to Abyssinia (A. Rich.); observed by Roxburgh in Bengal, according to Drury indigenous and yielding fibres. Clearly by European colonists, was carried to the Mauritius Islands (Boj., and A. Dec.), and to America: was received by Dillenius pl. 172, and Cavanilles, from "India orientali" and "Jamaica" (Pers.); by Hooker, from Buenos Ayres; by Decandolle, from Brazil, the West Indies, and Carolina; was observed by Baldwin at 31° in Florida; by N. A. Ware, at "St. Johns, about settlements;" by Chapman, "around dwellings, Florida to North Carolina and westward."

Centaurea Melitensis of the Mediterranean countries. An annual described by Boccone sic. 35 — (Spreng.); termed "carduus stellatus luteus capitulo minus spinoso" by Tournefort inst. 440, and known to grow on Melita and about Montpelier, observed by Sibthorp from the Peloponnesus to Rhodes. By European colonists was carried to Northeast America (A. Dec.).

"The same year" (hist coll. Mass. i. 141, and Holmes), a historical account of the aboriginals of New England, their numbers, customs, manners, religion, government, and condition, completed by Daniel Gookin.

"1675 A. D." (Klapr. mem. iii. 195), Simayé tsaghema with two companions in a large junk, sailing from Fatsisio Southeast reached a group of "eighty islands" (Bonin Islands), and made a map of them. The islands continued uninhabited, though long known to the Japanese under the name of their discoverer Okassa wara.

"June 24th" (Holmes), in New England, beginning of the second serious war with aboriginal Tribes: incited by Metacom, called "king Philip." — In the following year, the war was brought to a close by the death of Metacom.

"In this year" (J. E. Smith, Spreng., and Winckl.), after his Indice piant. Bologn. "in 1652," Zanoni publishing his Istor. Bot., enumerating* *Stachys glutinosa* pl. 81, *Sanguisorba media* 138, *Borago Cretica* 37, *Nonea violacea* 35, *Guettarda Matthiola* 154. 155, *Bupleurum Baldense* 40, *Sium*

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* *Sida carpinifolia* of Tropical America. Abounding in waste ground and near dwellings in Brazil and the West Indies (A. Saint-Hil., and A. Dec.). Transported to Europe, is described by Zanoni 114 — (Spreng.), Linnæus, Jacquin ic. rar. i. pl. 135, and Cavanilles v. pl. 134 and i. pl. 3: by European colonists also, was carried to Madeira and the Canary Islands (Pers., and Webb); to the Mauritius Islands, observed there along roadsides by Bojer p. 32.

Siculum 128, *Silene paradoxa* 109, *S. Lusitanica* 111, *Euphrasia tricuspidata* 76, *Sisymbrium tanacetifolium* 72, *Cytisus purpureus* 63, *Serratula centauroides* 95, *Gnaphalium lavandulaefolium* 71, *Buphthalmum floseulosum* 21, *B. aquaticum* 24, *Aster? laevigatus* 22, *Centaurea atrata* 58, *C. Romana* 42. 43, *C. Ragusina* 92, *Helianthus trachelifolius* 57, *Cymbidium praemorsum* 16, *Arum pentaphyllum* 23, *Desmanthus diffusus* 123, and *Onoclea sensibilis*. — He died "in 1682."

Dracocephalum Ruyschiana of the Uralian plains. Described by Zanoni 146 — (Spreng.), and Morison iii. 11. pl. 5 (Pers.); observed by Pallas trav. i. 64 along the Volga; and known to grow as far West as Austria.

"In this year" (Targ.), Michetti publishing his Lexicon botanicum.

"The same year" (Lubke and Lutrow), in London, St. Paul's church commenced; on a plan furnished by Christopher Wren. — The building was completed "in 1710."

"1676 A. D." (Chalm., and Holmes), by Charles II., troops sent to Virginia: the first troops sent to any of the English colonies for the suppression of insurrection.

"In this year" (Spreng.), Dodart publishing his Mem. hist. plant., enumerating *Heliotropium parviflorum* p. 82, *Campanula planiflora* 118, *Mitella diphylla* 106, *Pentstemon campanulatus* 78, *Astragalus Carolinianus* 64, *Trifolium subterraneum* 122, *Grindelia Siberica* 62, *Chrysanthemum maximum* 66, *Achillea odorata* 101, *Centaurea Sicula* 86, and *Urtica Dodartii* 130,* *Campanula Americana* iv. pl. 18, *Astragalus Canadensis* 65. — He died "in 1707."

Silene quinquevulnera of Europe and the adjoining portion of Asia. An annual described by Dodart 98 — (Spreng.), termed "lychnis hirta minor flore variegato" by Tournefort inst. 338, — and known to grow from Britain throughout middle Europe to Siberia (Engl. bot. pl. 86, Lam. fl. fr., and Pers.): observed by Scopoli in Carniolia; by Sibthorp, and Chaubard, from the Peloponnesus to Caria. By European colonists was carried to Northeast America, observed "near Charleston" (Chapm.).

"In this year" (Spreng.), Magnol publishing his Bot. Monsp., enumerating *Stipa juncea* 121, *Crassula Magnolii* 237. 238, *Teesdalia regularis* 187, *Hutchinsia procumbens* 185, and *Linkia nostoc* 180: — a second edition "in 1686" (Winckl.).

Silene nocturna of the Mediterranean countries. An annual described by Magnol bot. 170 — (Spreng.), Morison 5. pl. 36, and Dillenius elth. pl. 36; known to grow in France and Spain (Lam. fl. fr., and Pers.): observed by Moench in Germany; by Sibthorp, and Chaubard, from the Peloponnesus to Constantinople, sometimes in vineyards. By European colonists was carried to Northeast America, "introduced sparingly in Pennsylvania" (Pers., Schweinitz, and A. Gray).

"In this year" (Spreng., and Winckl.), Rheede publishing his Hort. malabar., enumerating *Gratiola trifida* xii. 36, *G. rotundifolia* ix. 57, *Justicia echioides* ix. 46, *Ruellia infundibuliformis* ix. 62, *Utricularia coerulea* ix. 70, *Piper amalago* vii. 16, *Rotala verticillata* ix. 81, *Rumphia Amboinensis* iv. 11, *Ficus venosa* iii. 64, *F. septica* iii. 59, *F. ampelos* iii. 60, *F. cotoneaefolia* iii. 57, *F. rufescens* iii. 62, *Hypaelytrum nemorum* xii. 58, *Scirpus articulatus* xii. 71, *Fimbristylis argentea* xii. 54, *Isolepis squarrosa* xii. 38, *Cyperus canescens* xii. 42, *Kyllinga umbellata* xii. 63; *K. monocephala* xii. 53, *K. triceps* xii. 52, *Perotis latifolia* xii. 62, *Festuca Indica* xii. 45, *Ischaemum muticum* xii. 49, *Eriocaulon setaceum* xii. 68, *Hedyotis racemosa* x. 25, *H. auricularia* x. 32, *Ixora alba* ii. 14, *Cissus latifolia* vii. 11, *C. carnosa* vii. 9, *Pothos scandens* vii. 40, *Convolvulus Medium* xi. 55, *C. maximus* xi. 53, *Ipomaea tridentata* xi. 65, *I. grandiflora* xi. 50, *I. repens* xi. 52, *I. pes-caprae* xi. 57, *I. campanulata* xi. 56, *Walkera serrata*

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* *Verbena urticifolia* of Northeast America. The *white-flowered vervain*, transported to Europe, described by Dodart — (Spreng.), and Morison iii. pl. 25. Westward, is known to be peculiar to North America, where according to Hooker it grows throughout Canada to the Saskatchewan: was observed by myself from 45° to 40° along the Atlantic, chiefly along roadsides and in waste ground; by Pursh, from New England to Carolina; by Michaux, in Virginia and Carolina; by Elliot, in South Carolina; by Beck, on the Mississippi near St. Louis; and by Nuttall, on the Arkansas.

Urtica (*Laportea*) *Canadensis* of Northeast America. The *woodland nettle*, alternate-leaved with stinging hairs, transported to Europe, described by Dodart — (Spreng.), Plukenet alm. pl. 239, and Linnæus; said to occur also in Siberia (Pers.). Westward, was observed by Kalm near Montreal; by myself, from 45° to 42° along the Atlantic, in rich soil in the forest; by Schweinitz, at 36° in Upper Carolina; by Elliot, on the Alleghanies of South Carolina; by Chapman, "Florida, and northward;" by Short, in Kentucky; and by Nuttall, on the Arkansas.

Zornia diphylla of Equatorial Africa? Observed by Rheede ix. pl. 82 in Malabar, — by Roxburgh in other parts of Hindustan, by Graham "common in the rains" in the environs of Bombay, but no native names are given (A. Dec.). Westward, is known to grow in Equatorial Africa along the Atlantic (fl. Nigr. p. 301). Probably by European colonists, was carried to the West Indies (Pers., and Schlecht.).

v. 48, *Viola* (*Hybanthus*) *enneasperma* ix. 60, *Impatiens latifolia* ix. 48, *I. fasciculata* ix. 47. 49, *Desmochaeta atropurpurea* x. 59, *Celosia argentea* x. 39, *Tabernaemontana alternifolia* i. 43, *Monetia diacantha* v. 37, *Asclepias alexicaca* ix. 13, *Ceropegia candelabrum* ix. 16, *Gomphrena hispida* ix. 72, *Aralia Chinensis* ii. 26, *Drosera Indica* x. 20, *Tradescantia Malabarica* ix. 63, *T. axillaris* x. 13, *Amaryllis latifolia* xi. 39, *Achras dissecta* iv. 25, *Loranthus elasticus* x. 3, *L. loniceroides* vii. 29, *Amyris protium* vii. 23, *Daphne* (*Cansiera*) *monostachya* vii. 4, *D.* (*C.*) *polystachya* vii. 2, *Sapindus laurifolius* iv. 19, *Cassia arborescens* vi. 9. 10, *Caesalpinia mimosoides* vi. 8, *Guilandina axillaris* vi. 20, *G. paniculata* vi. 19, *Heritiera littoralis* vi. 21, *Melastoma Malabathricum* iv. 42, *Bergia verticillata* ix. 78, *Rhizophora candel* vi. 25, *R. cylindrica* vi. 53, *Garcinia Malabarica* iii. 41, *Eugenia corymbosa* v. 27, *E. parviflora* v. 19, *Grewia Orientalis* v. 46, *G. microcos* i. 56, *Lagerstroemia hirsuta* iv. 22, *Delima sarmentosa* vii. 54, *Uvaria Zeylanica* ii. 9, *Nepeta Madagascarensis* xi. 25, *Torenia Asiatica* ix. 53, *Aeginetia Indica* xi. 47, *Diceros longifolius* ix. 87, *Hygrophila ringens* ix. 64, *Cleome monophylla* ix. 34, *Melochia corchorifolia* ix. 73, *Connarus pinnatus* vi. 24, *Sida populifolia* vi. 45, *Hibiscus Surattensis* vi. 44, *H. vitifolius* vi. 46, *Dalbergia lanceolaria* vi. 22, *Crotalaria quinquefolia* ix. 28, *Dolichos gladiatus* viii. 44, *D. rotundifolius* viii. 43, *D. catiang* iii. 41, *Sesbania aculeata* vi. 27, *Aeschynomene Indica* ix. 18, *A. pumila* ix. 21, *Indigofera glabra* ix. 67, *I. hedysaroides* ix. 36, *Malaxis Rheedii* xii. 27, *Cymbidium aloefolium* xii. 8, *C. ovatum* xii. 7, *Artocarpus pubescens* iii. 32, *Seleria lithosperma* xii. 48, *Tragia mercurialis* x. 82, *Boehmeria interrupta* ii. 40, *Sagittaria obtusifolia* xi. 43, *Arum divaricatum* xi. 20, *Croton coccineum* v. 22, *Trichosanthes caudata* viii. 16, *T. nervifolia* viii. 17, *Momordica muricata* viii. 10, *Antidesma sylvestris* v. 26, *Cocculus radiatus* vii. 3, *C. orbiculatus* xi. 62, *Myristica tomentosa* iv. 5, *Acacia intsia* vi. 4, *Acrostichum heterophyllum* xii. 29, *Polypodium acrostichoides* xii. 47, *Asplenium ambiguum* xii. 15, *Onoclea scandens* xii. 35, *Lygodium pinnatifidum* xii. 33, *L. flexuosum* xii. 32, and *Lycopodium phlegmaria* xii. 14.* — He died "in 1691," and the Twelfth and concluding volume was published "in 1703."

Neptunia oleracea of Equatorial Africa. Observed by Rheede ix. pl. 20 in Malabar; — by Nimmo, in "tanks throughout the Concan" (Graham); by Roxburgh, and Wallich, as far as Silhet, but having modern names only (A. Dec.); by Loureiro, in Cochinchina, its leaves eaten in salads (Pers.). Westward from Hindustan, is known to grow in Equatorial Africa along the Atlantic (Rich. fl. Seneg., Guill. and Perr., and Benth. fl. Nigr.). Probably by European colonists, was carried to Tropical America, where it has been observed along the Magdalena (H. and Bonpl.), and at Guayaquil (Benth.).

Crotalaria verrucosa of Equatorial Africa? Observed by Rheede ix. pl. 29 in Malabar; — by Graham, "common in Bombay during the rains" and found by Law "in the Sholapore Districts;" by Roxburgh, in other parts of Hindustan; by Mason, in Burmah; and known to grow in Ceylon, Java, and the Philippines (Pers.). Westward from Hindustan, is known to grow seemingly indigenous on the Mauritius Islands (Pers., and A. Dec.). By European colonists, was carried to the West Indies, where it continues in cultivated ground on Jamaica (Macfad.), and St. Thomas.

Oldenlandia herbacea of Equatorial Africa? Observed by Rheede x. pl. 35 in Malabar — (Spreng.); known to occur also on Ceylon (N. L. Burm. ind. pl. 14, and Pers.), and from Madagascar to Senegal (herb. Dec.). Probably through European colonists carried to Hayti (A. Dec.).

Elephantopus scaber of Equatorial Africa. Called in Bengalee "samdullum" (Lindl.), and observed by Rheede x. pl. 7 in Malabar; — by Wight, and Graham, in other parts of the peninsula as far as Bombay; by Roxburgh, as far as Bengal; by Mason, in Burmah, enumerated as indigenous; by Blanco, on the Philippines, unknown to the natives though frequent along roadsides, by myself also in the vicinity of Manila. Westward, by Grant towards the sources of the Nile, in ° 1°

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* *Wollastonia biflora* of Tropical Eastern Asia. An erect "annual" called in the environs of Bombay "soonkee" (Graham): observed by Rheede x. 40 in Malabar; — by Graham, as far as Bombay, "about a foot high" flowering "in the rains, very common on the Ghauts" and covering "the roofs of houses at Kandalla;" by Roxburgh, in Eastern Hindustan: and by Mason, indigenous in Burmah. The species observed by myself from Manila to the Feejeean, Tongan, and Samoan Islands, hardly corresponds with the above description, being much taller.

Vinca (*Catharanthus*) *pusilla* of Hindustan? A small annual observed by Rheede ix. pl 33 in Malabar; — by Lush, on "the Deccan," flowering "in the rains" (Graham); by Retz, a troublesome weed in the gardens of Tranquebar (Pers.); by Roxburgh, in other parts of Hindustan; and according to Royle, is applied as an external stimulant in cases of lumbago (Lindl.).

Ipomœa pes-tigridis of Tropical Eastern Asia. Observed by Rheede xi. pl. 59 in Malabar; — by Graham, "common everywhere during the rains" in the environs of Bombay; by Roxburgh, in other parts of Hindustan; by Mason, in Burmah; and is known to grow in the Malayan archipelago (Choisy). By European colonists, was carried to the West Indies, where it has been found in cultivated ground on St. Thomas (Schlecht., and A. Dec.).

42′ S., alt. five thousand feet," the flowers lilac. Transported to Europe, is described by Breynius pl. 34, Plukenet alm. pl. 388, and Dillenius elth. pl. 106. "E. Carolinianus" was observed by Conrad as far North as 40° near Philadelphia; by myself, on the Delaware peninsula; by Croom, near Newbern; by Elliot, in South Carolina; by Nuttall, in Maryland, Virginia, and Georgia; by N. A. Ware, in Florida; by Chapman, "Florida to Mississippi, and northward;" by E. James, in Louisiana; by Pitcher, in Arkansas; and by Sloane i. pl. 156, on Jamaica.

Herpestis Monnieri of Tropical and Subtropical America? A smooth small and somewhat creeping herb, having a Sanscrit name (Pidd., and A. Dec.), observed by Rheede x. pl. 14 in Malabar; — by Graham, around Bombay "generally to be met with on the margins of tanks," by myself on the Deccan; by Roxburgh, as far as Bengal, its expressed juice rubbed on parts affected with rheumatic pains; by Mason, in Burmah, enumerated as indigenous; by myself, on the Philippines, and Hawaiian Islands; is known to grow also on the Marquesas Islands (Pers.), New Zealand (Raoul), and in Tropical Australia (Benth.). Westward, is known to grow in Yemen (Schimp., and herb. Dec.); and in Equatorial Africa (Boj., and Benth.). Farther West, according to A. Gray, grows as far North as 38°, "Maryland and southward along the coast;" was observed by Elliot, and Leconte, in South Carolina and Georgia; by Chapman, "Florida to North Carolina, and westward;" by Nuttall, along the Mississippi near New Orleans; by Sloane pl. 129, Jacquin obs. pl. 1, and Swartz obs., in the West Indies (Pers.); by Humboldt and Bonpland, on Cuba (Kunth); by myself, in Brazil, and Peru; and was received by Bentham from Buenos Ayres and Chili.

Limnanthemum cristatum of Madagascar or Hindustan. An aquatic with small white flowers growing from the petioles, observed by Rheede xi. pl. 29 in Malabar, — by Graham in "Kandalla tank, common in the Concans," by Roxburgh cor. ii. pl. 105 in Bengal. Westward, by Bojer on Madagascar, and received by Grisebach from the Mauritius Islands (A. Dec.).

"1677 A. D." (Chalm., and Holmes), in England, the Northern boundary of Massachusetts fixed at three miles North of the Merrimack: but pending negotiations between Charles II. and the proprietor of Maine, the proprietor's interest was purchased by an agent of Massachusetts.

"In this and the following year" (Humb. cosm. v.), an important catalogue of *Southern stars* made by Halley at St. Helena: including however none under the sixth magnitude.

"1678 A. D." (Humb. cosm. ii.), Lister maintaining that each kind of rock has its own fossils: and that these are all "specifically different" from the somewhat similar ones in the present sea — Lister died "in 1711."

"Sept. 6th" (Blair), the Popish plot in England discovered by Oates.

"In this year" (coll. hist. vi. 223, and Holmes), Salem in New England containing "eighty-five houses, and three hundred polls:" and New York city (Chalm. i. 597), "three hundred and forty-three houses."

"In this year" (Spreng.), Jac. Breyn publishing his Exot. plant. cent., enumerating * *Salvia paniculata* pl. 85, *Wachendorfia hirsuta* 37, *Eriocaulon triangulare* 50, *Leucadendron decurrens* 9, *Lobelia pinifolia* 87, *L. coronopifolia* 88, *L. Breynii* 89, *Chironia linoides* 90, *Myrsine Africana* 5, *Phylica brunioides* 7, *Brunia nodiflora* 10, *Staavia radiata* 82, *Laserpitium pruthenicum* 84, *Tulipa Breyniana* 36, *Eriospermum latifolium* 41, *Erica cerinthoides* 33, *Gnidia simplex* 6, *Cassia grandis* 14, *C. mollis* 21, *C. flexuosa* 23, *C. glandulosa* 24, *Melastoma holosericeum* 2, *Oxalis speciosa* 46, *Mesembrianthemum molle* 81, *M. expansum* 79, *Leonotis leonurus* 86, *Pelargonium lacerum* 59, *Polygala teretifolia* 49, *Borbonia cordata* 28, *B. crenata* 28, *Clitoria Brasiliana* 32, *Colutea frutescens* 29, *Psoralea aphylla* 25, *Trigonella spinosa* 33, *Athanasia capitata* 78, *Artemisia vermiculata* 12, *Gnaphalium nudifolium* 71, *Senecio pubigerus* 65, *S. longifolius* 63, *S. purpureus* 67, *Inula pinifolia* 64, *Cenia turbinata* 73, *Osteospermum moniliferum* 76, *Othonna bulbosa* 66, *Stoebe ericoides* 10, *Croton solanifolium* 54, *Phyllanthus rhamnoides* 4, *Leptocarpus simplex* 91, *Inga cinerea* 15, *Mimosa sensitiva* 16, *M. polydactyla* 18, *Asplenium nidus* 99, *A. Breynii* 97, *Lycopodium plumosum* 100–1, and *Lygodium scandens*, — Breyn described in the Ephem. nat. cur. *Metastelma parviflorum* i. 4. 138, and *Cynanchum Indicum* (Spreng.).

"In this year" (Spreng.), after his Hort. Bles. auct. "in 1669," and Umbell. "in 1672," Morison publishing his Hist. Plant., enumerating *Laserpitium hirsutum* 9. 15, *Cachrys microcarpa* 9. 1. 1, *Daucus Mauritanicus* 9. 13. f. 6, *D. polygamus* 9. 13. f. 5, *Myrrhis colorata* 9. 10. f. ult., *Osmorhiza*

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* *Cotula coronopifolia* of the seashore of Austral Africa. Described by Breyn. exot. 76 — (Spreng.), and already naturalized in Friesland in the days of Linnæus sp. p. 1257; speading subsequently to various points along the seashore from Germany to Portugal and Cadiz (Pers., Koch, and Reuter); possibly by European colonists also, carried to "South America and New Zealand." Known to grow in Austral Africa (Pers.), the home according to A. Decandolle of all the species of Cotula.

Claytoni 9. 11. f. 1, *Cryptotaenia Canadensis* 9. 11. f. 8, *Chaerophyllum procumbens* 9. 11. f. ult., *Meum inundatum* 9. 5. f. ult., *Narcissus anceps* 4. 9. 13, and *Passiflora lutea* 1. 2. 3, *Heliopsis laevis* 6. 3. f. 69 (Pers.), *Pontederia cordata* 15. 4. f. 8.

Saxifraga geum of the mountains of Ireland and middle Europe. Described by Morison xii. pl. 9, — termed "geum rotundifolium minus" by Tournefort inst. 251, and known to grow on the mountains of Ireland (A. Dec.), and middle Europe (Moench, and Pers.): observed by Lapeyrouse pl. 14 on the Pyrenees; by Sibthorp, on mount Parnassus. Has become naturalized near Edinburgh (Engl. bot. pl. 1561 to 2093, and Bab.), also in Yorkshire and Cumberland (Wats.).

Mesembryanthemum tenuiflorum of Austral Africa. Transported to Europe, described by Morison 12. pl. 8, — Bradley i. 9, and Dillenius pl. 201; was observed by Chaubard to all appearance long naturalized on old walls at Athens. Is said to grow wild in Austral Africa (Chaub., and Gittard).

Xanthium spinosum of Austral America. A thorny kind of *bur-weed*, transported to Europe, described by Morison xv. pl. 2, * — and Magnol hort. 208; and from seeds procured in Portugal termed "xanthium lusitanicum" by Tournefort: becoming naturalized, has extended into Algeria, Sicily, Italy, and Southern France (Boissier, Gusson., Seguier, and Goüan); was observed by Güldenstadt in 1787, frequent in Southern Russia; subsequently, by Chaubard, and Grisebach, frequent in the Peloponnesus and on some of the Greek islands. Transported to North America as late perhaps as 1814 (as may be inferred from the silence of Walter, Michaux, and Pursh), was found by Nuttall in 1818 near dwellings from Savannah to Washington, and not foreseeing that it would become troublesome, was introduced by him as he informed me into the environs of Philadelphia; was observed by myself in 1823 in the vicinity of Boston. In the Southern Hemisphere, by European colonists also, was probably carried across the Andes into Chili (Beechey voy. 57, and A. Dec.); for it is known to be indigenous and abundant in the extensive plains on the La Plata.

Luzula nivea of Switzerland and the Tyrol. Described by Morison viii. pl. 9, — and Scheuchzer gram. pl. 7, and known to grow on the mountains of Switzerland and the Tyrol (Pers., and A. Dec.). In Scotland, planted by a gardener in Bromhall woods (Balfour, and Bab.), but not known to have extended itself into the surrounding country.

"1679 A. D." (Chalm., and Holmes), arrival in New England of the first collector of customs, Edward Randolph. He was persistently opposed, the colonists deeming "their chartered privileges invaded." — He returned two years afterwards, but was unable to execute his office.

"May 26th" (Macaulay i. 2), the *Habeas Corpus* Act signed by king Charles II.

"Sept. 2d" (Pauth. 436), at Pekin, a severe *earthquake*; throwing down walls and buildings, and destroying more than "four hundred thousand" persons.

"The same year" (Dampier), the buccaneers, continuing their ravages, and islands along the North coast of the Isthmus first made a rendezvous. In their vessels, one or more "Moskito indians" were employed; partly it would seem, from their knowledge of the means of procuring provision. These Indians are described by Dampier as "tall, well made, raw boned, long visaged, look stern" (Malayans?, see below, Guam), having no form of government, but cultivating in small plantations "*plantain* trees" (*Musa sapientum*), "*yames*, potatoes" (*Batatas edulis?*), "indian pepper" (*Capsicum*), "and *pine-apples*," of which they make an intoxicating drink.

"Towards 1680 A. D." (Kaempf., and art de verif.), Jetznako succeeded by Tsinajos, now emperor of Japan.

"1680 A. D." (Kaempf. v. 13), Cleyer in Japan, in charge of the Dutch there, and meeting with among plants *Zingiber mioga* iii. a. 3. o. 120, *Ligustrum Japonicum* iii. a. 2. o. 180, *Ficus itabu* ii. a. 10. o. 36. f. 10, *Bladhia Japonica* iii. a. 5. 6. o. 3, *B. crispa* iii. a. 2. 6. 179, *Campanula glauca* iii. a. 3. o. 119, *Euonymus pungens* iii. a. 5. 6. o. 2, *Cissus Japonica* ii. a. 7. o. 71. f. 25, *Scilla Japonica* ii. a. 5. 6. o. 53. f. 39, *Lilium speciosum* ii. a. 8. o. 191. f. 54, *L. pomponium* ii. a. 9. o. 76. f. 20, *Orontium Japonicum* ii. a. 9. o. 75. f. 18, *Houttuynia cordata* ii. a. 8. o. 189. f. 51. 52, *Alisma cordifolia* ii. a. 6. o. 53. f. 40, *Eurya Japonica* ii. a. 8. o. 192. f. 56, *Apactis Japonica* ii. a. 7. o. 70. f. 23, *Fumaria racemosa* iii. a. 3. o. 120, *Cineraria Japonica* ii. a. 9. o. 76, *Epidendrum ensifolium* iii. a. 10. o. 38, *Arum ringens* ii. a. 9. o. 75, *Rajania quinata* ii. a. 7. o. 71, and *Mertensia dichotoma* ii. a. 7. o. 73. f. 30. — He returned shortly afterwards (Spreng.).

Vinca (*Catharanthus*) *rosea* of Madagascar. Observed by Cleyer ii. a. 7. o. 72. f. 27 in Japan — (Spreng.); by Thunberg, growing in and around Nagasaki, and cultivated besides in vases, but no native name given: in the Philippines, formerly cultivated by the natives, continuing known to many of them, and called in Tagalo "cantotan" (Blanco): known to grow also in Java (Pers.): and in Bur-

* *Bromus racemosus* of middle Europe. Resembling B, secalinus but the panicle upright: described by Morison 8 pl. 7 f. 19; — observed by Smith fl. i. 128 in Britain; and known to grow in woods and pasture-land in France. By European colonists carried to Northeast America, has been observed by A. Gray in "grain-fields, not rare;" by myself, beyond the limits of cultivated ground in the environs of Philadelphia, naturalized.

mah, enumerated by Mason v. p. 432 as "exotic," called "them-bau-ma-hnyo-ban," and cultivated for ornament both by natives and Europeans. Westward, devoid of a Sanscrit name (Pidd.), and observed in Hindustan by Roxburgh, and Graham, only in the cultivated state, "common in gardens" and "in flower all the year:" and in Ceylon, only recently becoming naturalized (Moon, and Gardn.): called in Madagascar "tsi-felan-felan" (Boj.), but no specimens from that island seen by A. Decandolle. By European colonists, was carried to the Mauritius Islands, where it has become naturalized (Boj.); to Austral Africa (A. Dec.); to one locality in Guinea (flor. Nigr.); to the West Indies, where it is not mentioned by the early writers, but now occurs even in the neighbouring portion of Florida and "in the streets of Apalachicola" (Chapm.), and throughout Tropical America from Realejo in Western Mexico (Benth. bot. Sulph.) to Rio Janeiro. Transported to Europe, is described by Miller pl. 186, and Linnæus; has become frequent in greenhouses; and was observed by Clot-Bey in the gardens of Egypt.

"March 7th" (Charlev., Holmes, and voy. Belg.), leaving the mouth of the Illinois river, Father Hennepin with others proceeded up the Mississippi. At the "forty sixth" degree of North Latitude, he was stopped by falls, named by him "Falls of St. Anthony."

"March 16th" (Chalm., Belknap, and Holmes), Edward Randolph having arrived, bringing a commission separating New Hampshire from Massachusetts; the new government inaugurated at Portsmouth, by the meeting of the first assembly.

"Nov. 3d" (Blair), the *great comet:* — continuing in sight until "March 9th." From observations thereon, Isaac Newton was enabled to demonstrate, The regular revolution of comets around the sun (Holmes).

"In this year" (append. Sibth.), Morison publishing the second volume of his Hist. plant., enumerating* *Potentilla hirsuta* ii. 2. 20. 2, *Pentstemon laevigatus* ii. 5. 8. 6, *Sisymbrium Pyrenaicum* ii. 3. 7. 1, *Lavatera micans* ii. 5. 17. 9, *L. Cretica* ii. 5. 17. 5, *Ononis mitissima* ii. 2. 17. 4, *Scorpiurus muricata* ii. 2. 11. f. iv, *Medicago elegans* ii. 2. 15. 4, *M. muricata* ii. 2. 15. f. 11, *M. Gerardi* ii. 2. 15. f. 18, *M. terebellum* ii. 2. 15. f. 20, *Archemora rigida* ii. 7. f. 1 (Pers. i. p. 316), *Yucca filamentosa* ii. p. 419, *Lupinus perennis* ii. 2. 7. f. 6.

Hypericum calycinum of Eastern Europe and the adjoining portion of Asia. A low shrub described by Morison ii. 5. 35 f. 2, — termed "h. ascyrum" by Miller (Steud.), and received from Greece (Jacq. fragm. pl. 6, and Pers.); observed by Sibthorp in shaded situations near Constantinople. Seemingly naturalized at some points in Scotland (Bab.), Ireland, and on the Isle of Wight, but does not ripen seed (Wats., Bromf., and A. Dec.).

Medicago intertexta of the Mediterranean countries. An annual called in Egypt "nafal" (Del.); described by Morison 2. pl. 15. f. 7. 8. 9, — and known to grow in Barbary and Southern Europe (Pers.): observed by Forskal near Marseilles; by Delile, around Rosetta in Egypt. By European colonists, was carried to Northeast America (A. Dec.).

Medicago nigra of the West Mediterranean countries. An annual described by Morison 2. pl. 15. f. 19, — and known to grow in Southern France (Willd., and Pers.). By European colonists was carried to Northeast America (A. Dec.).

"In this year" (Spreng., and Winckl.), Breyn publishing his Prodrom., enumerating † *Gladiolus tristis* 7. f. 1, *G. angustus* 7. f. 2, *G. Lamarckii* 12. f. 1, *Antholyza ringens* 8. 1, *A. plicata* 9. 2, *Wachendorfia paniculata* 9. 1, *Rhynchospora aurea* 23, *Drosera cistiflora* 22. 2, *Crassula coccinea* 20. 1, *Lachenalia orchioides* 11. 3, *Euphorbia caput-Medusae* 19, *Capparis Breynii* 13, *Monsonia speciosa* 21. 2, *Spilanthus insipidus* 24, *Eupatorium divaricatum* 17. 2, *Pteronia oppositifolia* 17. 3, *Gnaphalium serratum* 18. 2, *G. divaricatum* 18. 3, *Helichrysum proliferum* 17. 1, *H. imbricatum* 18. 1, *H. virgatum* 16. 3, *Cineraria sonchifolia* 21. 1, and *Calendula hybrida* 14. 2: — the second part "in 1689." died "in 1697," and a new edition of the whole was published by his son Jo. Philipp Breyn "in 1734."

"1680 and 1681" (Churchill coll.), Captain Sharp returning from the Pacific, and unable "to recover the strait of Magellan," continued South as far as "sixty degrees," meeting with many ice-

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* *Trifolium medium* of Europe. The "t. pratense purpureum vulgare" of Morison ii. p. 138. n. 5 — (Afzel. linn. soc. lond. i. 237) may be compared: T. medium is described by Linnæus. By European colonists was carried to Northeast America, observed by myself springing up spontaneously around Salem, much resembling T. pratense but the heads of flowers I think smaller: "T. Pennsylvanicum" of Willdenow, and Pursh, may be compared (see Dec. prodr.).

† *Agapanthus umbellatus* of Austral Africa. Transported to Europe, described by Breyn prodr. pl. 10 — (Spreng.), Miller pl. 210, and Linnæus. By European colonists also, carried to Northeast America, where it has become frequent in greenhouses; recently to Hindustan, and called *African blue lily* (Graham). In its wild state, known to grow in Austral Africa (Thunb. prod. 60, and Pers.).

bergs, "and abundance of snow, frost, and *whales*, and called a small place he found the Duke of York's Island. Thus he came into the Atlantic by "a new way, and made it appear that the land" on the East side of the Strait of Le Maire was insular, and "not joined to any continent."

"1681, March 4th" (Proud i. 171 to 187, and Holmes), a charter granted by Charles II. to William Penn, for a new province named "Pennsylvania." After "July 11th," three ships sailed with colonists: and some of these arriving in the Delaware, commenced a settlement above the confluence with the Schuylkill.

"1682 A. D." (Proud i. 196, and Holmes), the right and interest of the Duke of York in the territory on the West side of Delaware Bay, procured by William Penn: who on "Oct. 24th" landed at Newcastle. — The origin of the State of Delaware.

The banks of the Delaware already inhabited by "three thousand" colonists, Swedes, Dutch, Finlanders, and English (Chalm. i. 643). Proceeding to Upland (Chester), William Penn called an assembly "Dec. 4th;" the foreigners were naturalized, and the body of laws brought by him were formally adopted. After making a treaty with the natives, and purchasing territory, Penn proceeded with a surveyor to lay out above the confluence with the Schuylkill his projected city of "Philadelphia." The first settlers were generally Quakers, who had suffered persecution: — and within less than a year, "eighty houses and cottages" were built (Proud, Chalm., and Holmes).

"The same year" (Charlev., and Holmes), M. de la Sale descending the Mississippi to the sea, formally took possession of all the country watered by that river, and in honour of Louis XIV. named it "Louisiana."

"In this year" (Winckl.), George Wheeler publishing his Travels in Greece, enumerating *Hypericum Olympicum* 222.

"In this year" (append. Sibth., and Spreng.), Chr. Mentzel publishing his Pugill. rar. plant., enumerating *Centunculus minimus* pl. 7, *Silene chlorantha* pl. 2. f. 1, *Massonia latifolia* pl. 13. f. 4, *Veltheimia viridiflora* pl. 13. f. 5, *Ornithogalum altissimum* pl. 13. f. 2, *Helianthemum Appeninum* pl. 8. f. 3. — He died "in 1701," and his Lex. was published "in 1715."

In this year (see Spreng.), Morison writing the third volume of his Hist plant., enumerating *Ziziphora thymoides* iii. 11. pl. 19. f. 6, *Salvia colorata* iii. 11. 16. f. ult., *S. lyrata* iii. 11. 13. 27, *S. urticaefolia* iii. 11. 13. 51, *S. Indica* iii. 11. 13. f. 16, *Fedia mixta* iii. 7. 16. 35, *F. discoidea* iii. 7. 16. f. 29, *Melica speciosa* iii. 8. 7. 51, *Chloris radiata* iii. 8. 3. 15, *Eragrostis rigida* iii. 8. 2. 9, *Festuca loliacea* iii. 8. 2. 2, *F. caespitosa* iii. 8. 7. 19, *Bromus asper* iii. 8. 7. f. 27, *B. Madritensis* iii. 8. 7. f. 13, *Triticum tenellum* iii. 8. 2. 3, *Lolium arvense* iii. 8. 2. 1, *Hordeum maritimum* iii. 8. 6. 5, *Cephalaria Transylvanica* iii. 6. 13. 13, *Plantago stricta* iii. 8. 17. 2, *Omphalodes linifolia* iii. 11. 30. 11, *Ellisia nyctelaea* iii. 11. 28. 3, *Cynanchum hirsutum* iii. 15. 3. 61, *Gentiana saponaria* iii. 1. 5. 4, *Eryngium coeruleum* iii. 7. 37. 13, *Juncus subverticillatus* iii. 8. 9. 4, *J. lampocarpus* iii. 8. 9. 2, *Saxifraga punctata* iii. 12. 9. 17, *Thalictrum rugosum* iii. 9. 20. f. 3, *T. Calabricum* iii. 9. 20. f. 16, *Teucrium Nissolianum* iii. 11. 22. 19, *Cleonia Lusitanica* iii. 11. 5. 4, *Scorzonera lanata* iii. 7. 6. 17, *Liatris squarrosa* iii. 7. 27. 10, *Serratula cynaroides* iii. 7. 25. 2, *Carthamus Tingitanus* iii. 7. 34. 19, *Bidens frondosa* iii. 6. 5. 21, *Gnaphalium polycephalum* iii. 7. 19. 19, *Xeranthemum cylindricum* iii. 6. 12. 1, *Conyza cinerea* iii. 7. 17. 7, *Helianthus altissimus* iii. 6. 7. 67, *H. divaricatus* iii. 6. 7. f. 66, *Rudbeckia digitata* iii. 6. 6. 54, *Silphium trifoliatum* iii. 6. 3. 68, *Aristolochia anguicida* iii. 12. 17. 7, *Ambrosia trifida* iii. 6. 1. 4, *Botrychium matricarioides* iii. 14. 5. 26, *Polypodium incanum* iii. 14. 2. 5, *Asplenium polypodioides* iii. 14. 2. f. 12, *A. angustifolium* iii. 14. 2. 25, *Fucus articulatus* iii. 15. 8. f. 6, *Littorella lacustris* iii. 8. pl. 9,* *Camptosorus rhizophyllus* iii. 14. 5. f. 14, *Asplenium ebeneum* iii 14.

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* *Heliotropium Curassavicum* of the seashore of Tropical and Subtropical America. A prostrate annual, transported to Europe, described by Morison xi. pl. 31, — Plukenet alm. pl. 36, and has become naturalized near Montpelier, Narbonne, Collioure, and Cette (Treviran., Martins, and A. Dec.). Westward, is known to grow near Norfolk (A. Gray); has been observed by myself from Lat. 39, wild on the seashore of the Delaware peninsula; by Elliot, near salt water in South Carolina; by Chapman, "Florida to North Carolina;" by Nuttall, on the Missouri, and along Salt river of Arkansas; by E. James, on salines along the Platte; according to Torrey, grows at Key West; according to Kunth, on salines near Mexico, and along the Pacific as far as Truxillo and Callao.

Cynoglossum Morisoni of Northeast America. A branching herb, transported to Europe, described by Morison iii. 11. pl. 30, — and Linnæus. Westward, observed by myself from 42° 30′ along the Atlantic, growing in the forest; by A. Gray, "copses, common" in central New York; by Pursh, in Virginia and Carolina; by Elliot, and Chapman, "in the upper districts of South Carolina."

Pulmonaria (*Mertensia*) *Virginica* of the Ohio, and its tributaries. The *American lungwort*, transported to Europe, is described by Morison iii. 444, — Plukenet alm. pl. 227 (Linn.), and Roth; and escaping from cultivation, has been found in Britain on ruins near Netley abbey (Nicholls,

2. f. 12, *Woodwardia onocleoides*, *Cacalia atriplicifolia* iii. 7. 15. 7, *Polymnia uvedalia* iii. 6. 7. f. 55, *Cypripedium pubescens* iii. 12. 11. f. 15, *Hydrophyllum Virginicum* iii. 51. 1. f. 1, *Juncus nodosus* iii. 8. 9. f. 15, *Monotropa uniflora* iii. 12. 16. f. 5, *Pycnanthemum Virginicum* iii. 11. 7. f. 8, *P. aristatum* iii. 11. 8. f. ult., *Hyssopus* (*Lophanthus*) *nepetoides* iii. 11. 4. f. 11, *Scutellaria lateriflora* iii. p. 416, *Eupatorium aromaticum* iii. p. 98, *Gnaphalium purpureum* iii. p. 92, *Aster linifolius* iii. p. 121, *Iva frutescens* iii. p. 90, *Phlomis leonitis* iii. p. 383. — He died "in 1683," and the volume was published by Bobart "in 1699."

Thalictrum alpinum of Subarctic Europe and Asia. Described by Morison iii. 9. pl. 20. f — (. . . .), and known to grow from Lapland and Finland to Ireland and Wales (fl. Dan. pl. 11, Engl. bot. pl. 262, and Wats.), also on the Pyrenees, throughout the Swiss Alps (A. Dec.), on Caucasus and in Northern Asia as far as the Altaian mountains (Ledeb.). Westward, according to Torrey and Gray fl. i. 39, grows on Newfoundland and in Canada.

Valeriana (*Centranthus*) *calcitrapa* of the Mediterranean countries. Described by Morison iii. 7. pl. 14, — termed "v. foliis calcitrapæ, etiam v. lusitanica latifolia annua laciniata" by Tournefort inst. 132, and known to grow in Barbary, Portugal (Pers.), and France (Dec. fl. fr.): observed by Sibthorp, and Chaubard, in cultivated ground in the Peloponnesus. In Britain, after maintaining itself fifty years near Eltham, is regarded by Watson as not completely naturalized (A. Dec.).

Solanum Hermanni of Austral Africa. Transported to Europe and described by Morison iii. pl. 1, the berries which are black inducing according to Hermann hort. lugd. 574 headache, torpor, furor and even death — (Spreng.); termed "s. pomiferum frutescens africanum spinosum nigricans borraginis flore foliis profunde laciniatis" by Tournefort inst. 149; was observed by Sibthorp growing spontaneously in Sicily; and has become naturalized in Greece (Heldr.), Italy, Sardinia, Majorca, Portugal, around Cadiz where it is called "tomates del diablo," and around Tangier in Morocco (Bertol, Dun., Reuter, and A. Dec.).

Ophrys lutea of the Mediterranean countries. Described by Morison iii. 12. 13. f. 15 — (Spreng.); termed "o. Cretica maxima" by Tournefort trav. pl. 37; and observed by Chaubard in the Peloponnesus. Westward, by Decandolle fl. in France; by Cavanilles, in Spain; and by Brotero, in Portugal.

Ophrys scolopax of the Mediterranean countries. Described by Morison iii. 12. 13. 11 — (Spreng.); observed by Cavanilles ii. pl. 161 in Spain; known to grow in Southwestern France, and observed by Chaubard in the Peloponnesus.

Carex riparia of Europe and the adjoining portion of Asia. A large subaquatic sedge described by Morison iii. 8. 12. 9 — (Spreng.); termed "cyperoides latifolium spica rufa sive caule triangulo" by Tournefort inst. 529; and known to grow throughout middle Europe (Micheli pl. 32, Pers., and Curt. lond. iv. pl. 60): observed by Sibthorp frequent in watery places from the Peloponnesus to Constantinople.

Bromf., and A. Dec.). Westward, according to A. Gray, grows on "alluvial banks, Western New York to Wisconsin, Virginia, Kentucky, and southward;" was observed by Michaux on the Alleghanies of Carolina; by Chapman, "along mountain streams, South Carolina to Tennessee;" by Beck, in Illinois; and by Nuttall, on the Arkansas.

Pteris longifolia of Mexico and the West Indies. A fern, transported to Europe, described by Morison iii. p. 568, — and Ray suppl. 65 (Linn. sp. pl); and naturalized on the isle of Ischia in the Bay of Naples (Tenore). Westward, observed by Plumier am. pl. 18 in the West Indies; grows according to Chapman, on "Key West" at the Southern extreme of Florida; is known to grow also in Mexico (A. Dec.).

Aspidium cristatum of Northern Climates. A fern described by Morison iii. 14. 3. f. 1, — and Plukenet phyt. 181. f. 2 (Linn. sp. 1551); known to grow throughout middle Europe (Engl. bot. pl. 2125); and observed by Sibthorp from Bœotia to Constantinople. Westward, grows according to Hooker as far as the Saskatchewan; received by Swartz from Pennsylvania; observed by A. Gray "common" in central New York; by myself, in swampy ground from 43° to 40° along the Atlantic.

Bromus secalinus of middle and Northern Europe. A coarse grass described by Morison iii. 8. pl. 7 — (Spreng.), and Linnæus; and known to occur as a weed in middle Europe (Weigel, Huds., Lam., and Pers.). By European colonists, unintentionally carried to Northeast America, where it continues in waste ground but chiefly in grain-fields, and is called *cheat*.

Panicum latifolium of Northeast America. A reedy grass, transported to Europe, described by Morison iii. 8. pl. 5, — and Linnæus. Westward, observed by myself from 46° on the St. Lawrence to 40° along the Atlantic; by A. Gray, in "moist thickets, common" in central New York; by Schweinitz, at 36° in Upper Carolina; by Beck, on the Mississippi near St. Louis; and by Nuttall, on the Arkansas.

Carex flacca of Europe and the adjoining portion of Asia. Described by Morison iii. 8. 12. f. 14 — (Spreng.), Schreber, and Schkuhr 117. t. O. f. 57; termed "c. glauca" by Scopoli as observed in Carniolia, "c. recurva" by Hudson; known to grow from Denmark throughout middle Europe (fl. Dan. pl. 1051, Engl. bot. pl. 1506, and Pers.); observed by Sibthorp, and Chaubard, from the subalpine portion of the Peloponnesus to Constantinople. Westward, was observed by Collins, and Knieskern, in the "marshes of New Jersey, near the coast" (J. Carey), "Cape May" according to Torrey; by Curtis, in "marshes, Alabama to North Carolina" (Chapm.).

Carex sylvatica of Europe and the adjoining portion of Asia. A woodland sedge described by Morison iii. 8. 12. 18 — (Spreng.); termed "cyperoides sylvarum tenuius spicatum" by Tournefort inst. 530; and known to grow from Sweden to the Mediterranean: observed by Decandolle in France; by Sibthorp, in woods in the environs of Constantinople.

Carex capitata of the Arctic region and alpine summits farther South. Described by Morison iii. 8. 12. f. 6, — and Schkuhr 80; observed by Linnæus in Lapland and Norway; and known to grow in the alpine portion of Switzerland (A. Dec.). Westward, was observed by Hooker on Iceland; by Robbins and Oakes, on the alpine summits of the White mountains of New England (A. Gray).

Carex distans of Europe and the adjoining portion of Asia. Described by Morison iii. 8. 12. 18 — (Spreng.); termed "cyperoides spicis parvis longe distantibus" by Tournefort inst. 530; and known to grow from Denmark throughout middle Europe (fl. Dan pl. 1049, Engl. bot. pl. 1234, and Pers.): observed by Sibthorp, and Chaubard, frequent in marshes in the Peloponnesus.

Festuca elatior of Northern Europe and Asia. Described by Morison iii. 8. pl. 2, — and Linnæus; termed "gramen paniculatum arundinaceum spica multiplici" by Tournefort inst. 523; and known to grow throughout middle and Northern Europe as far as Sweden and Iceland (Pers., Curt. lond. vi. pl. 7, Hook., and Wats.). Farther East, observed by Sibthorp in the environs of Constantinople; by Bieberstein, along the Taurian mountains; and by Gmelin in Siberia (Spreng.). By European colonists, carried to Northeast America, where it has become naturalized in our Northern States, occurring not only in grass-grown clearings, but in wild situations within the border of the forest.

Alopecurus pratensis of Europe and the adjoining portion of Asia. Described by Morison iii. 8. pl. 4 — (Spreng.), and Linnæus; termed "gramen spicatum spica cylindracea longioribus villis donata" by Tournefort inst. 520; known to grow throughout middle Europe, and in Britain called *foxtail grass* (Pers., Weinm., Curt. lond. v. pl. 5, and Prior): farther East, observed by Sibthorp growing around Athens and on Cyprus. By European colonists, carried to Northeast America, where besides being cultivated it has become naturalized, growing in waste ground and on the margin of the forest in our Northern States.

"1683, Sept. 2d" (Blair), siege of Vienna abandoned by the Turks.

"The same year" (Proud i. 219, and Holmes), about "twenty families" of German Quakers from the Palatinate, establishing themselves seven miles from Philadelphia, named their settlement "Germantown." Other Quakers of the original stock of the society in Wales, established themselves in Pennsylvania at a place named by them "North Wales."

"In this year" (Klapr. mem. i. 325), the Chinese, aided by the Dutch, obtain possession of all the Northwest coast of Formosa.

"In this year" (Spreng.), Jacob Sutherland publishing his Cat. hort. Edin., enumerating *Scabiosa graminifolia*, *Verbascum ferrugineum*, *Ribes* (*Grossularia*) *reclinata*, *Paronychia capitata*, *Imperatoria verticillaris*.

Amygdalus nana of the Uralian and Mongolian plains. A shrub enumerated by Sutherland — (Spreng.); termed "a. indica nana" by Tournefort inst. 627: observed by Sibthorp on the declivity of mount Haemus; by Baumgarten in Transylvania; by Gmelin, and Pallas trav. i. 125 to iv. 370, from 55° on the Volga to the Upper Selenga. Transported to Northeast America, the double-flowered variety has become frequent in gardens.

"In this year" (Winckler), Johannes Commelyn publishing his Plant. indig. Holl.

"1684 A. D. = 23d year of Khang-hi" (Chinese chron. table), beginning of the Seventy-third cycle. To Khang-hi (Pauth. 436), the island of Formosa surrendered by a son of the above-mentioned pirate chief.

"In the 23d year of his own reign," according to Khang-hi, the *magnetic needle* at Pekin declined "three degrees:" — but now only "two and a half" (Cibot in mem Chin. iv.).

"June 18th" (Hutch. i. 340, Chalm, and Holmes), by the high court of chancery in England, the charter of Massachusetts declared forfeited. Philadelphia already containing "nearly three hundred houses, and two thousand inhabitants" (Belknap ii. 424, and Proud i. 288).

June 22–3d (pref., and lett. 7), after arriving at Quebec in the previous "November," Lahontan at the age of sixteen leaving Montreal for Lake Ontario. — "Nov. 20th, 1690" (lett. 20), he sailed from the St. Lawrence for France.

"In this year" (Humb. cosm. ii.), the black stripes in Saturn's ring, showing at least two concentric rings, discovered by Dominie Cassini.

"In this year" (Spreng.), Sibbald publishing his Scot. Ill.

"1685, Feb. 6th" (Nicol., Holmes gives "16th"), Charles II. succeeded by his brother James II., now king of United Britain. Also "in this year" (Nicol.), Iwan Alex. succeeded by Peter the Great, as emperor of Russia.

"July" (Chalm., and Holmes), a writ issued against the charter of Connecticut. "October," a writ against the charter of Rhode Island. And "Oct. 8th," by James II., Joseph Dudley born in Massachusetts appointed president of New England. His jurisdiction included Maine, New Hampshire, Massachusetts, and "the Narraganset or king's province;" but the previous legislative ordinances "were declared to be in force, and the laws and customs of the colony were continued."

At this time (Chalm. i. 609, and Holmes), by "an accurate account taken by order of the governor," the inhabitants of Canada ascertained to be "seventeen thousand;" of whom, "three thousand" were supposed to be capable of bearing arms.

"Oct. 12th" (Blair), by Louis XIV., the Edict of Nantes revoked. — In the following year, a small brick church was built in Boston by fugitive French protestants.

"In this year" (Winckl.), Giov. Bapt. Triumfetti publishing his Obs. de ortu plant.

"The same year" (Kobell iii.), *gold-purple*, "formed as a purple precipitate when diluted solutions of gold and tin are mixed," discovered by Andreus Cassius; and applied by Kunkel to the manufacture of red or ruby glass.

"The same year" (art de verif.), in Japan, the Dutch subjected to further exaction; their trade not to exceed the annual value of "three hundred thousand taëls" = 1,500,000 livres.

"In this year" (Stirling, and W. W. Hunter), the English East India Company warring against the Muslim Mughuls. — "Nov. 29th, 1688," the governor of Balasor having imprisoned two English servants and threatened the factory, the town attacked and plundered by Capt. Heath.

"In this year" (Smith ed. fl. lapp., and Spreng.), Rudbeck publishing the third edition of his Hort. Upsal., enumerating *Calypso borealis* 81.

"1686, May," arrival of Dampier at Guam. The natives are described by him as "copper-coloured like other Indians, long-visaged, stern of countenance" (Malayans). The *hogs* seen there, appeared to him to belong to "that breed in America which came originally from Spain" (see Mendaña).

The inhabitants of the Bashee Islets (Malayans) described by Dampier as the "quietest and civilist people" he ever met with; having "no idols and not seen to worship anything, and all equal apparently;" the men having "but one wife," and the "children honouring and respecting parents." As a punishment for theft, a young man was buried alive. They have no coin, but wore in their ears small pieces of metal which they called "bullawan," the "Mindanao name for gold;" and their language presented "no affinity in sound to Chinese nor to Malayan."

At Pulo Condore, Dampier found the inhabitants Cochinchinese; having large nets for turtle, such as he had seen only at Jamaica; and exporting *tar* to Cochinchina.

Along the East coast of Celebes, Dampier found *beacons* placed on the shoals. And at the outlying island of Bouton, the inhabitants were all Muslim, under a sultan.

At the Nicobar Islands, Dampier found the inhabitants "all equal" (Malayans), "honest, civil, harmless people," having "neither temple nor idol," nor as far as discovered, any "form of religion." Their language differed from any he had heard before, but contained some Malay words.

"Dec. 20th" (Sewall, Chalm., and Holmes), arrival at Boston of Sir Edmund Andros, appointed by James II. governor of New England: "to continue the former laws," so far as "not inconsistent with his commission or instructions, until other regulations were established by the governor and council; to allow no printing press; to give universal toleration in religion, but encouragement to the church of England;" and a small military force of "about sixty" soldiers was at the same time introduced. Before the end of the month, Andros agreeably to orders dissolved the government of Rhode Island, broke its seal, and assumed the administration. In this year also, writs were issued against the charter of Carolina, against East and West Jersey, and New York was deprived of its assembly.

"In this year" (Spreng., and Winckl.), Paul Amman publishing his Hort. Bosian. exot., enumerating *Veltheimia uvaria*. — He died "in 1691."

"In this year" (Spreng., and Winckl.), after his Cat. plant. circa Cantabrig. "in 1660," Method. plant. "in 1682," Ray commencing his Hist., plant., enumerating "melianthus hysiquanensis minor fœtidus" dendr. 120 *Melianthus minor*. — He published the Second volume "in 1688."

"1687 A. D." (Kaempf., and art de verif.), Kinsen succeeded by his son Kinsen II., "one hundred and fourteenth" dairo of Japan; — reigning five years later, during Kaempfer's visit.

"October ¾ (Chalm., and Holmes), Andros visiting Connecticut, demanded the charter; which was produced, and surreptitiously removed: he however declared the government dissolved, assumed the administration, and the records of the colony were closed. The English trade beginning to extend far into the continent, an attempt at prevention by the French of Canada, by making war on the Senecas, a tribe favouring the English (Colden 78).

"The same year" (art de verif.), Mohammed IV. succeeded by Suliman III., twenty-first Turkish sultan.

"The same year" (Holmes note to 1746), severe *earthquake* at Lima in Peru.

"In this year" (J. E. Smith, and Spreng.), Hermann publishing his Hort. Lugd., enumerating *Lobelia erinoides* 109, *Asclepias tuberosa* 647, *Sophora tomentosa* 171, *Eryngium foetidum* 237, *Crassula dichotoma* 553, *Pancratium Zeylanicum* 693, *Cotyledon orbiculata* 551, *Myrtus Zeylanica* 435, *Mesembryanthemum bicolor* 249, *Heliophila coronopifolia* 367, *Cleome triphylla* 565, *Pelargonium coriandrifolium*, *cucullatum*, *myrrhifolium*, *alchemilloides*, *gibbosum*, and *grossularioides* 280–5, *Sida napaea* 23, *Crotalaria sagittalis* 203, *C. laburnifolia* 197, *Glycine bituminosa* 493, *Vicia Bengalensis* 625, *Astragalus pentaglottis* 75, *A. epiglottis* 77, *Psoralea pinnata* 273, *Andryala Ragusina* 673, *Tarchonanthus camphoratus* 229, *Athanasia annua* 227, *Conyza foetida* 662, *Aster puniceus* 651, *A. mutabilis* 67, *A. Novi Belgii* 69, *Calendula pluvialis* 105, and *Juniperus Bermudiana* 347, *Anemone Virginica* 645, *Ranunculus abortivus* 514, *Napæa laevis* 23, *Arum dracontium* 60, *Acalypha Virginica* 687.

Pelargonium capitatum of Austral Africa. The *rose-scented geranium* is described by Hermann lugd. 278 — (Spreng.), was introduced into England "in 1690" (Ait.), and soon became a favourite garden flower; is figured by Cavanilles iv. pl. 105; was observed by Clot-Bey in the gardens of Egypt; by Graham, "in gardens" at Bombay.

Convolvulus (*Batatas*) *pentaphylla* of Tropical America. Known to grow there (Pers., and A. Dec.). Transported to Europe is described by Hermann lugd. 185 — (Spreng.), Jacquin rar. ii., and Cavanilles iv. pl. 323. Regarded by R. Brown cong. p. 58 as indigenous in Western Equatorial Africa: clearly by European colonists, carried to the Mauritius Islands, observed by Bojer hardly naturalized; to Hindustan, observed by Roxburgh but no native name is given, by Graham "common on Malabar Hill etc.;" and to the Hawaiian Islands (Mann).

Leonotis nepetifolia of Equatorial Africa. Called in Hindustan "matee-sool" (Graham), and transported to Europe, described by Hermann lugd. pl. 117: — observed by Graham "about villages in the Concan," by Gibson "about hill forts throughout the Deccan, but never at any distance from the habitations of man;" and by Wallich, in Silhet. Westward, is enumerated as frequent and probably indigenous in Western Equatorial Africa (Benth. prodr., and fl. Nigr.). By European colonists, was carried to Tropical America (A. Dec.).

"In this year" (Spreng.), Christoph Knauth publishing his Enum. plant. hal., mentioning plants that are no longer to be found in that vicinity. — He died "in 1694."

"1687–8 A. D." (Spreng.), Sloane visiting Madeira, Barbadoes, Nives, S. Christophers and Jamaica, meeting with *Justicia nitida* pl. 10. f. 2, *Dianthera comata* 103. 2, *Piper macrophyllum* 88. 1, *Comocladia integrifolia* 222. 1, *Heteranthera limosa* 149. 1, *Ficus Martinicensis* 223, *Eleocharis interstincta* 81. 3, *Fimbristylis ferruginea* 77. 2, *F. spadicea* 76, *Abildgaardia monostachya* 79. 2, *Cyperus odoratus* 74. 1, *C. strigosus* 74. 2. 3, *C. ligularis* 9, *Mariscus aphyllus* 81. 2, *Paspalum paniculatum* 72. 2, *Digitaria linearis* 70. 3, *Panicum glutinosum* 71. 3, *P. capillare* 72. 3, *P. clandestinum* 80, *P. brevifolium* 72. 3, *Melica papilionacea* 64. 1, *Poa glutinosa* 71. 2, *Eleusine virgata* 70. 2, *Anatherum bicorne* 15, *Erianthus alopecuroides* 70. 1, *Andropogon Virginicus* 68. 2, *Chloris cruciata* 69. 1, *C. polydactyla* 65. 2, *Aristida Adscensionis* 2. 5, *Globularia longifolia* 5. 3, *Hedyotis rupestris* 202. 1, *Catesbaea parviflora* 207. 1, *Ernodea littoralis* 189. 1. 2, *Wallenia laurifolia* 145. 2, *Buddleia Americana* 173. 1, *Pavetta pentandra* 202. 2, *Cissus trifoliata* 144. 2, *Fagara pterota* 162. 1, *Ammania latifolia* 7. 4, *Cuscuta Americana* 128. 4, *Tournefortia cymosa* 212. 2, *T. suffruticosa* 162. 4, *Lisianthus longifolius* 101. 1, *Ipomaea parviflora* 97. 1, *I. violacea* 98. 1, *Lobelia longiflora* 101. 2, *Psychotria myrtiphyllum* 209. 2, *Ardisia tinifolia* 205. 2, *Chiococca racemosa* 188. 3, *Hamelia ventricosa* 183. 2, *Conocarpus erectus* 161. 2, *C. racemosus* 187. 1, *Beurreria succulenta* 204. 1, *Cestrum vespertinum* 204. 2, *Jacquinia armillaris* 190. 2, *Ehretia tinifolia* 203. 1, *Bumelia salicifolia* 206. 2, *Ayenia pusilla* 132. 2, *Celosia nitida* 91. 1, *Echites suberecta* 130. 2, *E. umbellata* 131. 2, *Tabernaemontana laurifolia* 186, *Sarcostemma Swartzianum* 131. 1, *Spathelia simplex* 171, *Staphylea Occidentalis* 220. 1, *Turnera ulmifolia* 127. 4. 5, *T. pumila* 127. 6, *T. cistoides* 127. 7, *Tillanasia tenuifolia* 122. 1, *T. recurvata* 121. 1, *Campelia Zanonia* 147. 1, *Loranthus Occidentalis* 200. 2, *Ornithrophe cominia* 208. 1, *Caesalpinia vesicaria* 181. 2. 3, *Petaloma myrtilloides* 187. 3, *Trichilia hirta* 220. 1, *T. spondioides* 210. 2, *Tribulus maximus* 132. 1, *Melastoma argenteum* 196. 1, *Casearia parviflora* 211. 2, *Bucida buceras* 189. 3, *Malpighia coriacea* 163. 1, *Banisteria fulgens* 162. 2, *Rubus Jamaicensis* 213. 1, *Clusia flava* 200. 1, *Clematis dioica* 128. 1, *Teucrium betonicum* 3. 3, *Gesneria acaulis* 102. 1, *G. tomentosa* 104. 2, *Citharexylon caudatum* 206. 3. 4, *Lantana stricta* 195. 4, *Stemodia maritima* 110. 2, *S. duran-*

tifolia 124. 2, *Lippia cymosa* 174. 3. 4, *Blechum Brownei* 109. 1, *Ruellia paniculata* 100. 2, *R. tuberosa* 95. 1, *Volkamera aculeata* 166. 2. 3, *Cleome polygama* 124. 1, *C. procumbens* 123. 1, *Melochia tomentosa* 138. 2. 3, *M. nodiflora* 235. 2, *Sida ciliaris* 137. 2, *S. viscosa* 139. 4, *S. altheaefolia* 136 2, *Malachra capitata* 137. 1, *Urena Americana* 11. 2, *Hibiscus clypeatus* 135. 1, *Pavonia racemosa* 139. 2, *Polygala diversifolia* 170. 2, *Crotalaria lotifolia* 176. 1. 2, *Phaseolus lathyroides* 116. 1, *P. sphaerospermus* 117. 1–3, *Dolichos ensiformis* 114. 1, *D. minimus* 115. 1, *Galactia pendula* 114. 4, *Ornithopus tetraphyllus* 116. 3, *Aeschynomene Americana* 118. 3, *Stylosanthes procumbens* 119. 2, *S. viscosa* 119. 1, *Lavenia decumbens* 155. 2, *Eupatorium villosum* 161. 2, *Calea Jamaicensis* 151. 3, *C. lobata* 152. 4, *Conyza purpurascens* 152. 1, *Erigeron Jamaicense* 152. 3, *Pectis linifolia* 149. 3, *Synedrella nodiflora* 154. 4, *Chrysanthellum procumbens* 155. 1, *Coreopsis reptans* 154. 2. 3, *Elephantopus Carolinianus* 156. 1, *E. spicatus* 150. 3. 4, *E. angustifolius* 148. 4, *Rolandra argentea* 7. 3, *Satyrium plantagineum* 147. 2, *Dendrobium sanguineum* 121. 2, *Oncidium variegatum* 148. 2, *Aristolochia odoratissima* 104. 1, *Scleria flagellum* 77. 1, *Tragia volubilis* 82. 1, *Argythamnia candicans* 86. 3, *Boehmeria cylindrica* 82. 2; *Urtica grandifolia*, *parietaria*, *nummularifolia*, and *microphylla* 83. 2 to 131. 4; *Pharus latifolius* 73. 2, *Begonia acutifolia* 127. 1, *Acidoton urens* 83. 1, *Juglans baccata* 157. 1; *Croton lineare*, *glabellum*, *chamaedrifolium*, and *phyllanthus* 82. 3 to 174. 1. 2; *Viscum? verticillatum* 201. 2, *V. opuntioides* 201. 1, *Schaefferia completa* 209. 1, *Xanthoxylon emarginatum* 168. 4, *Picramnia antidesma* 209. 2, *Iresine elatior* 90. 2, *Excoecaria glandulosa* 158. 2, *Inga vera* 183. 1, *Mimosa viva* 182. 7, *Hemionitis rufa* 45. 1; *Polypodium trapezoides*, *serrulatum*, and *asplenioides* 36. 1 to 43. 2; *Aspidium mucronatum*, *invisum*, and *patens*, 36. 4 to 52. 1; *Asplenium proliferum*, *auritum*, and *cuneatum* 26. 1 to 46. 2; *Pteris heterophylla* 53. 1, *Caenopteris rhizophylla* 52. 3, *Diplazium juglandifolium* 37, *Adiantum serrulatum* 35. 2, *Davallia aculeata* 61, *Dicksonia cicutaria* 57. 1. 2, *Trichomanes muscoides* 27. 1, *Lygodium volubile* 46. 1, *Onoclea sorbifolia* 38,* *Polygonum* (. . . .) *scandens* 90 f.

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* *Jussiæa erecta* of Tropical and Subtropical America. Tetrapetalous with a "napiformis" root (Pers.): observed by Sloane pl. 11 in the West Indies — (Spreng.), also by Swartz (A. Dec.), and known to grow in Demarara (Dec. prodr.). Farther North, observed by Pursh from the Dismal swamp to Carolina; and by Nuttall, on the Arkansas.

Asclepias Curassavica of Tropical America. An *orange-flowered milkweed*, observed by Sloane ii. pl. 129, — and Swartz, in the West Indies; by myself, in clearings and waste ground in Southern Brazil; is regarded by Gardner as indigenous, growing throughout Tropical America as far as the point of Florida (Chapm.); and from Negroes using the pulverized dried root as an emetic, is called "wild ipecacuanha" (Don). Transported to Europe, is described by Hermann parad. 36, Miller, and Dillenius: and by European colonists was carried to the environs of Bombay, observed by Graham "in gardens pretty common, flowers in the rains," and "almost naturalized;" to Ceylon, naturalized there according to Gardner (hort. soc. iv. 40); to Burmah, "exotic" there according to Mason; to the environs of Canton (Beechey, and Hook.); and to the Taheitian Islands (Lay and Collie, and A. Dec.).

Hyptis capitata of Tropical America. A shrubby Labiate, observed by Sloane i. pl. 109. — Jacquin rar. i. pl. 114, and Swartz, on Hayti and Jamaica; by myself, in Southern Brazil; and known to grow in Demarara, Panama, and Mexico (Benth.). By European colonists, was carried Westward across the Pacific to the Philippines, occurring according to Bentham around Manila (A. Dec.); and observed by myself on both Luzon and Mindanao.

Clethra tinifolia of the mountains of Eastern Tropical America. Observed by Sloane ii. pl. 198, — Browne pl. 21, and Swartz ii. 845, on the mountains of Jamaica (Pers.): known to grow also on the mountains around Rio Janeiro in Southern Brazil (Dunal, and A. Dec.).

Stachytarpha Jamaicensis of Tropical America. A tall weed, its bruised leaves applied in Brazil to ulcers, and then called "urgerao" or "jarbao" (Lindl.): observed by Sloane pl. 107, — and Jacquin obs. iv. pl. 85, in the West Indies, growing according to Chapman as far as the point of Florida; and observed by myself abounding in the outskirts of Rio Janeiro. Westward, by Polynesians may have been carried to the islands of the Pacific, observed by myself naturalized on the Hawaiian Islands, and planted by the natives on Tongatabu. Eastward, through European colonists was carried across the Atlantic to Equatorial Africa (Benth. fl. Nigr.); to Hindustan, observed by Graham "common about Bombay during the rains," by myself in gardens there, and "S. Indica" (regarded as not distinct) by Nimmo in the Southern Concan (see A. Dec.).

Priva lappulacea of Tropical America. A weed, observed by Sloane i. pl. 110, — Houstoun, Loefling 194, and Jacquin obs. i. pl. 84, in the West Indies, growing according to Chapman as far as the point of Florida; by myself, in waste ground in Brazil, and Peru; and farther West on Taheiti, brought there by European colonists.

Lagetta Lintearia of the mountains of the West Indies and Mexico. The *lace-bark*, a small tree

1, *Hyptis radiata* i. 109. f. 2, *Bignonia* (*Tecoma*) *stans* ii. p. 63, *Iresine celosioides* i. pl. 90. — He published an account of his Voyage "in 1707–27."

Mollugo nudicaulis of Tropical America? An herb observed by Sloane pl. 129, — and Plumier pl. 21, in the West Indies, also by Swartz, who termed it "pharnaceum spathulatum" (A. Dec.). Eastward, has been observed in Senegal (fl. Nigr. 104 to 225): and by Wallich, and Wight prodr. 43, in cultivated ground in Hindustan and Burmah.

Crotalaria incana of Tropical America. A Leguminous annual, observed by Sloane pl. 179, — and Jacquin obs. iv. pl. 82, in the West Indies, and known to grow from Mexico to Peru and Brazil (Cav. iv. pl. 322, and Benth.). Eastward, observed on the opposite shore of Equatorial Africa (fl. Nigr.); and about 1822 carried to Ceylon, found there by Gardner a weed spreading in all directions (bot. mag. 1848), by Edgeworth in the Doab springing up spontaneously, but by Wight in peninsular Hindustan only under cultivation (A. Dec.).

Desmodium tortuosum of Equatorial Africa. A shrubby Leguminous plant through European colonists carried to the West Indies, and observed by Sloane pl. 116, — and Macfadyen, on Jamaica, often in cultivated ground (A. Dec.); by Swartz, on other West India Islands (Steud.); and by Humboldt and Bonpland, along the Magdelena (Kunth). Eastward, is known to grow on the Cape Verd Islands, and from Senegal to Abyssinia (Webb in fl. Nigr. 122).

Cassia obtusifolia of Equatorial Africa. A roughish annual, through European colonists carried to America, and observed by Sloane ii. 47 in the West Indies; — by Chapman, "waste places, Florida to North Carolina, and westward;" known to occur also on Cuba (Pers.), and in South America (Vogel, and A. Dec.). Eastward, is known to grow on the Cape Verd Islands (Webb), in the sands of Senegal (Perr. and Guill.), and in Guinea (Benth. fl. Nigr.).

Amblogyna polygonoides of Tropical America. A prostrate Amaranthaceous plant observed by Sloane pl. 92 in the West Indies — (Spreng.); by Nuttall, around New Orleans; by Chapman, "South Florida." Transported to Europe, is termed "illecebrum polygonoides" by Miller, is described also by Hermann par. 17 (Spreng.), Moench, and Willdenow pl. 6; escaping from gardens, even at Dresden, but not naturalized in Europe (Reich., Koch. and A. Dec.); occurs also in Equatorial Africa (Moquin); Ceylon (Pers.), and Hindustan, having according to Piddington a Sanscrit name.

Lippia asperifolia of Tropical America. Observed by Sloane 108 f. 2 in Tropical America — (Willd.), and known to grow from Venezuela to the La Plata (H. and B., and A. Dec.). Transported to Europe is termed "verbena globifera" by Linnæus — (Steud.), "zapania odoratissima" by Scopoli, and "z. odorata" in Persoon (Steud.). By European colonists was carried to Eastern Austral Africa (A. Dec.), and to Zanzibar (Boj.).

Croton eleuteria of the West Indies. A small tree observed by Sloane ii. pl. 174,* — and Swartz ii. 1183, in the West Indies, the "chacrilla" or "ilateria" of the Bahamas as appears from Catesby ii. 46; yielding the *cascarilla* bark of commerce (Woodv. suppl. pl. 211, and Wright), ascertained by Pereira to come principally from the Bahamas. Cascarilla is regarded by Lindley as "a most valuable

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remarkable for its inner lace-like bark separating into linen-like folds that will even bear washing: observed by Sloane ii. pl. 168, — and Browne pl. 34, on Jamaica; by Swartz ii. 680, on other West India Islands.

Pisonia aculeata of Tropical America. Arborescent observed by Sloane ii. pl. 167, — and Plumier, in the West Indies, growing according to Chapman from the point of Florida, and according to Choisy as far as Brazil. By European colonists, was carried Westward across the Pacific to the Philippines, observed in certain localities by Blanco, and called in Tagalo "digguit digguit," in Ylocano "puruquit;" to the Moluccas (Choisy); to Timor (Decaisne); to Hindustan (Roxb., and Graham); where, as appears from A. Decandolle, it has acquired native names; but was probably carried Eastward to the Mauritius Islands, observed by Bojer "naturalized."

* *Croton cascarilla* of the West Indies. A bush called on Jamaica *wild rosemary*, observed by Sloane i. pl. 86, — and Jacquin pl. 162, in the West Indies; known to be frequent on various islands, as on Hayti, and erroneously supposed to yield cascarilla (Lindl.). From transported specimens, described by Linnæus, and Willdenow.

Cyperus elegans of Tropical America. Observed by Sloane pl. 75 in the West Indies, — and known to Kunth only from America. Through European colonists carried across the Atlantic, and possibly Eastward to Equatorial Africa (Benth. fl. Nigr.), and Asia (A. Dec.).

Sporobolus Indicus of Tropical America. A grass observed by Sloane pl. 73 in the West Indies; — by Michaux, in Carolina and Florida; by Elliot, in South Carolina; by N. A. Ware, in Florida; by Chapman, "waste places, Florida to North Carolina;" by Nuttall, on the Mississippi to New Orleans; by Baldwin, on Bermuda; and known to occur also in Australia (Kunth). From transported specimens, is described by Linnæus, and Beauvois.

bitter, aromatic, tonic stimulant;" and under the name of "kedré ambar" was seen by Rouyer in the drug-shops of Egypt.

Maranta arundinacea of Tropical America. A Scitamineous herb called *arrowroot*, observed by Sloane i. pl. 149 in the West Indies,—but according to Lindley brought to Jamaica from Barbadoes; observed by N. A. Ware as far as 28° in Florida, on the St. John's river near Lake George (Nutt.). Clearly by European colonists was carried to Bermuda, arrowroot forming there an article of export; to Burmah, "several years ago by" O'Riley, and according to Mason v. 507 "beginning to be largely cultivated" Its tubers according to Lindley "yield the Arrowroot of commerce, one of the lightest and most nutritious of vegetable aliments." (See Tacca pinnatifida.)

Manisuris granularis of Equatorial Africa. A weedy grass, observed by Sloane i. pl. 80 in the West Indies,—also by Swartz; and according to Kunth, occurring also in Guayana, Cumana, and Mexico: observed by Michaux on the sea coast of Carolina and Georgia; by Elliot, near Charleston, probably introduced; by Chapman, "fields and pastures, Florida to South Carolina," "introduced." Eastward, is known to grow in Equatorial Africa along the Atlantic (Benth. fl. Nigr.); was observed by Grant, a weed at "2° N." on the Nile; is known to grow also on Madagascar (A. Juss., and A. Dec.); was observed by Graham near Bombay, by Roxburgh cor. ii. pl. 118 in Eastern Hindustan; and according to Sweet, and Kunth, occurs in the East Indies as far as China.

"1688, Jan. 4th," Dampier arriving in Australia. The natives there using a piece of the "rind" of a tree for a "girdle, and a handful of long grass" for a covering, making "wares of stone to take small fish," but having "no houses;" and he was unable to discover how they procure fire.

Among plants met with by Dampier in Australia, *Banksia integrifolia* iv. 128, *Metrosideros hispida* iv. 128,* *Kennedia prostrata* iv. 127, *Aster glandulosus* iv. 127, *Casuarina distyla* or *quadrivalvis* iv. 127, *Fucus pilularia* 125, and in other countries visited by him, *Lobelia arborea* 125, *Solanum ferox* 126, *Eriocalea minor* iii. 157. pl. 3, *Diplolaena* . . . . iii. 110. pl. 3, and *Bombax eriauthus* i. 177—have been determined from his published figures (Spreng. gesch.).

On reaching Austral Africa, Dampier describes the Hottentots as having had *sheep* and *bullocks* before the arrival of the Dutch; celebrating the time of new and full moon by "mirth and nocturnal pastimes," singing and clapping of hands (derived from Arabs?); possessing a few earthen pots for boiling victuals; and as much infested with lice.

"Dec. 8th" (Nicol.), abdication of James II. in favour of his daughter Mary and her husband William III., as rulers of United Britain.—They were proclaimed on the following "Feb. 16th" (Blair, and Holmes).

"The same year" (coll. hist. iii. 259, and Holmes), building at Boston of the first episcopal church in Massachusetts, a wooden edifice called "king's chapel."—The existing stone edifice (according to the same authorities) was commenced in "1749" by governor Shirley.

"1689, April 18th" (Chalm., and. Holmes), the people of the surrounding country pouring into Boston, and in the uprising, Governor Andros with "about fifty" other persons seized and imprisoned. The former magistrates were reinstated; a general assembly meeting "May 22d," voted "to resume the government according to charter rights;" on the "24th," the former governor and magistrates consented to resume authority until there could be an orderly settlement; and on the "29th," William and Mary were formally proclaimed: application was then made, for authority to continue the government according to the old charter until a new one could be settled; and the request was granted. In Rhode Island, the people on hearing of the imprisonment of Andros, held a meeting and voted to resume their charter; and accordingly reinstated the former general officers.

"July 26th" (Charlev., and Holmes), the French settlement at Montreal burned, and the colonists "a thousand" in number massacred by "twelve hundred" aboriginals; belonging to the federated tribes called the "Five nations."

"In this year," (Klapr. mem. i. 2 to 79), first treaty between Russia and China. Concluded by Golowin at Nertchinsk, and fixing the boundary East of the mouth of Great Gerbitsi and on the left of the Amoor, where a stone pillar was erected.

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* *Pedilanthus tithymaloides* of Australia? The *Jew bush* or *slipper plant*, called in the environs of Bombay "thor" (Grah.), was observed by Dampier 126—(Spreng.). By European colonists was carried to Hindustan, observed there by Ainslie ii. 99; by Graham around Bombay "common in almost every garden, as edging to walks;" and according to Mason v. 491 "is as abundant as a wild plant" in "the neighborhood of Calcutta," and "is seen in cultivation occasionally" in Burmah. Transported to Europe, is described by Plukenet alm. pl. 230, Commelyn hort. i. pl. 15, and Miller. Farther West, was observed by Jacquin amer, pl. 92 in the West Indies; is known to occur there seemingly wild in stony places near the sea (Pers.); and according to Lindley is employed medicinally at Curaçao.

"In this year" (Sieb. elucid. Vries 54), the existence of Kamtchatka first made known to the Russians; — and in "1697" an ostroch or fort founded by some Cossacks on the Kamtchatka river.

"The same year" (Spreng.), Cavallini publishing his Pugil. Melit. (plants of Malta), enumerating *Conyza rupestris*.

"1690 A. D." (. . . . Smith, Hutch., and Holmes), inroads by French from Canada with aboriginals into the settlements in New York and New England, and French privateers from Acadie committing depredations; a fleet of "eight small vessels with seven or eight hundred men" under Sir William Phips, sailed "April 28th," and took possession of the whole Northern coast as far as Port Royal, which he captured. The colonists next contemplating the reduction of Canada, Phips made his appearance before Quebec "Oct. 5th" with a larger fleet; but the army marching in co-operation against Montreal having turned back, the fleet was also compelled to retire. For payment of the troops, the Massachusetts government issued bills of credit: being the first *paper money* in the colonies.

"The same year" (Z. Macy in coll. hist. iii. 157, and Holmes), beginning of the *whale-fishery* from Nantucket; in boats from the shore, under instructions from Ichabod Paddock, who came from Cape Cod. — In "1715" (account of 1785, hist. coll.), there were "six sloops, thirty-eight tons burden" employed.

By William III., a large body of French protestants sent to Virginia, and lands allotted them on James river: while others purchased land in Carolina, and settled on the Santee, and some in Charleston (Hewet 103, and Holmes).

"In this year" (Herm. parad. 24), Oldenland returning from Austral Africa, having met with *Ixia crocata* afr. 32.

Asclepias (*Gomphocarpus*) *fruticosa* of Austral Africa. A *milkweed* brought by Oldenland from Austral Africa — (Herm. parad. 24): observed by Bojer in the neighbouring Tropical portion of East Africa and on Madagascar, and naturalized on the Mauritius Islands. After its introduction into Europe, described by Plukenet alm. pl. 138, Miller, and Linnæus; and observed by Delile in Egypt, in a single garden, but some years later was found by Clot-Bey a more general favourite.

"In this year" (Spreng.), Plumier arriving at Hayti in the West Indies, meeting with — (or on his second visit "in 1693" and third "in 1695") *Utricularia foliosa* ic. Burm. 165. f. 2; *Piper aduncum*, *reticulatum*, *decumanum*, *umbellatum*, *obtusifolium*, *acuminatum*, *distachyum*, *maculosum*, *trifolium*, and *rotundifolium* amer. 66 to 77; *Peperomia pellucida* am. 72, *P. quadrifolia* ic. Burm. 242, *Hippocratea volubilis* ic. Burm. 88, *Comocladia ilicifolia* ic. B. 118. 1, *Moraea plicata* ic. B. 46. 2, *Exacum verticillatum* 81. 2; *Cissus sycioides*, *cordifolia*, and *microcarpa* 259. 2–4; *Pothos acaulis*, *lanceolatus*, *macrophyllus*, *palmatus*, *crenatus*, and *cordatus* am. 57 to 65 and ic. B. 38–9; *Rivina octandra* ic. B. 241, *Ilex cuneifolia* ic. B. 118. 2; *Tournefortia hirsutissima*, *foetidissima*, *humilis*, and *serrata* ic. B. 209–28; *Theophrasta Americana* ic. B. 226; *Convolvulus macrorhizus*, *macrocarpus*, *corymbosus*, *verticillatus*, *acetosaefolius*, and *umbellatus* ic. B. 89 to 94 and am. 102–5; *Ipomaea umbellata*, *digitata*, *hederaefolia*, and *solanifolia* ic. B. 92. 1 to 94. 1; *Rondeletia Americana* 141. 1, *Belonia aspera* 47, *Coffea Occidentalis* 156, *Hamelia chrysantha* 218. 1, *H. patens* 218. 2, *Erithalis fruticosa* 249. 2, *Brossaea coccinea* 64. 2, *Nicotiana? urens* 211, *Solanum polyacanthum* 224. 1, *Ardisia serrulata* 80, *Strumpfia maritima* 251. 1, *Rauwolfia nitida* 236. 1, *R. canescens* 236. 2, *Echites asperuginis* 26, *E. biflora* 96, *Cameraria latifolia* 72. 1, *C. angustifolia* 72. 2, *Tabernaemontana citrifolia* 248. 2, *Gonolobus crispiflorus* 216. 1, *Asclepias nivea* 30, *Alternanthera frutescens* 21. 2, *Rhus metopium* 61, *Aralia arborea* 148, *Bromelia lingulata* 64, *Pitcairnia latifolia* 62; *Tillandsia lingulata*, *serrata*, *paniculata*, and *monostachya* 64 to 257; *Tradescantia geniculata* 116. 2, *Loranthus Americanus* 166. 1, *Alisma flava* 115, *Dracontium pertusum* am. 56, *Fuchsia triphylla* ic. B. 133. 1, *Coccoloba excoriata* 146. 1, *Paullinia Curassavica* 111. 1, *P. cururu* 111. 2, *Serjana sinuata* 113. 2, *Celtis micrantha* 206. 1, *Bauhinia aculeata* 44. 1, *B. porrecta* 44. 2, *Cassia planisiliqua* 77, *C. biflora* 78. 1, *Caesalpinia crista* 68, *Jussiæa hirta* 174. 2, *J. octovalvis* 275. 1, *Melastoma splendens* 140, *Samyda serrulata* 146. 2; *Malpighia urens*, *aquifolia*, and *coccifera* 167. 1 to 168. 2; *Banisteria dichotoma*, *coerulea*, *purpurea*, and *angulosa* 13–15 and am. 92; *Tetrapteris citrifolia* ic. B. 16, *Oxalis Plumieri* 213. 1, *Rhipsalis parasitica* 197. 2, *Opuntia moniliformis* 198, *Cactus paniculatus* 192, *C. glomeratus* 201. 1, *Myrtus virgultuosa* 208. 1, *M. coriacea* 208. 2, *Eugenia angustifolia* 207. 2, *Marcgravia umbellata* 173, *Capparis amplissima* 73. 2, *Muntingia calabura* 203, *Sloanea dentata* 244, *Meritzelia aspera* 174. 1, *Corchorus hirsutus* 104, *C. siliquosus* 103. 1, *C. hirtus* 103. 2, *Talauma Plumieri* 161, *Anona Asiatica* 143. 2, *Clusia alba* 87. 1, *C. venosa* 87. 2, *Gerardia tuberosa* 75. 2; *Gesneria humilis*, *grandis*, and *craniolaria* 134–7; *Besleria melittaefolia*, *lutea*, and *cristata* 48–50; *Brunfelsia Americana* 65; *Bignonia stans*, *Aequinoctialis*, *microphylla*, *paniculata*, *staminea*, *longissima*, *crucigera*, and *unguis* 54 to 94; *Lantana trifolia* ic. B. 70, *L. odorata* 71. 2, *Hosta coerulea* 106. 1, *Buchnera elongata* 17, *Ruellia coccinea* 43. 1, *Barleria solanifolia* 43. 2, *Ovieda spinosa* 256, *Columnea scandens* 89. 1; *Passiflora rotundifolia*, *heterophylla*, *pallida*, *serrata*, *suberosa*, *rubra*,

and *multiflora* 79 to 139 and am. 79–90; *Murucuia ocellata* am. 87, *Sida nudiflora* ic. B. 3, *S. Americana* ic. B. 2, *S. hederaefolia* 169. 3, *Hibiscus trilobus* 159, *H. unilateralis* 160. 1, *Pavonia spinifex* 1, *P. coccinea* 169. 2, *Morisonia Americana* 203, *Polygala penaea* 214. 1, *Securidaca volubilis* 247. 1, *S. virgata* 248. 1, *Pterocarpus lunatus* 201. 2, *Rudolphia peltata* 102. 1, *Piscidia erythrina* 233. 1, *Teramnus volubilis*, 221, *Dolichos articulatus* 222, *Dolichos tuberosus* 220, *Clitoria Plumieri* 108, *Coronilla scandens* 107. 3, *Aeschynomene sensitiva* 149. 2, *Tephrosia toxicaria* 135; *Ascyrum hypericoides* 152. 1; *Eupatorium sinuatum, sophiaefolium, macrophyllum*, and *repandum* 128. 1 to 130. 1; *Conyza odorata, alopecuroides*, and *virgata* 97 to 98. 2; *Vernonia arborescens* 130. 2, *Chaptalia dentata* 40. 2, *Leeria nutans* 41. 1, *Inula aestuans* 41. 2, *I. primulaefolia* 40. 1, *Pectis punctata* 86. 1, *P. humifusa* 95. 2, *P. ciliaris* 151. 2, *Verbesina gigantea* 51, *V. fruticosa* 52, *Wedelia carnosa* 107. 2, *Coreopsis chrysantha* 53. 1, *C. coronata* 53. 2; *Neottia lanceolata, quadridentata*, and *elata* 181. 2 to 190; *Brassavola cucullata* 179. 1, *Isochilus linearis* 182. 1; *Epidendrum coccineum, juncifolium, altum, ciliare, secundum, cochleatum*, and *punctatum* 179 2 to 189; *Dendrobium polystachyon* 185. 1, *Stelis ophioglossoides* 176. 3; *Aristolochia bilabiata, peltata, punctata*, and *bilobata* 32. 1 to amer. 106; *Anguria trifoliata* amer. 99, *A. trilobata* ic. B. 22, *A. pedata* 23, *Dorstenia caulescens* 120. 1, *Urtica ciliaris* 120. 2, *Sagittaria lancifolia* 116. 1, *Begonia macrophylla* 45. 1, *B. rotundifolia* 45. 1, *Arum hederaceum* amer. 55, *Caladium auritum* 58, *C. pinnatifidum* 51. b. 53, *Pinus Occidentalis* ic. B. 161, *Plukenetia volubilis* 226, *Dalechampia scandens* amer. 101, *Croton furfuraceum* ic. B. 240. 1, *C. citrifolium* 240. 2, *C. palustre* 239. 1, *Sapium ilicifolium* 171. 1, *Trichosanthes amara* amer. 100, *Bryonia Americana* ic. B. 66. 1, *B. racemosa* 97, *Trophis Americana* 67, *Viscum buxifolium* 258. 3, *V. flavens* 258. 4, *Rajania hastata* amer. 98, *R. cordata* ic. B. 55. 1, *R. quinquefolia* 55. 2, *Dioscorea altissima* 117. 2, *D. piperifolia* 117. 1; *Inga circinalis, latifolia*, and *tergemina* 5 to 10. 1; *Acacia latisiliqua, tamarindifolia, ceratonia*, and *muricata* 6 to 11; *Acrostichum citrifolium, longifolium, villosum, muscosum, crinitum, peltatum, trifoliatum, alienum, cruciatum, calomelanos, chrysophyllum*, and *acuminatum* 40 to 135; *Hemionitis lanceolata* 127; *Polypodium piloselloides, serpens, heterophyllum, lanceolatum, crassifolium, phyllitidis, repens, comosum, trifurcatum, asplenifolium, suspensum*, and *fabelliforme, incisum, otites, pectinatum, taxifolium, struthionis, squamatum, aureum, crispatum, loriceum, dulce, crenatum, fasciale, tenuifolium*, and *cultratum* 76 to 138; *Aspidium Martinicense, articulatum, triangulum, semicordatum, exaltatum, cordifolium, nymphale*, and *villosum* 27 to 145; *Asplenium serratum, bifolium, obtusifolium, pumilum, salicifolium, cultrifolium, dentatum, striatum*, and *squamosum* 18 to 124; *Diplazium undulosum* 107, *Caenopteris cicutaria* 48, *Lonchitis repens* 12, *L. aurita* 17, *L. hirsuta* 20; *Pteris lanceolata, tricuspidata, furcata, grandifolia, stipularis, mutilata, aculeata, caudata*, and *trichomanoides* 5 to 141; *Vittaria lineata* 143, *Blechnum Occidentale* 62, *Adiantum aculeatum* 94, *A. trapeziforme* 95, *Cheilanthes microphylla* 58; *Davallia Domingensis, clavata*, and *trifoliata* 7 to 101; *Cyathea arborea, commutata, aspera*, and *horrida* 1 to 14; *Trichomanes membranaceum, pyxidiferum, alatum*, and *scandens* 50 to 101; *Hymenophyllum hirsutum*, and *sericeum* 50 to 73; *Osmunda hirta, phyllitidis, cervina, pipinnata, adiantifolia, verticillata, filiculaefolia*, and *hirsuta* 57 to 162; *Mertensia furcata* 28, *Danaea alata* 109, *D. nodosa* 108, *Botrychium Virginicum* 159, *Psilotum triquetrum* 170, *Ophioglossum palmatum* 163, *O. reticulatum* 164; *Lycopodium linifolium, rigidum, stoloniferum, thyoides*, and *acerosum* 43 to 166; *Plumiera obtusa*,* *Abutilon crispum* ic. pl. 25, *A. Americanum* ic. pl. 2 (Linn. sp. 963).

Malachra radiata of Western Equatorial Africa. A Malvaceous plant, through European colonists carried across the Atlantic: observed by Plumier 19 on Hayti, — and by Aublet in Guayana (A. Dec.). Eastward, known to grow in Equatorial Africa (R. Brown cong. 59).

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* *Duranta Plumieri* of the West Indies. Verbenaceous and arborescent with long spreading branches, observed by Plumier 79 — (Spreng.), and Jacquin amer. pl. 176, in the West Indies; and according to Chapman grows as far North as the point of Florida. Transported to Europe, is described by Linnæus; and was observed by myself flourishing in the open air on Madeira.

Petiveria alliacea of the West Indies. The *guinea-hen weed* is a small Phytolaccoid bush, observed by Plumier gen. pl. 219, — P. Browne, Jacquin amer. 201, and Schomburgh, in the West Indies, excessively acrid in all its parts, used by the Negroes medicinally and to procure abortion, and its root as a remedy for toothache. Transported to Europe, is described by Linnæus holm. 1744 pl. 7, and Trew and Ehret pl. 67.

Allamanda cathartica of Eastern Equatorial America. An Apocynoid woody climber with large yellow flowers, observed by Plumier pl. 29 in the West Indies — (Spreng.); by Aublet i. pl. 106 in Guayana and termed "orelia grandiflora;" known to grow also in "Brazil, especially near the coast" (Lindl.). By European colonists was carried to Hindustan, observed by Ainslie mat. ind. 2. 9, by Graham "common in gardens" at Bombay, by Gardner escaping from cultivation on Ceylon, by Mason "exotic" in Burmah and called "pha-young-ban." Employed medicinally according to Lindley as "a valuable cathartic," but in over doses "is violently emetic and purgative."

Triumfetta lappula of Western Equatorial Africa. A Tiliaceous weed through European colonists carried to the West Indies: observed there by Plumier pl. 255, — and Macfadyen 110; also to Brazil, and Bermuda (Pers.). Eastward, known to grow in Equatorial Africa (fl. Nigr., and A. Dec.).

Desmodium incanum of Equatorial Africa. A Leguminous plant, through European colonists carried to the West Indies, observed there by Plumier pl. 149 — (Pers.), and Swartz; by Macfadyen, frequent in pastures and along roadsides on Jamaica (A. Dec.). Eastward, known to grow in Equatorial Africa and perhaps wild also on the Mauritius Islands (Dec. prodr., and fl. Nigr.).

Parkinsonia aculeata of Tropical Africa? A small ornamental tree, observed in the West Indies by Plumier pl. 3 — (Spreng.), and Jacquin amer. pl. 129; by Browne, brought to Jamaica from the neighbouring continent; where however according to Kunth, its names indicate a foreign origin (A. Dec.). Eastward, was cultivated in Senegal in "1816," and has since become naturalized on the Wallo plains (Perrott. and Le Pr.): was observed by myself under cultivation in Yemen; appears to have been only recently carried to Hindustan, where it is "now almost naturalized," being "common about Bombay," but seems devoid of a native name (Pidd., and Moon); is enumerated by Mason as "exotic" in Burmah. Clearly by European colonists, was carried to the Mauritius Islands, where it was observed by Bojer only under cultivation.

Ecastaphyllum Brownei of Tropical America. Observed in the West Indies by Plumier 246. 2 — (Spreng.), and Browne pl. 32, and known to grow along the shore as far as Brazil — (Pers., and A. Dec.). Occurring also on the African coast at Senegal and Guinea (Dec., and fl. Nigr.), probably transported by the ocean currents.

Oldenlandia corymbosa of Tropical America. Observed by Plumier 212. 1 in the West Indies — (Spreng.), by Berlandier in Mexico; and known to grow in Jamaica and Cayenne (herb. Dec.). Probably by European colonists carried to the Moluccas (herb. Dec.), and across the Atlantic to Senegal and Guinea (fl. Nigr., and A. Dec.).

"In this year" (Spreng., and Winckl.), after his Prodrom. "in 1689," Magnol publishing his Hort. Monsp., enumerating *Lonicera Pyrenaica* 209, *Saxifraga hirsuta* 87, *Arenaria laricifolia* 11, *Garidella nigellastrum* 143, *Ononis tridentata* 16, *O. crispa* 17, *Astragalus Uralensis* 27, *Chrysanthemum graminifolium* 21, *C. Monspeliense* 21, *Verbesina alata* 40, *Polypodium leptophyllum* 5, and *Davallia Canariensis* (of Madeira), *Saxifraga umbrosa* pl. 8. — He died "in 1715."

"In this year" (J. E. Smith, and Spreng.), Ray publishing his Synops. Brit., enumerating* *Cerastium semidecandrum* pl. 15. 1, *Pinguicula villosa* hist. i. 752, *Subularia aquatica* syn. iii. 307, *Festuca uniglumis* 17. 2, *Trisetum pubescens* 21. 2, *Anthericum serotinum* 17. 1, *Sedum Angli-*

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* *Barbarea præcox* of Siberia. Called *Belleisle cress* (Prior), and already in Britain in the days of Ray syn. 297; — regarded by Watson as exotic and only naturalized: known to grow spontaneously on the neighbouring portion of the continent from France to Sweden (Pers., Fries, and A. Dec.); and observed by Gmelin in Siberia (Steud.). By European colonists, was carried to Northeast America, where it continues sparingly cultivated in our Northern, and according to A. Gray in our Middle States, "becoming spontaneous farther South;" to the Mauritius Islands, where it continues to be regularly cultivated and is distinguished as *early winter-cress* (Boj.; see B. vulgaris).

Bidens cernua of Northeast America. A species of *bur-marigold*, transported to and naturalized in Europe before the days of Ray syn. 187; — termed "bidens radiata" by Thuillier; and known to occur throughout middle Europe as far as Sweden (Linn., fl. Dan. pl. 312, Curt. lond. pl. , Engl. bot. pl. 1114, Willd., Pers., and Wats.). Westward, is known to grow throughout Canada from Quebec to the Saskatchewan (Hook.), and from "New England to Wisconsin" (A. Gray); observed by myself from 43° along the Atlantic, on the marshy border of slow-moving water, and often in wet places by the roadside; by Torrey, to 41°, and by Conrad to 40°; by Schweinitz, at 36° in Upper Carolina; and by Short, in Kentucky.

Selaginella selaginoides of Northern climates. A *club-moss* termed "selaginoides foliis spinosis" by Ray angl. iii. 106, — "muscus terrestris repens clavis singularibus foliosis erectis" by Scheuchzer it. pl. 6, and known to grow throughout Northern Europe (Dill. musc. pl. 88): observed by Linnæus in Lapland, and Sweden as far as Upland. Westward, by Pursh in New Hampshire; and according to A. Gray, grows in "wet places," "Michigan, Lake Superior and northward, pretty rare."

Lycopodium inundatum of Northern climates. A *club-moss* termed "muscus terrestris repens clavis singularibus foliosis erectis" by Ray angl. iii. 108, — "l. palustre repens clava singulari" by Vaillant paris. pl. 16, and known to grow throughout Northern and middle Europe (Dill. musc. pl. 62): observed by Linnæus in Sweden. Westward, by myself in bogs from 47° on the Lower St. Lawrence to North Conway and 42° along the Atlantic; rarer perhaps in the Interior, known to A. Gray in central New York as growing in "sandy bogs, northward, rare."

cum 12. 2, *Euphorbia Portlandica* 24. 6, *Astragalus hypoglottis* 12. 3, *Trifolium striatum* 13. 3, and *Geastrum rufescens* 1. 1, *Pyrola minor* angl. iii. p. 363.

Sagina erecta of Northern Europe. A vernal annual described by Ray 15. 4 — (Spreng.); termed "moenchia quaternella" by Ehrhart; observed by Moench in Germany; by Baumgarten, in Transylvania (Steud.); and known to grow in Britain and France (Eng. bot. pl. 609, and Lam. fl. fr.). By European colonists, was carried to Northeast America, has been found "near Baltimore, in dry ground" (A. Gray).

Chenopodium serotinum of the Uralian plains. An annual termed "blitum ficus folio" by Ray angl. iii. p. 155 — (Linn); observed by Pallas trav. i. 53 along the Volga; known to grow also in Siberia, and Westward occurring as far as Britain, France, and Spain (Pers.).

Phleum arenarium of the seashore of Europe and the Mediterranean countries. Termed "gramen typhinum maritimum minus" by Ray angl. iii. 398, — and Plukenet alm. pl. 33 (Linn.), "gramen spicatum maritimum minimum spica cylindracea" by Tournefort inst. 520, and known to grow along the Atlantic shore of Europe (Engl. bot. pl. 222, and Pers.): observed by Linnæus in Sweden as far as Scania; by Desfontaines i. 61, in the maritime sand of Barbary; by Sibthorp, frequent around the Greek islands.

"In this year" (append. Sibth, and Spreng.), Rivinus publishing his Introd. in rem. herb., and his Monop., enumerating *Salvia virgata*, *Teucrium campanulatum*, *T. Orientale*, and *Linaria Chalepensis*.

"Sept. 23d" (Thunb., and Spreng.), after visiting Persia in "1683," and proceeding by way of the Persian Gulf in "1689," Kaempfer arriving in Japan, meeting with *Ficus pumila* am. 805, *F. erecta* pl. 4, *Skimmia Japonica* pl. 5, *Weigelia Japonica* pl. 45, *Aralia Japonica* pl. 10, *Daphne odora* pl. 16, *Hydrangea hortensis* am. 854, *Convallaria Japonica* am. 824, *Phytolacca octandra* am. 829, *Magnolia kobus* pl. 42, *M. obovata* pl. 43. 44, *Bignonia grandiflora* pl. 21, *Clerodendron trichotomum* pl. 22, *Dolichos cultratus* pl. 25, *D. incurvus* pl. 39, *D. angularis* pl. 40, *Citrus trifoliata* am. 802, *Aster hispidus* pl. 29, *Inula Japonica* pl. 30, *Vanilla angustifolia* am. 869 f. 1, *Aerides arachnites* 869 f. 2, *Dendrobium moniliforme* am. 865, *Aristolochia Kaempferi* pl. 49, *Quercus glauca* pl. 17, *Dioscorea quinqueloba* pl. 15, *Taxus macrophylla* pl. 24, and *Pteris piloselloides*. — Leaving "in 1692," he published his Amoen. exot. "in 1712," and died "in 1716."

"Dec. 23d" (Humb. cosm. ii. and iv.), Uranus seen by Flamstead, but not recognized as a planet.

"1691 A. D." (art de verif.), Suliman III. succeeded by Achmed II. or Achmet II., twenty-second Turkish sultan.

"The same year" (Pauth. 437), expedition of the emperor Khang-hi, accompanied by the Jesuit missionary P. Gerbillon, into the country of the Kalkas or Eleuths. P. de Mailla and other Jesuit missionaries, were employed by Khang-hi in constructing by the European method maps of the different provinces of China.

"In this year" (J. E. Smith, and Spreng.), Rivinus publishing his Tetrap.; enumerating *Hedysarum flexuosum*; — "in 1699," his Pentap.; and died "in 1725."

"In this year" (J. E. Smith, and Spreng.), Plukenet publishing his Phytogr., enumerating* *Prunus Sinensis* pl. 11. f. 4, *Kosteletzkya Virginica* 6. f. 4, *Senecio hieracifolius* 112. f. 1. — The work was completed "in 1693."

Corchorus acutangulus of Tropical Africa. A Tiliaceous esculent called in Bengalee "tittapat" (Roxb., and A. Dec.); from transported specimens described by Plukenet phyt. pl. 44, — and Lamarck (Pers.): Through European colonists was carried to the West Indies, where according to

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* *Quercus agrifolia* of California. An *oak*, from transported specimens termed "ilex foliis agrifolii Americana" by Plukenet phyt. — (Brendel in Am. nat. May 1870). Westward, observed by Nee p. 271 on the Pacific shore of North America (Pers.).

Sicyos angulatus of Japan? The *one-seeded cucumber*, herbaceous and climbing, called in Japan "tamatsagori" (Thunb.), and known there as early probably as this date: transported to Europe, is described by Plukenet phyt. 26. f. 1, — and Hermann parad. pl. 133. Westward, has been observed by myself in New England only as a garden weed; but according to A. Gray, grows on "river-banks" in central New York: was observed by Pursh from Canada to Carolina; by Elliot, in the upper district of Carolina and Georgia; by Chapman, "river-banks, Florida, and northward;" by Short, in Kentucky; by Baldwin, on the Missouri (Torr.); by Nuttall, on the Arkansas; and according to Hooker, grows from Kettle falls along the Columbia to its mouth. Farther West, was observed by myself naturalized on the Hawaiian Islands, around native villages in New Zealand and boiled for greens, and in wild situations on the Upper Hunter in Australia, possibly introduced by Papuans: by Thunberg, around Nagasaki in Japan.

Hughes 197 it is eaten by Negroes. Eastward, has been observed in Guinea (Benth. fl. Nigr.); by Graham, in the environs of Bombay, "common in the rains;" and by Roxburgh, as far as Eastern Hindustan.

Aldrovanda vesiculosa of Hindustan? Termed "lenticula palustris indica fol. semirotundis binis capillamentis ad imum barbatis" by Plukenet alm. pl. 41. f. 6 — (Pers.). Probably exotic in Europe, but observed by Allioni at Candia and Viverone in Piedmont, by Bertoloni from Piedmont to Bologna and in Bientina lake near Pisa, by Maratti in the Pontine marshes near Rome, by Pourret from Arles and Montpelier to the baths of Molight in the Eastern Pyrenees, and by Besser in the Pinsk marsh in Lithuania (A. Dec.).

"1692, March 20th" (Pauth. p. 445), in China, at the end of "twenty-two years," the prohibition against attending Christian churches removed by the emperor Khang-hi.

"May 14th" (Hutch., and Holmes), arrival at Boston of Sir William Phips as governor, bringing a new charter for Massachusetts. By which, the power of the governor was increased, at the expense of some of the privileges of the colonists, and the boundaries of the province were enlarged so as to include Nova Scotia. Rhode Island and Connecticut were however allowed to resume their old charters.

"The same year" (Hutch., and Holmes), the witchcraft delusion at Salem and in the vicinity; and nineteen persons executed. One of the accused, Giles Cory, refusing to plead, was pressed to death: — "the only instance" of the enforcement of "this barbarous punishment" in New England. The proceedings at Salem evidently connected with similar witchcraft trials in Suffolk, England, published in 1684: but after the first year, no one appears to have been executed.

"June 7th" (univ. hist. xli. 364, and Holmes), a severe *earthquake* at Jamaica; and "in the space of three minutes," nine tenths of the city of Port Royal inundated, "two thousand" persons perishing.

In this year (Spreng.), Volckamer writing his Flor. Norimb., enumerating *Aizoon Canariense* 236, *Mesembryanthemum difforme* 165, *Stapelia hirsuta* 30, *Dracocephalum Canariense* 145, *D. canescens* 353, *Hermannia scabra* 24, *Colutea herbacea* 118, *Chrysocoma coma-aurea* 148, *Gnaphalium fœtidum* 194, *G. helianthemifolium* 194, *Senecio elegans* 225, *S. rigidus* 225, *Aster rubricaulis* 50, *A. angustifolius* 50, *Arctotis hypochondriaca* 224, *Osteospermum spinescens* 105, *Othonna abrotanifolia* 225, and *O. parviflora* 226. — He died "in 1693," and his Flor. was published "in 1700."

Mesembryanthemum crystallinum of Austral Africa. Transported to Europe, described by Volckamer 166 — (Spreng.), Dillenius elth. pl. 130, and Linnæus: known to occur about Athens (Pers.), and observed by Sibthorp, and Chaubard, around the acropolis; by Delile, springing up spontaneously at Alexandria. Is said to have been seen by Thunberg in Austral Africa.

"1693 A. D." (Stiles, Humph., and Holmes), the episcopal church introduced into the province of New York by Governor Fletcher; and an Act passed by the provincial assembly for settling and maintaining a ministry. — Nothing was done in pursuance of the Act until 1696, when Trinity church was built in New York city.

"The same year" (Colden 150, and Holmes), arrival at Montreal of "two hundred canoes" laden with furs, accumulated at Missilimakinak; the route having been interrupted for several years by the confederate tribes called the "Five nations."

"The same year" (Kobell ii.), "after a violent eruption of its volcano," sinking beneath the waves of one of the Molucca islands named "Sarca."

"At this time" (Spreng.), Geor. Ios. Kamel at Manila, sending to Ray and Petiver plants of the Philippines, including *Hibiscus lampas*, *Bradleia Philippensis*, *Stylocoryna racemosa*, and *Columbia serratifolia*.

"In this year" (Pursh, and Spreng.), Plumier, having commenced his Plant. amer., making a Second visit to the West Indies, meeting with * *Acrostichum aureum* am. pl. 7, *Pteris pedata* am. pl. 34, *Lobelia Cliffortiana* spec. v. 235. f. 2, *Phoradendron purpureum* spec. 258. f. 3. — He made a Third visit "in 1695," published his Nov. gen. "in 1703," died "in 1704," and ten fascic. of his Plant. amer. were published by Burmann "in 1755–60."

"1694 A. D." (Charlev., and Holmes), Fort Nelson, a fur-trading post on Hudson's Bay, captured by the French; and garrisoned by them. — After two years, the fort was re-captured by the English.

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* *Dieffenbachia seguina* of the West Indies. The *dumb cane*, Araceous though five or six feet high and palm-like, was observed by Plumier amer. 60 — (Spreng.), and Jacquin amer. pl. 229 in the West Indies: the root if chewed producing a dangerous swelling of the tongue, and said to produce dumbness if merely applied to the lips, the stem according to Browne employed to bring sugar to a good grain (Lindl.). Transported to Europe, is termed "caladium seguinum" by Linnæus; is described also by Ventenat, and Hooker exot. pl. 1.

"In this year" (Linn. fl. suec.), Olaus Bromelius publishing his Chloris Gothica, an account of the plants around Gothoburg . . . . — He died "in 1705" (Spreng.).

At this time (J. E. Smith, and Spreng.), Hermann writing his Parad., enumerating* *Holosteum cordatum* par. 11, *Amaryllis equestris* 194, *A. longifolia* 195, *Albuca minor* 209, *Tiarella cordifolia* 130, *Silene viridiflora* 199, *Cereus lanuginosus* 115, *Geum Virginicum* 111, *Hyssopus scrophulariaefolius* 106, *Marrubium cinereum* 200, *Antirrhinum triornithophorum* 377, *Scrophularia frutescens* 377, *Hesperis lacera* 193, *Passiflora hirsuta* 176, *Hieracium Pyrenaicum* 184, *Serratula nudicaulis* 190, *Aster dumosus* 95, *A. Novae Angliae* 98, *A. undulatus* 96, *Solidago flexicaulis* 244, *S. minuta* 245, *S. rigida* 243, *Coreopsis alba* 124, *Centaurea napifolia* 189, *C. Tingitana* 163, *Cucumis Africanus* 134, *Eryngium foetidum* pl. 237, *Asclepias purpurascens* 33. — He died "in 1695," and his Parad. was published by Wm. Sherard "in 1705."

Rosa cinnamomea of the Atlas mountains. Its bark brown-bay or chestnut colour, and hence perhaps the name (Pers.). Termed "r. majalis" by Hermann diss. de rosa p. 8, — described also by Reynier in act. laus. i. 68, Linnæus, Ehrhart, Retz. scand., and fl. Dan. pl. 868 and 1214: according to Watson cyb. i. 359, not really naturalized in Britain (A. Dec.): perhaps exotic also in Switzerland and other parts of Europe. In its wild state, observed by Desfontaines i. 400 on the Atlas mountains (Pers.).

"Dec. 28th" (Nicol.), death of queen Mary, leaving her husband William III. sole ruler of United Britain.

"In this year" (Winckl.), after his Plant. vern. "in 1688," Rudolph Jacob Camerarius publishing his Epist. de sexu plant. — He published other papers "until 1721, in which year" he died. His Opuscul. botan. were collected and republished "in 1797."

"1695 A. D." (art de verif.), Achmed II. succeeded by Mustafa II., twenty-third Turkish sultan.

"In this year" (Linn. fl. lapp. præf.), Olaus Rudbeck the younger visiting Lapland, meeting with † *Andromeda hypnoides* 97, *Tussilago frigida*, *Carex atrata* elys. i. pl. 23.

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* *Tribulus cistoides* of the West Indies. Decumbent and belonging to a Desert tribe, the Zygophyllaceæ: transported to Europe, described by Hermann parad. 236 — (Spreng.), and Plukenet alm. pl. 67 (Pers.). Westward, was observed by Jacquin, and Maycock, in the West Indies, and is known to grow from "Key West" at the point of Florida (Chapm.) to Curaçao (A. Dec.). Farther West, was carried by ocean-currents, or possibly by Polynesians, to Malden Island in the Pacific (J. D. Hook.); and to the Hawaiian Islands, observed there by Lay and Collie, by myself in a few Desert spots, but chiefly in the Desert outskirts of Honolulu.

Capraria biflora of Tropical America. Transported to Europe, is described by Hermann parad. 110 — (Linn. sp.). Observed in the West Indies by Jacquin amer. pl. 115, and Browne, near dwellings and employed as a substitute for tea (A. Dec.); known to grow also at the Southern extreme of Florida (Torr., and Chapm.), and in Mexico, Peru (R. and Pav.), and Brazil (Benth.). By European colonists, was carried to Equatorial Africa, observed at Cape coast in Guinea (fl. Nigr.).

Passiflora foetida of Tropical America. Known to grow wild from Dominica to Cuaçao and Brazil (Pers., Gardn., and A. Dec.). Transported to Europe, is described by Hermann parad. 173 — (Spreng.), Plukenet alm. pl. 104, and Cavanilles x. pl. 289. Eastward, was introduced by Moon "in 1824" into Ceylon, where it was found by Gardner (bot. mag. for 1848) a very frequent weed: by European colonists also, was carried to Bombay, observed by Graham "in gardens, not common;" and to Burmah (Mason).

Amaryllis belladonna of Tropical America. Received from the West Indies and termed "lilium bella donna" by Hermann parad. pl. 194; — described also by Seba i. pl. 17, and Linnæus; and observed by myself, naturalized throughout Madeira, even in wild woodland situations. By European colonists also, recently introduced into Hindustan (Graham). Said to grow wild on Barbadoes and other West India Islands, and in Surinam (Pers.).

† *Lychnis alpina* of the Arctic region and alpine summits farther South. Observed by O. Rudbeck jun. 98 in Lapland; — by Fries, in Finland, Sweden, and Norway; and known to grow as far as the mountains of Scotland and Wales (fl. Dan. pl. 65), also on the Pyrenees (A. Dec.) and Swiss Alps (Hall. i. pl. 7), on the Northern portion of the Ural mountains as well as around Lake Baikal and in Daouria (Ledeb. i. 329). Westward, was observed by Hooker on Iceland, and received from Labrador; is known to grow in Greenland and on Melville Island (Wats.).

Phyllodoce coerulea of the Arctic region and mountain-summits farther South. A low yew-leaved shrub observed by O. Rudbeck jun. 97 in Lapland; — by Gmelin, in Siberia as far as Kamtchatka, and received from the American coast; known to grow also on the Altaian mountains (A. Dec.), in one locality in Perth county in Scotland (Bab.), and near Bagnères de Luchon in the Pyrenees (Munby). Westward, was observed by Crantz in Greenland (Hook.); was received by Pursh from

"1696 A. D." (Anders. ii. 625, and Holmes), by the English parliament, an Act prohibiting the export of goods from the colonies to "Ireland or Scotland, without being first landed in England, and having also paid duties there; under forfeiture of ship and cargo." — In regard to Scotland, the prohibition after ten years was rendered void by the Union.

"November" (Humb. cosm. v.), the island of St. Paul discovered by Vlaming.

"In this year" (Chalm., and Holmes), the city of New York containing "five hundred and ninety-four houses, and six thousand inhabitants:" the shipping consisting of "forty ships, sixty-two sloops, and sixty boats." The aboriginals of New England maintained among themselves no less than "thirty" churches (Rawson, Stiles, and Holmes).

"In this year" (Spreng.), Cupani publishing his Hort. Cathol., enumerating* *Tordylium humile* 200, *Silene glutinosa* 110, *Linaria reflexa* 214, and *Seriola urens* 95. — He died in "1711," and his Pamphyt. Sicul. was published in "1713."

"In this year" (Spreng.), Plukenet publishing his Almagest, enumerating "quercus Americana rubris venis" (*Q. coccinea*), "q. castaneæ folio" (*Q. prinus*) figured, "q. pumila castaneæ folio Virginiensis"† (*chinquapin oak Q. pumila*, Brendel in Am. Nat. for May 1870), *Coldenia procumbens* pl. 64. f. 6, *Smilax tamnoides* 111. f. 1 and 3, *Iris cristata* 196. f. 6, *Woodwardia Virginica* 179. f. 2, *Phacelia parviflora* 245. f. 5, *Lysimachia heterophylla* 333. f. 1, *Stylisma evolvuloides* 166. f. 4, *Phlox subulata* 98. 2, *Cicuta maculata* 76. f. 1, *Hypoxis erecta* 315. f. 2, *Juncus polycephalus* 92. f. 9, *Cassia (Chamæcrista) nictitans* 314. f. 5, *Crataegus coccinea* 46. f. 4, *Scutellaria pilosa* 313. f. 4, *Draba incana* 42. f. 1, *Melothria pendula* 85. f. 5, *Passiflora peltata* 210. f. 4, *Kuhnia eupatorioides* 87. f. 2, *Pluchea bifrons* 87. 4, *Solidago latifolia* 235. f. 4, *Sericocarpus solidagineus* 79. f. 2 ("Conyza linifolia" of Linn.), *Aster tenuifolius* 78. f. 5, *Cornus florida* 20. f. 3, "frutex virginianus trifolius" *Ptelea trifoliata* 159, *Oldenlandia glomerata* 74. f. 5, *Ampelopsis bipinnata* 412. f. 2, *Claytonia Virginica* 102. f. 3, *Saururus cernuus* 117. f. 4, *Rhexia Virginica* 202. f. 8, *Kalmia latifolia* 379. 6, *Clethra alnifolia* 115. f. 1, "sanicula virginiana alba" 59. f. 1 *Saxifraga Pennsylvanica*, *Iris verna* 196. f. 6, "polygala rubra virginiana spica parva compacta" 300 *Polygala viridescens* ("P. Nuttallii" of Carey), "cicer astragaloides virginianus hirsutie pubescens floribus amplis subrubentibus" 23. f. 2 *Tephrosia Virginiana;* "hypericum virginianum frutescens pilosissimum" alm. 245. f. 6 *H. villosum* ("Ascyrum" of Linn., and "H. pilosum" of Walt.); "sonchus elatus s. dendroides virginianus, ari in modum articulatis foliis, ramosissimus, floribus luteis parvis pentapetalis" 317. f. 2 *Nabalus altissimus;* "eupatoria

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Labrador; and was observed by Peck, and myself, on the summits of the White mountains of New England.

Salix myrsinites of the Arctic region and alpine summits farther South. Observed by O. Rudbeck jun. 340 in Lapland; — known to grow in Scandinavia (fl. Dan. pl. 1054, and Fries), on the mountains of Scotland (Bab.), the Pyrenees (Benth.), the Swiss Alps (Vill. iii. pl. 50, and A. Dec.), and on the Altaian mountains (Ledeb.). Westward, was observed by Hooker on Iceland, and received from Arctic America and the Rocky mountains (A. Dec.); was received by Pursh from Labrador; and is known to grow in Greenland (Wats.).

* *Lathyrus odoratus* of Ceylon. First cultivated by Cupani at Panormus in Sicily — (Spreng.); described also by Commelyn hort. Amst. ii. 80; cultivated in gardens, and called in Britain *sweet pea* (Prior). From Europe, carried by colonists to Northeast America, where it continues a favourite garden flower. Received by Linnæus from Ceylon.

† *Rhus venenata* of Northeast America. The *poison sumach*, a tall smooth shrub, transported to Europe described by Plukenet alm. pl. 145, — Miller, Dillenius elth. pl. 292, and Linnæus. Westward, the "poison-wood tree" was seen by Paul Dudley in New England about 1723 (phil. trans. xxxi. 135, and Tuckerm. arch. Am.): R. venenata was observed by Michaux from Canada to Carolina; by myself, in swamps from 44° 30′ throughout New England; by Elliot, rare in the low country as far as Savannah; by Baldwin, as far as 31°; by Croom, to 30° 30′; by Chapman, "Florida to Mississippi;" and by Nuttall, on the Arkansas.

Helonias bullata of the Marginal alluvial of Northeast America. Transported to Europe, described by Plukenet alm. pl. 174. f. 5, — (Linn. sp. pl.), Trew (Spreng.), Miller pl. 272; continues under cultivation as a garden flower. Westward, was observed by Michaux wild "in marshes in Pennsylvania and Maryland" (Pers.); by Pursh, from New Jersey to Virginia.

Eragrostis ciliaris of Tropical America? Transported to Europe, and described by Plukenet pl. 190 — (Spreng.), Linnæus, and Jacquin coll. ii. p. 338. Westward, was observed by Swartz in sterile or cultivated places in the West Indies; by Chapman, in "waste places and along roads, Florida to South Carolina." On the Atlantic side of Equatorial Africa, is known to grow in Guinea, and on the Niger and Congo (R. Brown, Benth., and A. Dec.); and farther East, was observed by Roxburgh, and Graham, in Hindustan.

virginiana serratulæ noveboracensis latioribus foliis" 280. f. 6 *Vernonia prœalta* ("V. altissima" of Nutt.); *Mikania scandens* 163. f. 3, *Conoclinium cœlestinum* 394. f. 4, "gnaphalium plantaginis folio virginianum" 348. f. 9 *Antennaria plantaginifolia*, "aster americanus latifolius albus caule ad summum brachiato" 79. f. 1. *Diplopappus cornifolius*, *Viola pedata* 114. f. 7, *Parthenium hysterophorus*, *Dioscorea villosa* 375. f. 5, *Menispermum Canadense* 36. f. 2.

Corydalis lutea of the West Mediterranean countries. Described by Plukenet alm. pl. 90,— termed "fumaria lutea" by Linnæus, and known to grow wild in Mauritania, Italy (Pers.), and Illyria (A. Dec.); observed by Allioni 1084 in Piedmont. In Britain, first seen escaped from cultivation by Withering, and again occurred "in 1798" (Engl. bot. pl. 588); occurs also on old walls near Caen (Lecl. fl. calvad.), and near Paris and Tournay (Lestib. bot. belg.); but seems unknown outside of gardens in Ireland and Southwestern France (A. Dec.).

Cyperus haspan of Hindustan. Transported to Europe, and described by Plukenet alm. pl. 192,— and Rottboell pl. 6 (Pers., and Spreng.). Received from Egypt by Valliant (Del.); and according to Persoon growing in Aethiopia. Eastward, was observed by Graham in the environs of Bombay, and by Roxburgh i. p. 210 in other parts of Hindustan.

"1697, Sept. 11th" (Blair, and Holmes), invasion of the New England colonies, which had been ordered by the French king Louis XIV., prevented by the signing of a treaty of peace at Ryswic.

"The same year" (narrat.), in journeying from Aleppo to Jerusalem, Maundrell proceeded along the seashore as far as Acre. His narrative contains many judicious observations on the antiquities met with, and the sites of ancient towns.

"In this year" (Spreng.), J. Commelyn publishing his Hort. Amst., enumerating* *Salvia Africana* ii. 91, *S. aurea* ii. 92, *Rivina laevis* i. 96, *Cephalaria rigida* ii. 54, *Echium fruticosum* ii. 54, *Convolvulus Canariensis* ii. 51, *Campanula Capensis* ii. 35, *C. rigidula* ii. 37, *Roella ciliata* ii. 39, *Solanum aggregatum* ii. 96, *Varronia alba* i. 80, *Sideroxylum melanophleum* i. 109, *Rhamnus colubrinus* i. 90, *Phylica ericoides* ii. 1, *Bubon gummifer* ii. 58, *Rhus tomentosa* i. 92, *R. lucida* i. 93, *Amaryllis Zeylanica* i. 37, *Sanseviera Guineensis* ii. 20, *Aletris fragrans* ii. 4, *Aloe picta*, *sinuata*, *retusa*, *plicatilis*, *lingua*, *verrucosa*, and *margaritifera* i. 48 to ii. 10, *Furcraea gigantea* ii. 18, *Melicocca bijuga* i. 94, *Zizyphus iguanea* i. 73, *Cassia Javanicus* i. 111, *Royena glabra* i. 65, *R. lucida* i. 96, *Malpighia glabra* i. 75, *Oxalis incarnata* i. 22, *Talinum anacampseros* ii. 89, *T. fruticosum* i. 4, *Euphorbia cotinifolia* i. 15, *Sempervivum Canariense* ii. 95, *Pereskia aculeata* i. 70, *Tetragonia fruticosa* ii. 103, *Spiraea opulifolia* i. 87, *Grewia Occidentalis* i. 85, *Sideritis candicans* ii. 99, *Bystropogon Canariense* ii. 65, *Selago corymbosa* ii. 40, *Lantana mista* i. 78, *Manulea cheiranthus* ii. 42, *Hebenstreitia dentata* ii. 109, *Hermannia alnifolia* ii. 78, *Pelargonium auritum*, *rapaceum*, and *lobatum* ii. 61–3, *Polygala myrtifolia* i. 46, *P. stipulacea* ii. 97, *Psoralea bracteata* ii. 106, *Lotus jacobaeus* ii. 83, *Indigofera lotoides* ii. 84, *Hypericum floribundum* ii. 68, *Chrysocoma cernua* ii. 45, *C. ciliaris* ii. 48, *Athanasia pubescens*, *trifurcata*, and *crithmifolia* ii. 47–50, *Tanacetum suffruticosum* ii. 100, *Aster fruticulosus* ii. 27, *Berckheya setosa* ii. 28, *Calendula nudicaulis* ii. 33, *C. graminifolia* ii. 34, *Arctotis aspera* ii. 22, *Othonna pectinata*, *coronopifolia*, and *frutescens* ii. 69–74, *Hippia frutescens* ii. 101, *Myrica quercifolia* ii. 81, *Zamia debilis* i. 58, *Cluytia daphnoides* ii. 2, *Stilbe pinastra* ii. 110, *Mimosa casta* i. 28, *Desmanthus punctatus* i. 31, *Sapindus saponaria* i. 94.—He died in "1698," and the publication was completed in "1702."

"In this year" (J. E. Smith, and Spreng.), Boccone publishing his Mus., enumerating† *Veronica acinifolia* pl. 9, *Panicum hirtellum* 55, *Rottboella monandra* 57, *Triticum unilaterale* 57, *Scabiosa Pyrenaica* 6, *Galium Bocconi* 101, *G. aristatum* 75, *Rubia Bocconi* 75, *Anchusa undulata* 77, *Lobelia Laurentia* 27, *Viola nummulariaefolia* 127, *Lahaya corymbosa* 39, *Eryngium dilatatum* 71, *Angelica Razoulii* 99, *Seseli rigidum* 76, *Statice bellidifolia* 103, *Linum verticillatum* 42, *Rumex multifidus* 126, *R. luxurians* 126, *R. amplexicaulis* 126, *Epilobium alpestre* 5. 16, *Galenia Africana* 110, *Polygonum alpinum* 37. 83, *Gypsophila altissima* 5, *Silene mollissima* 118, *S. Vallesia* 54, *Helianthemum squamatum* 64, *Teucrium multiflorum*, *rotundifolium*, and *buxifolium* 61–117, *Nepeta violacea* 36, *N. lanata* 36, *Sideritis incana* 67, *Lamium rugosum* 23, *Stachys Palaestina* 109, *S. maritima* 127, *Marrubium supinum*, *crispum*, and *Hispanicum* 69–122, *Thymus Patavinus*, *piperella*, and *cephalotes*

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* *Tetragonia herbacea* of Austral Africa. Transported to Europe is described by Commelyn hort. ii. pl. 102,—Miller pl. 263, and Linnæus. Known to grow wild in Austral Africa (Pers.).

Calla (*Zantedeschia*) *Æthiopica* of Austral Africa. Transported to Europe is described by Commelyn hort. i. 50—(Spreng.), and Linnæus. By European colonists also, carried to the Mauritius Islands, and cultivated there (Boj.).

† *Leonurus marrubiastrum* of Europe. Described by Boccone mus. 98—(Spreng.), Schreber, and Moench (Steud.); and known to occur in Germany and Java (Jacq. austr. v. pl. 405, Host, and Pers.). By European colonists was carried to Northeast America, observed according to A. Gray along "road-sides, Pennsylvania, rare."

43–117, *Euphrasia minima* 60, *E. longiflora* 63, *Antirrhinum molle* 41, *Scrophularia trifoliata* 60, *Digitalis obscura* 98, *Alyssum halimifolium* 39, *A. saxatile* 93, *Biscutella sempervirens* 122, *Sisymbrium Valentinum* 80, *Erysimum Bocconi* 111, *Erodium malopoides* 89, *E. chamaedrioides* 128, *Corydalis enneaphylla* 73, *Hieracium prunellaefolium*, *montanum*, and *molle* 24–113, *Apargia taraxaci* 106, *Serratula coronata* 37, *S. humilis* 109, *Gnaphalium supinum* 109, *Inula bifrons* 121, *Chrysanthemum Bocconi* 98, *Centaurea uniflora* 2, and *Pistacia trifolia* 93. — He died "in 1704."

Chærophyllum aromaticum of Eastern Europe and the adjoining portion of Asia. Described by Boccone mus. ii. pl. 19, — and known to grow in Silesia, Lusatia, and Misnia (Jacq. austr. pl. 150, and Pers.): observed by Fleischer fl. 115 as far West as Livonia; by Sibthorp, in shaded situations on the Bithynian Olympus. In Britain, was found by G. Don "about 1831" between Arbroath and Forfar, clearly exotic, but has perhaps become naturalized (Wats., Bab., and A. Dec.).

Achillea (*Ptarmica*) *alpina* of Arctic Asia and mountain-summits farther South. Described by Boccone mus. pl. 101, — and known to grow on the Swiss Alps (Pers.), but according to A. Decandolle only above Airolo on the Saint-Gothard Pass. Eastward, is known to grow throughout Arctic Siberia, and on the Altaian mountains (Ledeb., and Dec.).

Echium maritimum of the West Mediterranean countries. Described by Boccone mus. ii. pl. 78, — and Tournefort inst. 136; and known to grow wild on the seashore of Italy and Sicily. By European colonists, was carried to Austral America, where it has become abundantly naturalized around Montevideo (A. St. Hil., and A. Dec.).

"1698, Aug. 19th" (Blair), signing of the First treaty of partition: dividing Poland and giving rise to the new German kingdom of Prussia.

"The same year" (Stiles, and Holmes), under instructions from the commissioners for propagating the gospel, the aboriginals in different parts of Massachusetts visited this year by Rev. Grindal Rawson and Rev. Samuel Danforth, and found to number "about four thousand." Mary Cushman who "came over in the first shipe liveing this present year" (inscript. on Bradford's Ms. hist. Plimouth Plantation). — I therefore writing in 1872 have seen persons who may have seen acquaintances of the first settlers of New England; and in this manner, twenty-five individuals would easily span the one hundred and eighty-five generations from the time of Adam.

"In this year" (Krapf trav. 521–9), Mombasa, Zanzibar, and Keelwah captured by a fleet under Sultan Seif, son of Seif bin Malik, Mozambique besieged, and Portuguese power extinguished along the East African coast from Cape Gardafui to Cape Delgado.

About this time (see Phil. trans. xxi. 255, and Spreng.), Jacob Cunningham visiting Ascension Island, finding its flora to consist of only "five" plants, *Ipomoea pes-caprae* (growing on the seashore throughout the Tropics), *Dombeya erythroxylon* (attributed to St. Helena), *Euphorbia chamaesyce* (attributed to Southern Europe, Mesopotamia, and Siberia), *E. origanoides* (not known elsewhere), and *Aristida Adscensionis* (seen by Forskal in Yemen). — Two additional plants have been found there by Osbeck, and subsequent observers, *Sherardia fruticosa* (not known elsewhere), and *Hedyotis Adscensionis* (not known elsewhere. See A. Dec. g. bot. 1281).

J. Cunningham resided as surgeon at Amoy and Chusan in China, — and has given an account of the plants growing there in Phil. trans. xxiii. 280–6 (Spreng.).

"1698 to 1699 A. D." (Churchill coll.), in sailing along "the easternmost part of New Guinea," a Strait discovered by Dampier; separating an island called by him "New Britain."

"1699 A. D." (Charlev., and Holmes), under instructions from Louis XIV., claiming the whole territory of Louisiana, a fort built by M. d'Iberville between the mouths of the Mississippi and the Mobile river. In all this immense territory along the Mississippi, there were besides only a few straggling houses of Canadian French settled among the Illinois: and the object of the new movement was, To open communication with Canada, hem in the English colonies, and thus engross the trade of the aboriginal tribes (Anders. ii. 642, Du Pratz i. 8, and univ. hist. xl. 282).

"The same year" (Anders. ii. 644, and Holmes), in England, on complaint that *woolen manufactures* of the colonies in North America began to be exported to foreign markets, both by sea and land, a law prohibiting this.

"Aug. 6th" (narrat., and Murdoch hist. Nov. Scot. i. 539), Dièreville, "employed to obtain plants for the Royal garden," sailing from Rochelle. After "fifty-four days" he arrived at Chibouctou, and continuing visited Port Royal and St. John, meeting with "viola acadiensis folio longo sinuata" *Viola lanceolata*. — He left "Oct. 6th 1700," and returning to France published an account of his Voyage "in 1708."

"1700 A. D." (Blair), "New Style" adopted by the Dutch and the Protestants of Germany: "omitting the last eleven days of February."

"The same year" (Blair), Second treaty of the Partition of Poland: Frederic now becoming king of Prussia. Charles XII. ruling Sweden.

"In this year" (Mather magnal. i. 31, and Holmes), Boston containing "more than seven thou-

sand" inhabitants, and above "a thousand houses." The White inhabitants of Carolina amounting to "five thousand five hundred" (Drayton). Building at Newport of the meeting house of the Friends or Quakers (Adams 188).

Gleditschia triacanthos of the Mississippi and its tributaries. A large Acacia-like tree, remarkable for its branching thorns, transported to and first cultivated in Britain in this year — (Loudon); described also by Duhamel i. pl. 105; and according to Clot-Bey recently introduced into the gardens of Egypt. Westward, was observed by F. A. Michaux from 40° on the Susquehanna throughout the Western States; by myself, wild on the Lower Ohio; by Long's Expedition ii., as far North as 41° on the Mississippi; by Nuttall, on the Arkansas; by Darby, in Opelousas; by Chapman, "Florida to Mississippi, and northward;" and is termed "g. meliloba" by Walter (Steud.).

"In this year" (Spreng. and Winckl.), Plukenet publishing his Mantiss., enumerating *Allosorus atropurpureus* pl. 349. f. 1, *Phlox Carolina* 348. f. 4, *Oenothera linearis* 426. f. 6, *Andromeda Mariana*, *Heterotheca scabra* 340. f. 1. n. 5, *Cypripedium parviflorum* 418. f. 2, *Calystegia paradoxa* 54, *Nolina Georgiana* 342. f. 1, *Azalea nudiflora* 49, *Rhexia Mariana* 428. f. 1, *Andromeda Mariana* 448, *Polygala sanguinea* 437. f. 5, "orobus virginianus foliis fulva lanugine incanis foliorum nervo in spinam abeunte" 142 *Tephrosia spicata*, *Sericocarpus conyzoides* 29 ("conyza asteroides" of Linn.), *Chrysopsis Mariana* 340. f. 1, *Coreopsis verticillata* 344. f. 4, "viola virginiana platani fere foliis parvis et incanis" 187 *Viola palmata*, *Panax trifolium* 435. f. 7.

In this year (Fontenelle eloge), after his first work "Elemens de Botanique" published in "1694," Tournefort issuing a second edition under the title "Institutiones rei herbariæ," enumerating "sanicula canadensis amplissimo laciniato folio" inst 326 *Sanicula Canadensis*, "onagra angustifolia caule rubro flore minore" 302 *Oenothera fruticosa* (Linn sp. pl.), "vitis idæa canadensis pyrolæ folio" 608 *Gaultheria procumbens*, "astragalus canadensis flore viridi flavescente" 416 *Astragalus Canadensis*, "a. alpinus procerior alopecuroides" 416 *A. alopecuroides*, "rapuntium canadense pumilum linariæ folio" 164 *Lobelia Kalmii*, "ascyrum erectum salicis folio magno flore" 256 *Hypericum pyramidatum* (Willd.).

Arenaria ciliata of Subarctic climates. Termed "alsine alpina serpylli folio multicaulis et multiflora" by Tournefort inst. 243 — (J. E. Smith); known to grow in Lapland and Finland (fl. Dan. pl. 346, Fries, and Ledeb.), in Northwest Ireland (Bab., and Wats.), on the Pyrenees (herb. Dec.), on the Jura and Swiss Alps (Pers., and A. Dec.), on the Carpathians (Hook.); and observed by Sibthorp on the rocks of Cyprus and the mountains of Crete. Westward, by Hooker on Iceland, and by Sabine in Greenland. (See A. ligericina.)

Alyssum minimum of the Mediterranean countries and Siberia. Allied to A. maritimum, but annual and the stamens all dentate; possibly the species described by Tournefort inst. 217: — known to grow in Spain and Siberia; and observed by Sibthorp, and Chaubard, on the seashore of Greece and the Greek islands.

Trifolium incarnatum of the Mediterranean countries. A showy annual called in English gardens *crimson clover* (Prior), termed "t. spica rotunda rubra" by Tournefort inst. 405, and known to grow in moist meads in France, Italy, Switzerland, and Carinthia (Sturm, and Pers.); observed by Sibthorp on mount Athos; by Chaubard in the lower portion of the Peloponnesus. Regarded as exotic in Britain, maintained there by the continued importation of seed for cultivation (Wats., and A. Dec.).

Cytisus sessilifolius of the Mediterranean countries. Termed "c. glabris foliis subrotundis pediculis brevissimis" by Tournefort inst. 648, — "majerella" by Micheli (Targ.), and known to grow in Southern France and Italy (Pers.); observed by Sibthorp, and Chaubard, from the Peloponnesus to the Greek islands; by Pallas trav. i. 235, near Samara on the Lower Volga.

Epilobium alpinum of the Arctic region and mountains farther South Termed "chamænerion alpinum minus brunellæ foliis" by Tournefort inst. 303, — "c. alpinum alsines foliis" by Scheuchzer alp. 132, "e. anagallidifolium" by Lamarck; known to grow in Lapland and on the Alps and Pyrenees (fl. Dan. pl. 322, Pers., and Dec.), also in Northern Asia (Wats.): was observed by Linnæus on the mountains of Lapland; by Lightfoot pl. 10, in Scotland; by Haller 409, in Switzerland; by Chaubard on the upper portion of Taygetus, by Sibthorp on the summit of Bithynian Olympus. Westward, by Hooker in Iceland, and received by him from the Rocky mountains and 56° on the Northwest coast; was observed by Colm. in Labrador (Pursh); and is known to grow in Greenland and Alaska (Wats.).

Linaria supina of Western Europe. Termed "l. pumila supina lutea" by Tournefort inst. 170, — "antirrhinum supinum grandiflorum" by Lapeyrouse, "a. dubium" by Villars, "l. pyrenaica" by Decandolle, and known to occur on walls and in sandy soil in France, Spain, and Italy (Pers.): observed by Sibthorp around Constantinople. In Britain found since 1843 near Plymouth (Bab. 2d edit.), also near Poole in Dorset, near Newcastle, and in two localities in Cornwall (Wats.), but regarded by A. Decandolle as exotic.

Linaria simplex of Europe and the adjoining portion of Asia. Annual, termed "l. quadrifolia

lutea" by Tournefort inst. 170, — "a. arvense var." by Linnæus, "a. parviflorum" by Jacquin rar. iii. pl. 499, and known to grow in Spain, Southeastern France, Algeria, Syria, Persia, and around the Caspian (A. Dec.): was observed by Gussone in Sicily; by Sibthorp, in maritime sands along the Black Sea; by Ledebour, in the Crimea. In Britain, is once mentioned by Babington in his first edition, but is omitted in his second (A. Dec.).

Amaranthus hypochondriacus of Mexico? Called in English gardens *prince's feather* (Prior), termed "a. sylvestris maximus novæ Angliæ spicis purpureis" by Tournefort inst. 235, — and received by Linnæus from Virginia; but is known to A. Gray only as "rarely spontaneous around gardens." Eastward, was observed by Forskal, and Sibthorp, at Constantinople; by Pollini, and Cesati, naturalized in Lombardy; by Reichenbach, tending to become naturalized in Saxony (A. Dec.).*

Helleborine cordigera of the Mediterranean countries. Termed "orchis montana italica flore ferrugineo lingua oblonga" by Tournefort inst. 434; — described also by Rudbeck elys. ii. pl. 204, and Petiver gaz. pl. 128; and known to grow in Barbary, Southern Europe and the East (Pers.): observed by Sibthorp, and Chaubard, in mountainous situations from the Peloponnesus to Constantinople.

Ornithogalum arvense of Eastern Europe and the adjoining portion of Asia. Termed "o. angustifolium bulbiferum" by Tournefort inst. 379: — observed by Persoon (Ulst. ann. xi. pl. 1) in cultivated ground in France; by Sibthorp, and Chaubard, from the Peloponnesus to Caria and Cyprus; and is known to grow on the Taurian mountains (Bieb.).

Allium montanum of Asia Minor and Greece. Termed "a. montanum radice oblonga" by Tournefort inst. 384; — and observed by Sibthorp, and Chaubard, from the Peloponnesus to the Bithynian Olympus.

Carex remota of Europe and Northern Asia. A woodland sedge termed "cyperoides angustifolium spicis sessilibus in foliorum alis" by Tournefort inst. 430, — and known to grow in moist woods throughout middle Europe (Engl. bot. pl. 832, Pers., and Wats.), also as far as Iberia (Bieb.); was observed by Decandolle in France; by Savi, on the Appenines; by Sibthorp, from the Peloponnesus to Constantinople; by Thunberg, on Niphon in Japan. (Is attributed by Pursh to the Alleghany mountains of Pennsylvania, and by Watson to British America, probably through mistake.)

Carex depauperata of Europe and the adjoining portion of Asia. A woodland sedge termed "cyperoides vesicarium humile locustis rarioribus" by Tournefort inst. 530, — "carex ventricosa" by Curtis Lond. vi. pl. 68; and known to grow throughout middle Europe (Engl. bot. pl. 1098, and Willd. iv. 278); observed by Sibthorp in woods in the Peloponnesus.

"March 9th" (Tourn. voy. 4), departure of Tournefort on his way to Crete, Greece, and Armenia. He met with *Borago Orientalis* ii. 13, *Echium Orientale* ii. 107, *Morina Persica* ii. 120, *Campanula laciniata* i. 99, *C. heterophylla* ii. 154, *Verbascum pinnatifidum* i. 128, *V. Osbeckii* ii. 83, *Laserpitium ferulaceum* ii. 121, *Daphne Pontica* ii. 83, *Saxifraga cymbalaria* ii. 148, *Silene viscosa* ii. 148, *S. bupleuroides* ii. 154, *Calligonum polygonoides* ii. 147, *Papaver Orientale* ii. 118, *Rhinanthus Orientalis* ii. 126, *Lepidium lyratum* ii. 141, *Vesicaria reticulata* ii. 109, *Lunaria Graeca* i. 92, *Hedysarum cornutum* ii. 108, *Hypericum Orientale* ii. 97, *Scorzonera elongata* i. 86, *Aristolochia hirta* i. 147, — and returned in "May 1702."

Dodartia Orientalis of the Uralian plains. An Antirrhinoid plant observed by Tournefort trav. pl. about mount Ararat; — by Pallas i. 437 in journeying Eastward, first met with on the Yaik; known to grow also in Tartary (Pers.).

Polygonum Orientale of Brazil? Observed by Tournefort trav. iii. 171 in gardens at Tiflis in Georgia; — by Forskal, in gardens at Constantinople, and by Delile in gardens at Cairo. Described by C. Commelyn, and soon becoming frequent in the gardens of Europe (Pers.); and by European colonists carried to Northeast America, where it is cultivated for ornament under the name of *prince's feather*, and is sometimes found growing spontaneously (A. Gray, and Chapm.). Eastward from Egypt, is enumerated by Taberd dict. p. 633 as called "trai-ngai-ba" in Cochinchina, and used there medicinally: but according to Thunberg, was brought by the Portuguese to Japan, and is called at Nagasaki by the Portuguese name "paute cobra." As observed by myself in Brazil, the plant seemed to harmonize with the surrounding vegetation.

Vaccinium arctostaphylos of Madeira? A stout-stemmed shrub, tall as a man, observed by Tournefort trav. iii. pl. 67 near Tripoli on the Black Sea, and termed "vitis idaea orientalis maxima cerasi folio flore variegato" cor. 42. — (If however, as would seem from Persoon, the same species grows on Madeira, it is probably the Madeira species introduced.)

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* *Briza minor* of Europe and the adjoining portion of Asia. Termed "gramen paniculatum minus locustis magnis tremulis" by Tournefort inst. 523; — described also by Scheuchzer gram. pl. 4, and known to grow throughout Europe. By European colonists, was carried to Austral Africa (Pers.); and to Southwest Australia, where it has become naturalized (Drummond, and A. Dec.).

One hundred and eightieth generation. Jan. 1st, 1701, mostly beyond youth: the Greek writers Elias Meniates d. 1714, Meletius of Athens d. 1728, Alexander Mavrocordatus d 1719: the Slavonic writers, Glück of Livonia, Kirsha Danilof, and Paul Ritter: other writers, N. Boileau Despreaux; Humphry Prideaux; John George Grævius; P. Bayle; Gilbert Burnet; Vincent de Filicaia; Nicholas Malebranche; Henry Dodwell; James Gronovius; William Lloyd; madame Dacier; Fénélon; Godfrey Wm. Leibnitz; Daniel Huet; John Flamstead; Andrew Dacier; J. Vincent Gravina; Richard Bentley; Joseph Addison; sir Richard Steele; Matthew Prior; John Hardouin; John Le Clerc; James Lenfant; abbé Vertot; John Friend; Bernard de Montfaucon; Samuel Clarke; J. Albertus Fabricius; John Arbuthnot; and cardinal Polignac: the Orientalists, Galland, Renaudot: the microscopic observer Antonius Van Leeuwenhoek d. 1723: the botanists, Sam. Dale d. 1739, Gunth. Christ. Schelhammer d. 1716, Guid. Crescent. Fagon d. 1718, Io. Gottfr. Olearius d. 1711, Petr. Hottonus, Alex. Christ. Gakenholz, Io. Henr. Burkhard d 1738, Christian Knaut d. 1716, Franc. Petit, Sam. Morlandus, Stephan. Franc. Geoffroy d. 1731, Patrick Blair, Mart. Dan. Johrenius d. 1718, Abrah. Rehfeld, David Wipacher, H. I. Meyenberg, C. H. Erndtel d. 1734, Hellwing d. 1748, Ant. Tita, and Aegid. de Koker: the publishers, Awnsham and John Churchill: the painters, Godfrey Kneller, Carlo Cignani d. 1719: the engraver, Gerard Edelinck d. 1707.

"The same year" (Humphreys' hist. account 41, and Holmes), in England, the Society for propagating the Gospel in foreign parts established. Acting it would seem, chiefly to extend the Episcopal Church (see 1706). By the secretary, Rev. Dr. Humphreys, the population of the English colonies in North America estimated on inquiry at "two hundred and sixty-two thousand."

"Aug. 27th" (encycl. meth., and Holmes), at Madrid, signing of a treaty between the two kings "très-chrétien et catholique," establishing the Assiente; a French company for transporting Negroes into the Spanish settlements in America.

"In this year" (Linn. fl. suec. p. x), Olaus Rudbeck jun., "from 1690" professor of Botany at Upsal, publishing the second volume of his Campi Elysii, enumerating *Narcissus trilobus* 61. f. 3; — the first volume, containing the grasses, was published "in 1702." He died "in 1740" (Spreng.).

"1702, March 8th" (Nicol.), William III. succeeded by Anne, now queen of united Britain.

"The same year" (Blair), in Europe, general war against France and Spain. — This continued twelve years, until the Treaty of Baden.

"In this year" (Spreng.), Io. Iac. Scheuchzer, a brother of Ioan., visiting the alpine region of Switzerland, meeting with *Poa supina* vi. pl. 17, *Phyteuma Scheuchzeri* 460, *P. ovata* 518, *Juncus Jacquini* i. pl. 5. f. 2, and *Achillea moschata* ii. pl. 21. f. 3. — He continued his excursions "until 1711," published an account of them "in 1723," and died "in 1733."

Poa laxa of the Arctic region and mountain summits farther South. A grass distinguished from P. alpina by fewer florets and a creeping root (Pers.); observed by Scheuchzer it. vi. 457 pl. 6 on the Swiss Alps, — also by Haenke sudet. 118; known to grow in Spitzbergen, Lapland, and on the mountains of Scotland and Germany (Sabine, and Hook.); observed by Chaubard on the mountains of Arcadia in the Peloponnesus. Westward, is known to grow in Greenland (Sabine, and Wats.); observed by Nuttall, and myself, in the alpine region of the White mountains; and according to A. Gray grows also on the "alpine mountain-tops of Maine," and "Northern New York, and high northward."

"In this year" (Linn. sp.), Petiver publishing his Gazoph. naturæ, enumerating *Cornucopiae cucullatum* gaz. pl. 73, *Protea nana* gaz. 25. 7, *P. Levisanus* gaz. 5. 7, *Polypremum procumbens* gaz. 5. 6, *Blaeria ericoides* gaz. 2. 10, *Spigelia anthelmia* gaz. 59. 10, *Cassine maurocenia* gaz 57. 4, *Crassula subulata* gaz. 57. 4, *Eucomis nana* gaz. 85. 6, *Loranthus scurrula* gaz. 63. 8, *Phyllodoce Daboeci* gaz. 27. 4, *Erica corifolia* gaz. 3. 7, *Euphorbia pilulifera* gaz. 80. 14; *Mesembryanthemum geniculiflorum, corniculatum*, and *emarginatum* gaz. 77. 3 to 78. 3; *Ranunculus nodiflorus* gaz. 24. 9, *Hyobanche sanguinea* gaz. 37. 4, *Hermannia althaeifolia* gaz. 43. 2, *Passiflora pedata* gaz. 114. 4; *Pelargonium angulosum, vitifolium*, and *trifidum* gaz. 84. 5–11, *Crotalaria biflora* gaz. 30. 10, *Hallia sororia* gaz. 32. 1, *Hedysarum bupleurifolium* gaz. 11. 12, *H. nummularifolium* gaz. 26. 4, *H. vaginale* gaz. 26. 1, *Lespedeza latebrosa* gaz. 30. 11, *Indigofera depressa* gaz. 83. 9, *Athanasia punctata* gaz. 81. 6, *A. parviflora* gaz. 34. 1; *Gnaphalium fasciculatum, fastigiatum*, and *spicatum* gaz. 7. 3 to 82. 6; *Stoebe plumosa, cinerea*, and *fusca* gaz. 3. 9 to 5. 4; *Helleborine oxyglottis* gaz. 128. 5, *Sagittaria trifolia* gaz. 19. 3, *Sapium sebiferum* gaz. 34. 3, *Dioscorea oppositifolia* gaz. 31. 6; *Acrostichum speciosum*, and *inequale* gaz. 61. 5 and 49. 4; *Polypodium stigmosum* gaz. 61. 4, *Adiantum Philippense* gaz. 4. 4, *Cheilanthes suaveolens* gaz. 73. 4, *Schizaea dichotoma* gaz. 70. 12, *Lygodium circinatum* gaz. 64. 10.

"1703 A. D." (art de verif.), Mustafa II. succeeded by Achmed III., twenty-fourth Turkish sultan. Coins issued at Cairo by Achmed III., are figured in Marcel p. 225.

"The same year" (Spreng.), Augustin. Lippi sent into Abyssinia, meeting with *Heliotropium eriocarpum, Adonis marginata, Cochlearia Nilotica, Artemisia Lippii*, and *Inula crispa*. — He was slain in the following year.

"In this year" (Spreng.), Caspar Commelyn publishing his Praelud. botan., enumerating *Phylica cordata* 12, *P. pubescens* 13; *Diosma oppositifolia, rubra*, and *hirsuta* 1–3; *Asclepias undulata*, and *crispa* 16–17; *Aloe arachnoides, rhodacantha, brevifolia, Aptera viscosa, spiralis, tricolor, imbricata*, and *patula* 20–32; *Agave vivipara* 15; *Euphorbia mamillaris, Commelyni*, and *clava* 7–9; *Pelargonium pinnatum, peltatum*, and *acetosum* 2–4.

Pelargonium zonale of Austral Africa. Described by C. Commelyn prael. 1 — (Spreng.), and "in 1710" introduced into England (Ait.); figured by Cavanilles iv. pl. 98; frequent in gardens, and from the black band around the centre of the leaf, a white margin being sometimes substituted, called in French "geranier à bandes" *banded geranium:* enumerated by Clot-Bey as recently introduced into the gardens of Egypt.

Aloe Commelyni of Austral Africa. Transported to Europe is described by C. Commelyn prael. 24 (Spreng.). In Austral Africa, said to be collected with *A. arborescens* and *A. mitraeformis* for preparing *Cape aloes* — (Lindl.).

Aloe spicata of Austral Africa. Growing in the Interior, and the principal source of *Cape aloes*, — according to Thunberg diss. 2 (Pers., and Lindl.).

"In this year" (Fontenelle eloge, and Spreng.), Tournefort publishing his Corollarium inst. r. h., enumerating *Convolvulus lanatus* p. 2, *Phyteuma limonifolia* 4, *Campanula heterophylla* 4, *C. collina* 4, *C. Ruthenica* 5, *Galium capillare* 5, *G. coronatum* 5, *Hyoscyamus Orientalis* 6, *Primula longifolia* 6; *Asperula lutea, incana*, and *nitida* 6; *Crucianella glomerata* 6; *Valeriana macrophylla, cardamines*, and *caespitosa* 7; *Anchusa parviflora, rosea*, and *lutea* 7; *Onosma erecta, Orientalis*, and *sericea* 7–8; *Symphytum Tauricum* 8, *Plumbago lapathifolia* 8, *Lysimachia anagalloides* 8, *Veronica amoena* 8, *Verbascum auriculatum* 9, *V. plicatum* 9; *Scrophularia bicolor*, and *minima* 10; *Euphrasia glutinosa* 10, *Orobanche arenaria* 11, *Phlomis lunarifolia* 11; *Salvia crassifolia*, and *argentea* 11; *Dentaria quinquefolia* 17, *Paris incompleta* 18, *Arenaria holostea* 18, *Cerastium macranthum* 20, *Potentilla bifurca* 22, *Ammi acaule* 22, *Tragium peregrinum* 22, *Astrantia heterophylla* 23, *Smyrnium apiifolium* 23; *Heracleum Pyrenaicum*, and *apsynthifolium* 23; *Sium Graecum, Ferula meoides; Cachrys microcarpa; Scandix grandiflora; Eryngium multifidum*, and *parviflorum*.

Lythrum virgatum of Eastern Europe and the adjoining portion of Asia. Termed "salicaria orientalis salicis folio acutissimo et glabro" by Tournefort cor. 18; — observed by Sibthorp in the environs of Constantinople; by Jacquin pl. 7, in Austria; by Pallas trav. i. 52, along the Volga; and is known to grow in Tartary and Siberia (Pers.).

Rhagadiolus Koelpinia of the East Mediterranean countries. An annual termed "rh. creticus minor capsulis echinatis" by Tournefort cor. 36; — observed by Sibthorp on Cyprus; by Pallas v. 340 to 511, on mount Bogdo-Oola on the Lower Volga.

Symphytum asperrimum of the Tauro-Caspian countries. Observed and distinguished by Tournefort cor. 8 — (Spreng.), and Bieberstein. In Britain, has made its appearance in three separate localities (Wats. cyb. ii. 279 to iii. 486), with some prospect of becoming naturalized (see A. Dec.).

Asphodelus Creticus of the mountains of Crete and the Peloponnesus. Termed "a. creticus luteus serotinus patulus folio aspero" by Tournefort cor. 25; — observed by Sibthorp on the loftier mountains of Crete, by Chaubard in the upper region of Taygetus.

A selection of plants from Tournefort's herbarium, figured by Aubriet and described in the Coroll. (has been published by Desfontaines), containing *Ophrys mammosa, iricolor, villosa, umbilicata*, and *densiflora* ann. mus. x. pl. 11–16; *Aristolochia Cretica*, and *lutea* 18–19; *Phelypaea Tournefortii* 21, *Teucrium microphyllum* 22, *Nepeta melissaefolia* 23, *Sideritis rosea* 24, *Stachys spinulosa* 25, *Dracocephalum lamiifolium* 26, *Heliotropium villosum* 33; *Cynoglossum glastifolium, staminèum*, and *lanatum* 35–7; *Linaria grandiflora*, and *corifolia* xi. 2–3; *Verbascum betonicaefolium* 4, *Phyteuma lanceolata* 5; *Campanula ptarmicifolia, pauciflora, calaminthifolia, stricta, parviflora, corymbosa, pelviformis*, and *tubulosa* 6–17; *Lactuca Cretica* 19, *Tanacetum incanum* 21, *Anacyclus Creticus* 22, *Inula conyzoides* 23, *Scabiosa micrantha* 25, *Valeriana sisymbriifolia* 30, *Ranunculus grandiflorus* 31, *Papaver floribundum* 33, *Hesperis pinnatifida* 34; *Alyssum densiflorum, samolifolium*, and *paniculatum* 35–7, *Draba Pontica* 38, *Thlaspi cordatum* 39, *Hypericum ciliatum* 39, *Ruta parviflora* 42, *Silene spergulaefolia* 43, *Lychnis variegata* 44, *Cotyledon parviflora* 42, *Crassula crenata* 46, *Pyrus parviflora* xii. 4, *Crataegus Cretica* 5, *Rubus sanctus* 6, *Lathyrus purpureus* 7, *Orobus laxiflorus* 8, *O. croceus* 9, *Vicia variegata* 12, *Hedysarum radiatum* 13, *Euphorbia biglandulosa* 14, *E. denticulata* 15, and *E. valerianaefolia* 16.

Specularia pentagonia of . . . . Described by Tournefort cor. — (ann. mus. xi. pl. 18, Spreng.); termed "campanula minor arvensis seu viola pentagonia" by Forskal, as observed near Marseilles, observed there also by Kralik (Godron, and A. Dec.); described by Linnæus, and L'Heritier, as received from Thrace (Pers.). Attributed by A. Decandolle to America, but seems unknown in at least North America.

"1704, Feb. 29th, about two hours before day" (Williams, Hutch., and Holmes), Deerfield in Massachusetts surprised by three hundred French and aboriginals under Hertel de Rouville. The town was burned, "forty-seven" of the inhabitants were slain, and "about one hundred" were carried captive to Quebec.

"July 24th" (Blair), Gibraltar captured by the English under admiral Rook.

"In this year" (Winckl.), Bosmann publishing his account of Guinea.

"In this year" (Winckl.), after his Stirp cur. extra britan. "in 1694," Ray publishing the Third volume of his Hist. plant., enumerating *Cineraria amelloides* suppl. 158, *Gazania rigens* s. 182, *Othonna cheirifolia* s. 167. — He died "in 1705."

"1705 A. D." (Talvi ii. 1), at St. Petersburg, through the influence of Peter the Great, printing of the first *Russian newspaper*. Russian was also made the language of public business and of the courts of justice: and the emperor further modified the form of certain Slavonic letters: — Which modifications continue in use in Russia to the present day.

"December" (Pauth. 445), in the dispute between the Jesuit and Dominican missionaries on the translation of certain Chinese words, Khang-hi having decided in favour of the Jesuits, and the pope in favour of the Dominicans, the arrival of a legate at Pekin, To adjust the differences. — In the following year, an edict by Khang-hi, Excluding European missionaries from China, without a license; procurable only by approving the doctrine of Confucius.

"In this year" (Spreng., and Winckl.), Plukenet publishing his Amaltheum, enumerating in this or his previous works *Linociera compacta* pl. 224. f. 2, *L. cotinifolia* 241–14, *Veronica Virginica* 70. 2, *V. tenella* 233. 4, *Gratiola hyssopioides* 193. 1, *Elytraria crenata* 438. 1, *Justicia stricta* 279. 7, *J. pedunculosa* 423. 5, *J. hyssopifolia* 280. 1, *Stachytarpha prismatica* 321. 1, *S. orubica* 327. 7, *Tamonea spinosa* 234. 4, *Cunila Mariana* 344. 1, *Blephilia ciliata* 164. 3, *Monarda punctata* 24. 1, *Salvia Canariensis* 301. 2, *Boerhaavia hirsuta* 113. 7, *B. scandens* 226. 7, *Fraxinus lentiscifolia* 182. 4, *Gunnera perpensa* 18. 2, *Ixia corymbosa* 275. 1, *I. erecta* 310. 1, *Glaaiolus galeatus* 224. 8, *Aristea cyanea* 299. 5, *Commelyna Virginica* 174. 4, *C. Bengalensis*, *C. nudiflora* 27. 4, *Ficus pedunculata* 178. 4, *Dulichium spathaceum* 301. 1, *Scirpus minimus* 300. 3, *S. mucronatus* 40. 3, *S. pungens* 40. 1, *Fimbristylis dichotoma* 119. 3, *Machaerina restioides* 192. 5, *Cyperus arenarius* 300. 7, *C. tenellus* 300. 4. 5, *C. polystachyos* 416. 6, *C. iria* 191. 7, *C. pumilus* 191. 8, *C. squarrosus* 397. 2, *Mariscus ovularis* 91. 4, *M. retrofractus* 415. 4, *M. paniceus* 91. 3, *Fuirena glomerata* 417. 6, *Panicum brizoides* 191. 5. 1, *Eragrostis tenella* 300. 2, *Festuca bromoides* 33. 10, *F. capillata* 190. 2, *Paspalum dissectum* 350. 2, *Alopecurus Indicus* 92. 5, *Uniola paniculata* 32. 6, *Dactylis spicata* 190. 6, *Aristida hystrix* 191. 3, *Andropogon arundinaceus* 32. 1, *Heteropogon contortus* 191. 5, *Chloris petraea* 245. 1, *Triticum Polonicum* 231. 6, *Eriocaulon quinquangulare* 221. 7, *Mollugo oppositifolia* 75. 6, *M. stricta* 256. 2; *Protea cyanoides*, *serraria*, *conocarpa*, *argentea*, *hypophylla*, *cucullata*, and *saligna* 200. 2 to 440. 3; *Globularia bisnagarica* 58. 5, *Cephalanthus Occidentalis* 77. 4, *Spermacoce tenuior* 136. 4, *Mitchella repens* 444. 2, *Callicarpa Americana* 136. 3, *Pendea sarcocolla* 446. 6, *Buddleia Occidentalis* 210. 1, *Sebaea aurea* 275. 3, *S. cordata* 275. 4, *Cissus quadrangularis* 210. 6, *C. acida* 152. 2, *Fagara tragodes* 107. 4, *Ludwigia alternifolia* 412. 1, *Ammania baccifera* 136. 2, *Cometes alterniflora* 380. 4, *Tournefortia gnaphalodes* 193. 5, *T. volubilis* 235. 6, *Dodecatheon integrifolium* 79. 6, *Lysimachia stricta* 428. 4, *Gouania Domingensis* 201. 6, *Ipomaea sagittata* 85. 3, *I. tuberosa* 267. 6; *Convolvulus tenellus*, *tomentosus*, *vitifolius*, and *quinquefolius* 25. 3 to 167. 6; *Dentella repens* 356. 5, *Triosteum angustifolium* 104. 2, *Physalis Curassavica* 111. 5, *Solanum mammosum* 226. 1, *S. Virginianum* 62. 3, *Cestrum laurifolium* 95. 1, *C. nocturnum* 64. 3, *Cordia collococca* 158. 1, *Varronia lineata* 328. 5, *V. salvifolia* 221. 3, *Zizyphus lineatus* 122. 4, *Z. napeca* 216. 6; *Phylica plumosa*, and *acerosa* 342. 1 to 445. 1; *Corymbium glabrum* 272. 4, *C. scabrum* 272. 5, *Ceanothus intermedius* 28. 6, *C. Africanus* 126. 1, *Celastrus lucidus* 80 4, *C. bullatus* 28. 5, *C. pyracanthus* 126. 2; *Diosma cupressina*, *ericoides*, *pubescens*, and *cistoides* 279. 2 to 411. 3; *Brunia lanuginosa* 318. 4, *Celosia Monsoniae* 357. 4, *C. nodiflora* 133. 2, *Achyranthus brachiata* 334. 2, *Desmochaeta micrantha* 82, *Comandra umbellata* 342. 4, *Randia latifolia* 97. 6, *Amsonia latifolia* 115. 3, *Cynanchum pilosum* 359. 2, *Asclepias pubescens* 139. 1, *A. verticillata* 336. 4, *Microloma lineare* 335. 1, *Gentiana ochroleuca* 186. 1, *Eryngium Virginicum* 396. 3, *Trachymene incisa* 454. 6, *Agasyllis galbanum* 12. 2, *Rhus villosa* 219. 8, *R. angustifolia* 219. 6, *Viburnum prunifolium* 46. 2, *Pharnaceum glomeratum* 331. 3, *P. albens* 304. 4, *P. distichum* 130. 6, *Sarothra gentianoides* 342. 2, *Statice diffusa* 42. 5, *Drosophyllum Lusitanicum* 117. 2, *Crassula flava* 314. 2, *C. gentianoides* 415. 6, *Mahernia verticillata* 344. 4, *Bromelia pinguin* 258. 4, *Asparagus retrofractus* 375. 3, *A. Asiaticus* 15. 4, *A. Capensis* 78. 3, *Aletris farinosa* 437. 2, *Juncus nodosus* 92. 9, *Melanthium Virginicum* 434. 8, *Trillium sessile* 111. 6, *Xerophyllum setifolium* 342. 3, *Disandra prostrata* 257. 5, *Septas Capensis* 340. 4, *Osbeckia Zeylanica* 173. 4, *Oenothera sinuata* 203. 3, *Gaura biennis* 428. 2, *Dodonaea viscosa* 447. 5, *Valentinia ilicifolia* 196. 3; *Erica planifolia*, *bruniades*, *apsynthioides*, *gnaphalodes*, and *Plukenetii* 344. 2 to 347. 6; *Gnidia oppositifolia* 323. 7, *Polygonum tomentosum* 210. 7, *P. perfoliatum* 398. 1, *Coccoloba pubescens* 222. 8, *C. punctata* 237. 4, *Serjana triternata* 168. 5, *Sapindus rigidus*

217. 7, *Forskolea tenacissima* 275. 6, *Cyclopia genistoides* 413. 5, *Podalyria myrtillifolia* 185. 2, *Grimaldia assurgens* 314. 5, *Guaiacum sanctum* 94. 4, *Zygophyllum morgsana* 429. 4, *Melastoma hirta, discolor*, and *acinodendron* 159. 1 to 265. 4; *Chimaphila maculata* 349. 5, *Trianthema monogyna* 95. 4, *Gypsophila prostrata* 75. 2, *Silene Virginica* 203. 1, *Arenaria graminifolia* 7. 3, *Malpighia punicifolia* 157. 4, *Erythroxylon sideroxyloides* 442. 3, *Suriana maritima* 241. 5; *Oxalis violacea, versicolor, hirta*, and *tomentosa* 102. 4 to 450. 6; *Crataeva gynandra* 147. 6, *Litsaea trinervia* 381. 2, *Talinum triangulare* 105. 6, *Triumfetta Bartramia* 41. 5; *Euphorbia cereiformis, hystrix, corollata, microphylla*, and *satureioides* 113. 2 to 446. 3; *Cactus phyllanthoides* 247. 5, *Prunus capulin* 158. 4, *Crataegus crusgalli* 46. 1, *C. parvifolia* 100. 1, *Glinus dictamnoides* 356. 6, *Capparis sepiaria* 338. 1, *C. cynophallophora* 172. 4, *Cimicifuga racemosa* 383. 3; *Cistus laevipes*, and *polifolius* 84. 6 and 23. 6; *Corchorus fascicularis* 439. 6, *Arungana mollusca* 241. 3, *Xylopia glabra* 238. 4, *Thalictrum anemonoides* 106. 4, *Clematis Virginiana* 379. 4, *C. ochroleuca* 379. 4, *Knowltonia vesicatoria* 95. 2, *Brasenia peltata* 349. 3, *Clusia rosea* 157. 2, *Teucrium Japonicum* 441. 2, *Sideritis Canariensis* 322. 4, *Stachys Aethiopica* 315. 3, *Marrubium Africanum* 306. 2, *Phryma leptostachya* 380. 8, *Rhinanthus Capensis* 310. 2; *Gerardia delphinifolia, tenuifolia*, and *quercifolia* 12. 4 to 389. 3; *Scrophularia scorodonia* 59. 5, *Hemimeris montana* 331. 3, *H. diffusa* 320. 5, *Bignonia leucoxylon* 200. 4, *Citharexylon cinereum* 162. 1, *Crescentia cucurbitina* 171. 2, *Lantana involucrata* 114. 5, *L. aculeata* 233. 5, *Manulea tomentosa* 319. 2, *Buchnera Asiatica* 305. 3, *Schwalbea Americana* 348. 8, *Barleria hystrix* 119. 5, *Bontia daphnoides* 209. 3, *Blepharis boerhaaviaefolia* 99. 3, *Cardamine Virginica* 101. 4, *C. Africana* 101. 5, *Heliophila integrifolia* 432. 2, *Arabis Canadensis* 86. 8, *A. reptans* 51. 5, *A. runcinata* 206. 3, *Cleome tenella* 224. 3, *Waltheria Americana* 150. 6, *W. angustifolia* 150. 5, *Melochia concatenata* 9. 5; *Passiflora laurifolia, minima*, and *hibiscifolia* 210. 3 to 212. 1; *Erodium maritimum* 31. 4, *Pelargonium betulinum* 415. 3; *Sida Capensis, humilis, rotundifolia*, and *periplocifolia* 9. 3 to 356. 1; *Malva Gangetica, fragrans, parviflora*, and *Hispanica* 44. 2 to 431. 5; *Lavatera triloba* 8. 3, *Gossypium hirsutum* 299. 1; *Hibiscus hastatus, hirtus, Aethiopicus; Pavonia Zeylanica* 125. 3, *Fumaria vesicaria* 335. 3, *Polygala Heisteria* 229. 5, *Piscidia Carthaginensis* 214. 4, *Borbonia trinervia* 297. 4, *B. lanceolata* 297. 3; *Aspalathus capitata, astroites, thymifolia, ericaefolia, uniflora, araneosa, Indica, quinquefolia*, and *callosa* 201. 2 to 414. 4; *Crotalaria imbricata* 388. 3, *C. laevigata* 277. 2, *Dolichos scarabaeoides* 52. 3, *Orobus Pyrenaicus* 210. 2, *Lathyrus clymenum* 114. 6, *Vicia sylvatica* 71. 1, *V. cassubica* 72. 2, *V. peregrina* 233. 6, *Cytisus foliolosus* 277. 6, *Hedysarum spinosissimum* 50. 2, *Desmodium viridiflorum* 308. 5, *D. paniculatum* 432. 6, *Lespedeza capitata* 433. 3, *Zornia Zeylonensis* 102. 1, *Z. pulchella* 433. 7, *Indigofera psoraleoides* 320. 3, *I. cytisoides* 185. 3; *Tephrosia villosa, colutea*, and *argentea* 52. 1 to 166. 3; *Trifolium glomeratum* 113. 5, *Lotus Creticus* 43. 1, *Hypericum ericoides* 93. 5, *H. simplex* amalth. 421. 3 (Nutt.), *Ethulia divaricata* 21. 9, *Ageratum ciliare* 81. 4, *Pteronia camphorata* 345. 5, *Artemisia Chinensis* 353. 5; *Gnaphalium cephalotes, divergens, teretifolium, cylindricum, felinum, cymosum, odoratissimum, squarrosum, nodiflorum*, and *Indicum* 173. 6 to 410. 2; *Conyza bifoliata* 177. 1, *Tussilago Japonica* 390. 6, *Senecio grandiflorus* 422. 5, *S. uniflorus* 39. 7, *Aster tenellus, Solidago odora* 116. 6, *S. bicolor* 114. 8, *Inula squarrosa* 16. 1, *I. aromatica* 326. 1, *Arnica crocea* 343. 7, *Leysera callicornia* 350. 1, *Chrysantheinum procumbens* 430. 3, *C. frutescens* 272. 6, *Cotula anthemoides* 274. 6, *C. tanacetifolia* 430. 7, *Anthemis cota* 17. 5, *Phaethusa Americana* 342. 6, *Buphthalmum durum* 21. 3, *Helianthus giganteus* 159. 5, *Rudbeckia triloba* 22. 2, *Coreopsis tenuifolia* 344. 3, *Gorteria personata* 273. 6, *Berckheya incana* 273. 5, *B. ciliaris* 354. 3, *Arctotis paradoxa* 312. 5, *A. pilifera* 276. 2, *Osteospermum polygaloides* 382. 2, *Sphaeranthus Africanus* 108. 7, *Arethusa bulbosa* 348. 6, *Pogonia parviflora* 348. 1, *P. verticillata* 348. 3, *P. ophioglossoides* 93. 2, *Malaxis paludosa* 247. 2, *Corallorhiza odontorrhiza* 211. 1. 2, *Podostemon ceratophyllum* 138. 1, *Carex folliculata* 419. 1, *Tragia urens* 107. 6, *Ambrosia paniculata* 10. 5, *Ostrya Virginica* 156. 1, *Arum dracontium* 271. 2, *Belis jaculifolia* 351. 1, *Croton sidaefolium* 220. 5, *C. spinosum* 108. 3, *Sapium aucuparium* 229. 8, *Phyllanthus dumosus* 183. 4, *P. falcatus* 247. 4, *Bradleia Sinica* 368. 1, *Anthospermum Aethiopicum* 183. 1, *A. ciliare* 344. 7, *Montinia acris* 333. 3, *Myrica Aethiopica* 48. 8, *M. serrata* 424. 3; *Xanthoxylon clava-Herculis* 239. 4, *X. juglandifolium, rhoifolium*, and *aromaticum* 239. 4 to 392. 2; *Margaritaria nobilis* 176. 4, *Menispermum Canadense* 36. 2, *Cocculus Plukeneti* 345. 2; *Clifortia ruscifolia, strobilifera*, and *trifoliata* 275. 2 to 319. 4; *Juniperus Barbadensis* 197. 4, *Inga microphylla* 1. 6, *I. marginata* 141. 2, *I. nodosa* 211. 5, *Acacia cineraria* 2. 1, *A. reticulata* 123. 2, *A. tamariscina* 329 3; *Acrostichum sorbifolium, bifurcatum, alcicorne*, and *velleum* 281. 4 to 429. 2; *Polypodium hexagonopterum* 284. 2, *P. scolopendroides, reptans, dissimile, phymatodes, griseum, arvonicum, sanctum, effusum*, and *speluncae* 89. 5 to 404. 1. 5; *Aspidium trifoliatum, unitum, coriandrifolium, cicutarium, montanum, lobatum*, and *falcatum* 89. 3 to 405. 1; *Asplenium furcatum* 123. 6; *Pteris arguta, biaurita*, and *pedata* 286. 5 to 407. 2; *Blechnum Australe* 89. 7, *Adiantum reniforme, pumilum, denticulatum, radiatum, Aethiopicum, tenerum*, and *pallens* 124. 2 to 403. 2; *Davallia tenuifolia* 4. 1, *Dicksonia apiifolia* 282. 1, *Hymenophyllum Tunbrigense* 3. 5, *Schizaea pectinata* 95. 7, *Osmunda spectabilis* 181. 4, *Botrychium dissectum* 427. 5, *Todea Africana* 427. 5, *Mohria*

thurifraga 350. 10; *Lycopodium curvatum, cernuum, bryopteris,* and *canaliculatum* 47. 9 to 453. 8, *Eriocaulon decangulare* amalth. pl. 409. f. 5, *Ribes oxyacanthoides* amalth. 212. — He died "in 1706."

Elsholtzia cristata of the mountains of Siberia and Central Asia as far as Hindustan and Lake Baical. A Labiate plant described by Plukenet amalth. 430. 1 * — (Spreng.); termed "mentha patrina" by Pallas (Steud.), and apparently from the commencement of the present century occurring in Russia, mentioned by Hoeft as "spontaneous," by Ledebour as "subspontaneous" (A. Dec.): of late years has extended itself into cultivated land in Germany (Koch) and Sweden (Fries), was already naturalized in Germany "in 1830" (Reich.), and about 1823–8 escaped from gardens in Sweden (Wahl.); "in 1850," had extended itself around Angers (Leroy). From "English seeds" was introduced into the environs of Bombay (Gibs., and Graham).

Carex pilulifera of Europe and the adjoining portion of Asia. Described by Plukenet amalth. 91. 8 — (Spreng.), termed "cyperoides alpinum saxatile capillaceo folio caule rotundo triquetro spica seminali nigricante plerumque unica" by Micheli pl. 32 (Linn.), and known to grow from Sweden throughout middle Europe (fl. Dan. pl. 1048, Engl. bot. pl. 885, and Pers.): observed by Linnæus as far as Upsal; by Sibthorp, in the environs of Constantinople.

"In 1705–6" (Pers., and Spreng.), Tournefort in Mem. acad. par. distinguishing by well-defined characters several genera of plants, including *Diervilla.* — He died "Dec. 28th, 1708" (Fonten.).

"1706 A. D." (Humphreys, and Holmes), in South Carolina, an Act of assembly, establishing religious worship according to the Church of England. The province was divided into ten parishes, in each of which a church was built; and the clergymen were all supplied by the British Society for propagating the Gospel.

"July 22d" (Blair), signing of the Union between England and Scotland.

"In this year" (Spreng.), C. Commelyn publishing his Hort. rar. Amst., enumerating† *Chironia baccifera* rar. 9, *C. frutescens* 8, *Mahernia pinnata* 7, *Crinum erubescens* 15; *Aloe echinata,* and *variegata, Apicra albicans* 46–8; *Zygophyllum sessilifolium* 10, *Cotyledon spuria* 10, *Spielmannia Africana* 6, *Melianthus comosus* 6, *Cacalia ficoides* 40, *Athanasia dentata* 41, *Senecio ilicifolius* 42, *Centaurea glastifolia* 39; *Arctotis acaulis,* and *calendulacea* 35–6, and *Momordica operculata* 22. — Completed "in 1715;" he died "in 1731."

Lamium multifidum of the Uralian plains. From transported specimens described by C. Commelyn rar. pl. 26 — (Pers.): observed by Pallas trav. i. 257 wild on the Lower Volga.

"1707 A. D." (Marcel p. 221), in Egypt, a change in internal affairs: the authority of the pasha from Constantinople becoming chiefly nominal, giving place to that of the schekh-el-beled, Ismael-Bey. — Who from this time really conducted the administration; and transmitted the charge to his successors in the office.

"The same year" (Maunder), death of Aurungzebe. War ensued, for the succession, between his sons; and Mausum gaining the ascendancy, became emperor of Northern Hindustan under the name of Bahader Shah.

"1708, Aug. 29th, about break of day" (Charlev., Hutch., and Holmes), Haverhill on the Merrimack river surprised by "about two hundred" aboriginals under French officers. The town was plundered and several of the houses burned; the clergyman, "captain of the town," and "thirty or forty other persons were killed; and many" were taken prisoners.

"The same year" (Steinschneid. iii. 30), the peculiar disease of the hair termed "*plica Polonica,*" described by Tobias Cohen.

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* *Hyptis suaveolens* of Tropical America. Known to grow wild there (Pers., and A. Dec.). Transported to Europe is described by Plukenet amalth. 306. 3 — (Spreng.), Aiton, and L'Heritier: by European colonists also, was carried across the Pacific to the Philippines, Moluccas, Hindustan (Benth.), and Java (Zoll.).

Utricularia minor of Northern Europe and America. Described by Plukenet amalth. pl. 99. f. 9 — (Spreng.); observed by Hayne pl. 6 in Germany (Pers.), by Decandolle in France, and known to grow from Sweden to Ireland and Switzerland (Wats., and A. Dec.). Westward, growing according to Pursh in New Jersey; and according to A. Gray, from Watertown in "N. New York to Wisconsin, and northward."

† *Quamoclit coccinea* of the West Indies and neighbouring portion of North America. A scarlet-flowered Convolvulaceous twiner, transported to Europe, described by C. Commelyn rar. pl. 11, — Linnæus, and Jacquin rar. pl. 35: by European colonists also, carried to Java and Bombay (Choisy, and A. Dec.); observed at Bombay by Graham "in gardens pretty common," by Roxburgh, in Eastern Hindustan. Westward, is known to grow in the West Indies (Pers.); was observed by Nuttall on the Arkansas; according to A. Gray, is naturalized on "river-banks, etc., Ohio, Virginia, and southward;" and according to Chapman, occurs in "cultivated ground, in the middle and upper districts" (of Georgia and Carolina), the flowers "sometimes yellowish."

"In this year" (append. Sibth., and Winckler), Scheuchzer publishing his Prodrom. agrostographi. Helvet.*

"The same year" (Spreng.), arrival in Southern Arabia of Mervellius and Lalande. — They remained until "1713."

"1709, July 24th" (Forster voy. 444, and Holmes), arrival in California of Captain Trondad, a Frenchman, in the first ship that crossed the Pacific in a high Northern latitude.

"In this year" (Spreng.), after visiting the East "in 1700" and the West Indies "in 1703," Feuillée from Brazil sailing around Cape Horn to Chili and Lima, meeting with *Drymis Winteri* i. pl. 6. f. 1, *Fuchsia macrostema* iii. pl. 47, *Gratiola Peruviana* ii. 17, *Sarmienta repens* ii. 34, *Calceolaria pinnata* ii. 7, *C. salicifolia* ii. 7. 1, *Acaena argentea* ii. 41. 1, *Guevina avellana* iii. 34, *Buddleia globosa* iii. 38, *Cynoglossum Limense* iii. 49, *Lobelia tupa* iii. 29, *Nicotiana paniculata* iii. 10, *Solanum chenopodioides* iii. 24, *S. quercifolium* iii. 15, *S. muricatum* iii. 26, *Lycopersicum Peruvianum* i. 25. 1, *Witheringia montana* i. 46, *Anagallis alternifolia* i. 26. 3, *Viola capillaris* iii. 28. *Nertera depressa* i. 44, *Cestrum auriculatum* i. 20. 2, *Hydrocotyle citriodora* i. 1. 2, *Oenothera tenuifolia* i. 33. 2, *Conanthera bifolia* i. 3. 1, *Herreria stellata* iii. 7, *Phalangium coeruleum* iii. 8, *P. eccremorrhizum* i. 21. 1, *Amaryllis tubiflora* i. 20. 1, *A. Chilensis* i. 21. 3, *A. flammea* i. 20. 3, *A. bicolor* i. 21. 2, *Alstroemeria pelegrina* iii. 5, *A. salsilla* iii. 6, *Pitcairnia coarctata* i. 39. 2, *Tropaeolum peregrinum* iii. 42, *Chlora sessilis* iii. 14. 2, *Cassia stipulacea* i. 42, *Jussieua Peruviana* iii. 9, *Oxalis rosea* iii. 23, *O. conorhiza* iii. 24, *O. megalorhiza* iii. 25, *Euphorbia laurifolia* iii. 2, *E. portulaccoides* iii. 3, *Salpiglossis sinuata* iii. 21, *Eugenia buxifolia* i. 31. 2, *Dracocephalum chamaedryoides* i. 1, *Bignonia radiata* iii. 22, *Loasa acanthifolia* iii. 43, *Xuaresia biflora* iii. 48, *Verbena chamaedrifolia* i. 25. 3, *Cristaria betonicaefolia* i. 27. 1, *Ferraria ixioides* i. 4. 1, *Passiflora tiliaefolia* iii. 12, *P. punctata* iii. 11, *Polygala thesioides* iii. 13, *Psoralea glandulosa* i. 3. 2, *Cephalophora glauca* i. 45. 2, *Flaveria eupatorioides* iii. 14. 2, *Baccharis ivaefolia* iii. 37, *Neottia diuretica* iii. 17, *Cymbidium virescens* iii. 19, *C. luteum* iii. 20, *Inga ingoides* i. 19, and *Azolla Magellanica* i. 35.† — He returned to Marseilles "in 1711," published his Obs. côtes or. Am. Merid. "in 1714–25," visiting the Canary Islands "in 1724," and died "in 1732."

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* *Agrostis alpina* of Subarctic climates and mountain-summits farther South. A grass described by Scheuchzer prodr. pl. 4, — and Leysser 34, and known to grow on the mountains of Saxony and Switzerland (Pers.): observed by Decandolle on the Swiss Alps; by Allioni 2161 on rocks in Piedmont and termed "a. rupestris" (Steud.). Westward, was received by Collins from Labrador; observed by myself on the summits of the White mountains of New England; grows on "mountain-tops, Maine to New York" (A. Gray), and on "high mountains of North Carolina" (Chapm.).

† *Galinsoga parviflora* of the Andes from Mexico to Chili. Described by Feuillée iii. pl. 32 — (Spreng.); noted in Peru for its vulnerary and antiscorbutic properties; observed there by Ruiz and Pavon (Pers.); known to grow also in Chili, New Granada, and Mexico (A. Dec.). As transported to Europe, described by Cavanilles iii. pl. 282; cultivated in a garden in Germany in "1800" (Roth catal.), had escaped from cultivation near Memel and Osterode in "1807," spreading into Courland and Lithuania and various parts of Germany as far as the Rhine (Reichenb., and Döll): also by European colonists, was carried to Northeast America, where it made its appearance in "waste places, Cambridge, Mass., New York, and Philadelphia" (A. Gray) prior at least to 1859.

Madia sativa of California? An herb called by the Chilians "madi," and oil procured from its seeds (Molin.): observed by Feuillée in Chili; — by Molina, two species, one of them cultivated and the other wild; by myself, two varieties or possibly species frequent and seemingly wild in the environs of Valparaiso and Santiago.

Madia mellosa of . . . . — A third species, its leaves viscous and amplexicaul, observed by Molina in Chili.

Mimulus luteus of Northwest America. Observed by Feuillée ii. pl. 34 in Peru — (Pers.): known to occur throughout Chili (Benth.), and observed by myself on the river-bank of the Maipu above Santiago. In the Northern Hemisphere, was received by Pallas from Northwest America; was observed by Chamisso on Unalascha; and by Lewis and Clarke, on the North branch of the Columbia (Pursh). Transported to our Atlantic States, was cultivated as a garden-flower; and in 1812 was carried to Europe, where it has become naturalized in various localities from Britain to middle Europe (Newman, Godron, and A. Dec.).

Nicandra physalodes of Peru. An annual, two to three feet high with solitary pale blue flowers, observed by Feuillée iii. pl. 16 in Peru — (Spreng.); by Ruiz and Pavon ii. pl. 186, in waste places and cultivated ground around Lima (Pers.); by Jacquin obs. iv. pl. 98, in the West Indies; by Chapman, in "waste and cultivated ground, introduced" in our Southern States; by myself as far as 43° in New England, a weed possibly brought by the natives. Transported to Europe, is described by

Brugmansia candida of Peru. A shrub with large white trumpet-shaped odorous flowers, called "floripondio" in Chili, and observed there by Feuillée iii. pl. 46, — and Molina; in Peru, by Ruiz and Pavon ii. pl. 128; and farther North, by Humboldt and Bonpland. As transported to Europe, described by Linnæus, and Persoon; and farther East, enumerated by Graham as introduced in 1837 by the way of Egypt into Hindustan. By European colonists also, carried to Northeast America, where it continues frequent in greenhouses.

"1710, Oct. 2d" (Hutch. ii. 180, and Holmes), Port Royal in Nova Scotia captured by an English fleet, in part fitted out from New England; and the name changed to Annapolis.

In this year (app. Sibth., and Spreng.); Cupani writing his Panphyton Sicul., enumerating *Calamagrostis Plinii* pl. 8, *Linaria pilosa* 24, *Ophrys ciliata* 28, *Orchis ornithis* 29, *O. lactea* 35, *Gnaphalium nodiflorum* 36, *Raphanus cheiranthifolius* 71, *Tolpis quadriaristata* 118, *Crepis Taurinensis* 120, *C. leontodontoides* 121, *Hypochaeris Sicula* 122, *Lapsana virgata* 127, *Hieracium bracteolatum* 137, *H. crinitum* 144, and *Silene Sicula* 144. — He died "in 1711," his work was published "in 1713," and a Second edition by Bonanni "in 1719."

Orchis ensifolia of the Mediterranean countries. Observed by Cupani panph. pl. 29 in Sicily — (Spreng.), by Villars in Dauphiny, — by Lamarck fl. fr. also in France and termed "o. laxiflora;" by Chaubard, in the Peloponnesus.

Ophrys speculum of the Mediterranean countries. Described by Cupani panph. pl. 28 — (Spreng.), and Link; observed by Bivona i. 60 in Sicily and termed "o. ciliata;" by Gittard, in the Peloponnesus (Chaub.).

Ophrys picta of the Mediterranean countries. Described by Cupani panph. pl. 37 — (Spreng.), and Link; known to grow in Portugal (Pers.); observed by Chaubard in the Peloponnesus; by Steven, and Bieberstein, as far as the Caspian.

"In this year" (Spreng.), Herm. Boerhaave publishing his first Index Hort. Lugd., enumerating * *Salvia pinnata* i. p. 167, *Fedia vesicaria* i. 75, *Conium Africanum* i. 63, *Statice Tatarica* i. 76, *Chrysanthemum Orientale* i. 110, and *Senecio dentatus* i. 99.

"1711 A. D." (Winckl.). In or about this year Vaillant publishing descriptions of plants, including *Aster macrophyllus* act. 583, "aster canadensis humilior salicis minoris folio" act. 584 *A. tardiflorus?*

"1712, A. D." (Hewet, and Holmes), in Northern Carolina, conspiracy of the Tuscaroras and other aboriginal tribes for exterminating the White settlers. Of these, "one hundred and thirty-seven" were surprised and killed about Roanoke; but some escaping, the news spread, a force was raised and the Tuscaroras were totally defeated. The remnant of the tribe abandoned the country, and proceeding North to the "Five nations," was received by them as a Sixth confederate tribe.

"In this year" (Spreng.), Catesby visiting Virginia, meeting with "q. humilis salicis folio breviore" (*Q. cinerea*), "q. Marilandica" i. 19 (*black-jack oak* Q. nigra), "q. folio non serrato" i. 20 (*Q. aquatica*), "q. esculi divisura" i. 23 (*Q. Catesbaei*, Brendel in Am. Nat. for 1870); *Dodecatheon Meadia* app. 1, *Nyssa denticulata* i. 60, *Gleditschia monosperma* i. 43, *Lilium Catesbaei* ii. 58, *Trillium cernuum* i. 45, *Acer dasycarpum* i. 62, *Rhododendron maximum* app. 17. f 2, *Andromeda arborea* i. 71, *A. Catesbaei* ii. 43, *Halesia tetraptera* i. 64, *Philadelphus inodorus* ii 84, *Calycanthus floridus* i. 46, *Magnolia tripetala* ii. 61, *M. acuminata* app. 15, *Fothergilla alnifolia* i. 66, *Orobanche Americana* i. 36, *Stewartia malachodendron* app. 13, *Robinia hispida* app. 20, *Pogonia divaricata* i. 58, *Smilax laurifolia* i. 15, *S. tamnoides* i. 52, "smilax non spinosa baccis rubris" ii. pl. 84, *S. lanceolata*, *Coccus Caroliuus* i. 51, *Lilium Pennsylvanicum* iii. pl. 8, *Tetranthera geniculata* ii. 28, *Xanthoxylum Carolinianum* i. pl. 26 (Linn. sp. pl.).

At this time (Charlev. ii. 427, and Holmes), the whole province of Louisiana containing "but twenty-eight French families;" one half of the population being either traders or workmen.

"The same year" (= "1707 + 5 years" of Maunder), end of the reign of Bahader Shah. "About this time" (Maunder), a firman or grant obtained by the British East India Company; exempting their goods of export and import from duties.

"1712 to 1713 A. D." (Spreng.), Frezier visiting the Straits of Magellan, Chili, and Lima. — He published his Relat. in "1717," and died in "1773."

Adanson, and Gærtner ii. pl. 131; has been found spreading spontaneously in Germany (Burkh., and A. Dec.), in Lithuania, and around Caucasus (Ledeb.); also in Western Hindustan, around Dapooree (Lush, and Graham); and on Ceylon, where it has been introduced since 1823 (Gardner).

* *Euxolus lividus* of Tropical and Subtropical America. Transported to Europe is described by Boerhaave lugd. i. p. 97 — (Linn. sp. pl.). Westward, was observed by Clayton in Virginia (Gron. 116); by Chapman, from "South Florida to South Carolina;" and known to grow abundantly around Bahia (Moq.). Probably by European colonists carried to China, observed by Hinds at Hong-kong, by Roxburgh 2d edit. iii. 605 under cultivation in Bengal (A. Dec.).

"1713, March 30th" (Blair, Anders. iii. 50, and Holmes), signing of the treaty of Utrecht: France ceding to Britain the island of St. Christopher, Nova Scotia, Newfoundland, and the Bay and Straits of Hudson. On the news reaching New England, the aboriginals on the Eastern frontier sued for and obtained peace. The French perceiving that the island of Cape Breton was not expressly mentioned, formed a settlement there in "August," and claimed to be its first inhabitants.

"The same year" (Krashenin. hist., and Bickmore), Kunashir, the twentieth Kurile island from the continent, reached by a Cossack.

"In this year" (Pall. trav. ii. 524), by the Swedish officials in Tobolsk, a school established and instruction given in Latin, French, German, geometry, geography, and drawing. — Its reputation soon became widely extended, but in consequence of the Treaty of Neustadt the strangers withdrew.

"1714, Aug. 1st" (Nicol), Anne succeeded by George, now king of United Britain.

"The same year" (Keith 173, univ. hist. xli. 549, and Holmes), the Alleghany mountains crossed by Alexander Spotswood, lieutenant governor of Virginia. The country beyond as far as the Mississippi, though traversed by the French, having been concealed from the knowledge of the English.

"In this year" (Winckl.), De la Loubere publishing his Descript. Siam.

"1715, March 6th" (Salmon chron. hist., and Holmes), the *aurora borealis* first seen in England, from "evening to near 3 o'clock in the morning, to the great consternation of the people."

"The same year" (Nicol.), Louis XIV. succeeded by Louis XV., as king of France.

"The same year" (Hewet i. 228, and Holmes), in Southern Carolina, general conspiracy among the Yamassees and other aboriginal tribes for exterminating the White settlers. Of these, "ninety" were surprised and slain in and around Pocotaligo; war followed in all directions; but the Yamassees were finally defeated, and the remnant of the tribe found refuge in the Spanish territory of Florida.

A Catalogue of the Beaufort garden, in the handwriting of Sloane, contains *Mesembryanthemum albidum, scalpratum, pugioniforme, noctiflorum, spinosum, muricatum, acinaciforme, tuberosum, perfoliatum, micans,* and *hispidum.* — Sloane died "in 1753" (Spreng. gesch. ii. 83–115).

"In this year" (J. E. Smith, and Spreng.), Garidel publishing his Plantes d'Aix, enumerating *Euphrasia viscosa* pl. 80, and *Iberis linifolia* 105. — He died in "1737."

"1716 A. D." (Salmon chron. hist., and Holmes), sailing of two French ships from the river Mississippi; being the first that carried away merchandize from the colony in Louisiana.

"In this year" (Linn. fl. suec.), Linder publishing his Flora Wiksbergensis. — He died "in 1724" (Spreng.).

"In this year" (Spreng.), Anton. Danty d'Isnard publishing his memoir on *Celastrus scandens:* — "in 1717," on *Lamium orvala,* and *L. Garganicum:* "in 1719," on *Centaurea Isnardi,* and *C. Lippii:* "in 1720," on *Euphorbia cereiformis,* and *E. anacantha:* and "in 1724," on *Sisymbrium supinum.*

"In this year" (Spreng.), Bradley publishing his Plant. Succul., enumerating *Crassula tetragona* v. pl. 11, *Cereus hexagonus* i. 1; *Mesembryanthemum caninum, tortuosum, calamiforme, pugioniforme, dolabriforme, tenuifolium, splendens, micans, spinosum, crassifolium, glaucum, uncinatum, albidum, perfoliatum,* and *falcatum.* — The publication was completed in "1727," and he died in "1732."

At this time (Spreng.), Maria S. Merian writing her Insects of Surinam, describing among plants *Costus Merianæ* pl. 36, *Cassia bicapsularis* 58, *Mullera moniliformis* 35, and *Genipa Merianæ* 43. — She died in "1717," and her work was published in "1726."

"1717 A. D." (Charlev., Du Pratz, and Holmes), on the Lower Mississippi, founding of the city of New Orleans. The commerce of Massachusetts, of Boston and Salem, at this time employing "four hundred and ninety-two ships," measuring "twenty-five thousand four hundred and six tons," and manned by "three thousand four hundred and ninety-three" seamen (Hutch. ii. 111).

"The same year" (Pauth. 447), the emperor Khang-hi warned by a travelled mandarin against the enterprising character of Europeans, their formidable ships armed with cannon, and especially against the Dutch.

In this year (Spreng.), Petiver continuing his descriptions of plants, including *Chionanthus Virginica* hort. sicc. 241, *Isolepis supina* phil. trans. 282. 1253, *I. Antarctica* p. t. 282. 1261, *Cyperus exaltatus* mus. 539, *Galium saxatile* herb. 30. 6, *Chenopodium ficifolium* herb. 8. 3, *Atriplex littoralis* herb. 7. 4, *Erica glutinosa* mus. 161, *Sibthorpia Europæa* herb. 6. 11, *Arabis hispida* herb. 50. 3, *Solidago Cambrica* herb. 16. 11, "clitorius marianus trifolius subtus glaucus" *Clitoria Mariana* sicc. v. 243 (Pers.), *Stylosanthes elatior* sicc. 84, "gramen pratense majus virginianum" *Tricuspis seslerioides* mus. 239, "phaseolus marianus scandens floribus comosis" mus. 453 *Galactia comosa* ("Glycine" of Linn., and "Galactia mollis" of Mx.), *Helianthus angustifolius* mus. 103. — He died "in 1718," and a collected edition of his works was published "in 1764."

"In this and the following year" (Spreng.), Schober following the banks of the Volga and shore of the Caspian as far as Hyrcania or Northwestern Persia.

"1718 A. D." (univ. hist. xli. 336, and Holmes), New Providence, one of the Bahama Islands,

having become the resort of pirates, seized by an English fleet under Woods Rogers; and comparative security extended to the commerce of the West Indies. — In the following year, an attack by a Spanish fleet from Havanna, was repelled (Hewet i. 243, and Ramsay i. 5.).

"In this year" (Spreng., and Winckler), Henr. Bern. Ruppius publishing his Flor. Jenensis, enumerating *Senecio sylvaticus*. — He died "in 1719."

Chærophyllum aureum of the mountains of middle Europe. Observed by Ruppius iii. pl. 5 in the environs of Jena, — and known to grow from Switzerland nearly as far as Belgium (Jacq. austr. pl. 64, Pers., and A. Dec.). In Britain, escaped from cultivation was found "in 1809 or a little earlier" between Arbroath and Montrose, and near Edinburgh (Engl. bot. pl. 2103), is mentioned by Hooker "in 1821" as still existing in Scotland, but has since disappeared.

"1719 A. D." (Smith 191, and Holmes), a Presbyterian church first founded in New York.

"Dec. 17th" (Trumbull, coll. hist. ii. 14, and Holmes), the *aurora borealis* first seen in New England; beginning "about 8 o'clock in the evening," and filling the country with alarm.

"In this year" (J. E. Smith, and Spreng.), Scheuchzer publishing his Agrostographia, enumerating *Scirpus campestris* pl. 7. f. 19, *S. baeothryon* 7. 21, *Eriophorum Scheuchzeri* app. pl. 7, *Holcus mollis* 4. 25, *Festuca rubra* 6. 9, *F. pratensis* 4. 6, *Bromus Ligusticus* 6, 13, *B. squarrosus* 5. 11, *B. giganteus* 5. 17, *Avena versicolor* app. 3. 3, *Calamagrostis speciosa* 3. 11, *Elymus Europaeus* 1. 1, *Luzula spadicea* 6. 3, *Carex Davalliana* 11. 9. 10, *C. foetida* app. 4. 3, *C. curvula* 11. 7, *C. lobata* 11. 8, *C. alba* 10. 4. 5, *C. clandestina* 10. 1, *C. collina* 10. 8. 9, *C. brachystachys* 10. 7, *C. limosa* 10. 15, *C. filiformis* 10. 11, and *Restio triticeus* 7. 15. 16. — He died "in 1737."

Eragrostis pilosa of Central Asia. An annual grass described by Scheuchzer agrost. pl. 4 — (Spreng.), Linnæus, Dubois, Pallas, Suter, Villars, and Beauvois (Steud.); known to occur in Italy and Carniolia (Pers.), also in Tauria and Siberia (Kunth); and observed by Delile growing spontaneously near Cairo. By European colonists carried to Northeast America, was observed by Torrey as far North as 41°; by myself, near Philadelphia; by Muhlenberg, in Pennsylvania and New Jersey, and received from Illinois; and according to A. Gray, is "naturalized" in "sandy or gravelly waste places, S. New England to Illinois, and southward."

Elymus crinitus of the Mediterranean countries. An annual grass described by Scheuchzer agrost. 20, — Schreber ii. pl. 24, and Pallas: observed by Buxbaum cent. i. pl. 52, and Sibthorp, around Smyrna; by Forskal, near Constantinople; by D'Urville, on the island of Milo; and is termed "hordeum crinitum" by Desfontaines (Steud.).

"In this year" (Spreng.), Jos. Monti publishing his Prodr. stirp. bonon., enumerating *Cyperus Monti*.

In this year (= seven years after his arrival in Virginia, Spreng.), Catesby visiting Carolina, Florida, and the Bahama Islands, meeting with *Fraxinus Caroliniana* i. 80, *Catesbaea spinosa* ii. 100, *Ipomoea Carolina* ii. 19, *Gardenia clusiaefolia* i. 59, *Vinca lutea* ii. 53, *Rhus elegans* app. 4, *Amyris elemifera* ii. 33,* *Silene Catesbaei* ii. 43, *Magnolia grandiflora* ii. 80, *Anona glabra* ii. 64, *Crescentia jasminoides* i. 59, *Tecoma pentaphylla* i. 3, *Jacaranda Caroliniana* i. 42, *Erythrina herbacea* ii. 49, *Epidendrum nocturnum* ii. 68, *Phoradendron rubrum* ii. 81, *Smilax aristolochiaefolia* i. 47, *Acacia glauca* ii. 42, *Convolvulus sagittifolius* i. 35, *Laurus (Persea) Catesbyana* ii. 28, *Symplocos tinctoria* i. p. 54. And as appears from his herbarium, *Clematis Catesbyana*, *C. ovata*, *Seymeria cassioides*, *S. pectinata*, *Ambrosia hispida*, *Lysimachia lanceolata*. — He returned to Europe "in 1722–6," published his Nat. hist. Car. "in 1731–43," and died "in 1749."

"1720 A. D." (Hewet i. 290, and Holmes), through the action of the people of Carolina, the charter of the proprietary government annulled: leaving themselves under the immediate protection of the British crown.

"The same year" (Spreng.), Messerschmid on his way to Tobolsk.†

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* *Amyris toxifera* of Florida and the West Indies. A shrub or small tree called in South Florida *torch-wood* (Chapm.): described by Catesby i. pl. 40 — (Pers.); observed by N. A. Ware in Florida; and known to grow in the West Indies (Dec.). Transported to Europe, is termed "toxicodendrum pinnatum" by Miller (Steud.).

† *Astragalus melilotoides* of the Mongolian plains. Observed by Messerschmid — (Amm. 119 n. 157), and Gmelin iv. 38 n. 51, in Siberia; by Pallas iv. 370 to 713, on the Upper Selenga?

Trifolium hedysaroides of the Mongolian plains. Suffruticose, observed by Messerschmid 1724 — (Amm. 154), and Gmelin fl. 31 n. 39, in Siberia; by Pallas iv. 379 to 715, on the Upper Selenga.

Campanula verticillata of Daouria. Observed by Messerschmid — (Amm. 18), and Sokolof, in Daouria (Pall. trav. iv. 610 to 690).

Potentilla geoides of Siberia. Observed by Messerschmid hodeget., — and Pallas iv. 698, in Siberia.

According to a Japanese account written in this year (Klapr. addit. to San-kokf p. 197), people of the two Aino villages of Kousouri and Atskesi on the East side of Yeso voyaging once a year to the island of Rakko sima to procure "rakko" or *sea-otter;* and the natives being much dreaded, only the strongest and boldest men are selected for the expedition: the distance is unknown, but a person who resided "three" years there, represents Rakko sima (Aleutian Islands?) as very remote: no native has ever visited Yeso, nor has a Japanese ever visited Rakko sima.

In this year (Spreng.), Vaillant writing his Bot. Paris, enumerating* *Eriophorum gracile* pl. 17. 2, *Aira aquatica* 17. 7, *Aegilops triuncialis* 17. 1, *Exacum pusillum* 6. 2, *Alsine segetalis* 3. 3, *Juncus tenageia* 20. 1, *Elatine triandra* 2. 1, *Silene Gallica* 16. 12, *Aspidium regium* 9. 1, *Riccia glauca* 19. 1, and *R. fluitans* 19. 3. — He died "in 1721," and the work with plates by Aubriet was published "in 1727."

Tillæa Vaillantii of the Mediterranean countries. A diminutive annual observed by Vaillant pl. 10 in the environs of Paris; — by Brotero, in Portugal (Steud.); by Moris, on Sardinia; by Gussone, on Sicily and Lampeduza; and received by A. Richard from the margin of a mountain-pool near Adowa in Abyssinia (A. Dec.).

"In this year" (Spreng.), Herm. Boerhaave publishing his Second Index Hort. Lugd., enumerating *Aulax pinifolia* ii. p. 123, *Leucadendron argenteum* ii. 195, *L. Levisanus* ii. 202, *L. squarrosum* ii. 197; *Protea cynaroides, speciosa, melaleuca, lepidocarpon, longifolia, mellifera, scolymus, acaulis, longiflora,* and *repens* ii. 183–99; *Leucospermum conocarpum* ii. 196, *L. hypophyllum* ii. 198, *Mimetes hirta* ii. 194, *M. cucullata* ii. 206, *M. Hartogii* ii. 205, *Gasteria carinata* ii. 131, *Apicra arachnoides* ii. 131, *Bumelia lycioides* ii. 263 (Linn. sp. pl.), "phaseolus americanus supra et infra terram fructus gerens" ii. 28 *Amphicarpæa monoica.* — He died "in 1738."

"In this year" (Spreng.), after his Compend. "in 1718," Pontedera publishing his Anthologia. — He died "in 1758."

"1721 A. D." (Pauth. 447), arrival at Pekin of another legate from the pope. He was received by Khang-hi in a friendly manner, and assured that there was "union among the missionaries." But a decree was issued, prohibiting Europeans, "since they could not understand the language," from preaching their religion in China.

"The same year" (Hutch., coll. hist., and Holmes), the *small pox* making havoc in Boston and the neighbourhood, by advice from Rev. Cotton Mather, *inoculation* was introduced by Dr. Zabdiel Boylston; who had the courage to begin with his own family, and meeting with success, continued the practice amid violent opposition. About "three hundred" persons were inoculated, but of these "it is impossible to determine the number which died."

At this time (biogr. univers.), A. G. Barcia writing. — He brought his work down "to 1722."

"In this year" (Spreng.), after residing for eighteen years as consul at Smyrna, William Sherard returning to England.

"In this year" (Spreng., and Winckl.), Buxbaum publishing his Enum. plant. Hal.

Chenopodium urbicum of Europe and the adjoining portion of Asia. Described by Buxbaum enum. — (Spreng.); known to grow in waste places in France and middle Europe as far as Denmark (flor. Dan. pl. 1148, Engl. bot. pl. 717, Lam. fl. fr., and Pers.). Eastward, was observed by Sibthorp, and Chaubard, in cultivated ground in Southern Greece and around Constantinople. By European colonists, was carried to Northeast America, where it was observed by Muhlenberg (Moq.), and according to A. Gray is "not rare eastward, naturalized."

"In this year" (Winckl.), Rzaczynski publishing his Hist. nat. Polon Lithuan.

"1722, Dec. 20th" (Chinese chron. table, and Pauth. 438), death of Khang-hi, "three hundred and first emperor from the year 'kia-tse' of Hoang-ti" (according to his own reckoning in his will). He was succeeded by his "fourth son" Young-tching, of the same Twenty-fourth dynasty.

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* *Erythraea ramosissima* of Western Europe. Observed by Vaillant pl. 6 around Paris, — by Schmidt i. n. 131 in Bohemia (Pers.), by Villars in Dauphiny, and by Pollini near Verona (Steud.); termed "e. palustris" by Schrader, "gentiana palustris" by Lamarck, "chironia pulchella" by Smith and Deslongchamps, and "hippocentaurea pulchella" by Schultes (Steud.). Westward, was observed by Pursh on the seashore of New Jersey and termed "exacum pulchellum;" but is regarded by A. Gray as "naturalized" only, occurring in "wet or shady places, Long Island to E. Virginia, scarce."

Sagina Linnæi of Subarctic climates. Termed "alsine tenuifolia pedunc. fl. longiss." by Vaillant paris. 8, — "spergula saginoides" by Linnæus; observed also by Sauvages montp. 142 in France; and known to grow from Spitzbergen and Lapland to the mountains of Switzerland (Wats.), also in Siberia (Gmelin), and on Caucasus and the Altaian mountains (Ledeb.). Westward, was observed by Hooker on Iceland, and received from Greenland; by Parry, in Arctic America; by Menzies, in Northwest America; by Chamisso, at Escholtz Bay as well as on Unalashka, and St. Paul's Island.

In the "Ten precepts," attributed to the emperor Young-tching, *gambling* is forbidden; and homicide even in a *duel*, is regarded as deserving death.

"1723 A. D." (Colden's map, Smith, and Holmes), at Albany, the Nicariagas of Missilimakinak by their own desire, formally received by the "Six nations" as a Seventh confederate tribe.

"In this year" (J. E. Smith, and Spreng.), Tilli publishing his Cat. hort. Pisan., enumerating *Luzula spicata* 91, *Knautia Propontica* 48, *Rumex Aegyptiacus* 37. f. 1, *Medeola angustifolia* 12. 2, *Eugenia uniflora* 44, *Antirrhinum cirrhosum* 38. 2, *Pelargonium fulgidum* 26, *Malva Sherardiana* 35. 2, *Phaca Gerardi* 14. 1, *P. alpina* 14. 2, *Anthemis alpina* 19. 1, *Centaurea cichoracea*, 27, *Zamia pungens* 45, *Acacia pedunculata* 1. 2, and *Woodwardia radicans?*

"1724 A. D." (Charlev. ii. 376, and Holmes), hostilities on the Eastern frontier of New England; the Abenaquis being jealous of the extension of settlements, and favouring French interests through the influence of the Jesuit missionary P. Rallè residing at Norridgwog. After the destruction of the town of Berwick, an expedition was sent against Norridgwog, and during the capture Rallè and "about eighty" natives were slain. He left a manuscript dictionary of the *Norridgwog language* of "above five hundred" quarto pages, which was deposited in the library of Harvard college.

"The same year" (Adams, and Holmes), at Ephrata in Pennsylvania, the sect of Dunkers founded by a German colonist.

"In this year" (Winckl.), Valentyn publishing his account of the East Indies. — The fifth and last volume was issued "in 1726."

"1725, Jan. 21st" (Pall. trav. iv. 396), a severe *earthquake* experienced by Messerschmid at Tchitinsk in Siberia, not far from the Selenga. — Returning, Messerschmid wrote the first history of Siberia, died "in 1730," and the plants he collected were published by Io. Ammon.

"In this year" (Nicol.), Peter the Great succeeded by Catharine; now empress of Russia. "June 11th," George succeeded by George II., now king of United Britain.

"Aug. 20th, 12th of George I." (Hutch. ii. 3, Dougl. i. 380, Brit. emp. 352, and Holmes), date of an explanatory charter, issued on the complaint of governor Shute of Massachusetts against Acts of the Legislature; relating especially to the "king's woods," the forts, and forces. — The additional charter was accepted on the following "Jan. 15th" by the Massachusetts Legislature.

"In this year" (Stirling, and W. W. Hunter), Muhammad Taki appointed deputy-governor of Orissa. — His oppressions induced the priests of Jagannath to flee across the Chilka Lake, taking the image with them.

"In this year" (Spreng.), after his Generat. fung. "in 1714," Ludw. Ferdin. Marsigli publishing his Hist. phys. de la mer. — He died "in 1730."

Sterculia platanifolia of the mountains of Yemen. A large tree called there "kulham" (Forsk.); and from transported specimens termed "firmiana" by Marsili — (Pers.), "f. chinensis" by Medicus and "hibiscus simplex" by Linnæus (Steud.); was cultivated in England in 1757 (Ait.). Eastward, was observed by Clot-Bey in the gardens of Egypt; and by Forskal p. 96, wild among the mountains of Yemen. Is however by Medicus, and Persoon, attributed to China and Japan.

About this time (Spreng., and Winckl.), Buxbaum visiting Constantinople and Asia Minor as far as Armenia and Iberia, meeting with *Salicornia strobilacea* cent. i. pl. 10. f. 2, *Corispermum pungens* iii. 56, *Veronica gentianoides* i. 35, *V. biloba* i. 36, *V. Orientalis* i. 38, *V. pectinata* i. 39. 1, *V. cymbalaria* i. 39. 2, *V. filiformis* i. 40. 1, *V. parvifolia* i. 41. 2, *V. pedunculatis* i. 41. f. 1, *Ziziphora serpyllacea* iii. 51. 2, *Valeriana alliariaefolia* ii. 11, *Cyperus hamulosus* iv. 60. 1, *Aegilops squarrosa* i. 50. 1, *Bromus alopecuroides* v. 38. 1, *B. inermis* v. 40. 2, *B. lanceolatus* v. app. 19, *B. confertus* iv. 54. 1, *Polycnemum oppositifolium* i. 31. 1, *P. sclerospermum* v. 58, *P. malacophyllum* i. 17. 2, *Crucianella molluginoides* ii. 30. 1, *Galium cucullaria* i. 19. 2, *Symphytum Orientale* v. 68, *Lycopsis obtusifolia* ii. 13. 2, *Moltkia coerulea* ii. 14, *Campanula lamiifolia* v. 18, *Salsola glauca* i. 13, *S. rigida* i. 14. 1, *S. crassa* i. 14. 2, *S. vermiculata* iii. 11. 2, *S. foliosa* i. 19. 1, *Kochia prostrata* i. 15, *K. hyssopifolia* i. 15, *K. sedoides* iii. 49, *Statice acerosa* ii. 10, *Linum luteolum* v. 59, *Evolvulus linifolius* ii. 30. 3, *Allium Sibericum* iv. 45, *Asphodelus prolifer* ii. 36. 2, *Atraphaxis spinosa* i. 30, *Sophora alopecuroides* iii. 46, *Ruta villosa* ii. 28. 1, *Reaumuria hypericoides* ii. 35, *Saxifraga hederacea* ii. 45. 2, *Sedum spurium* v. 61. 2, *Silene fimbriata* iii. 57, *Euphorbia tuberosa* ii. 23, *E. micrantha* ii. 25, *Lythrum acuminatum* i. 47. 1, *Potentilla pimpinelloides* i. 48, *Trollius patulus* i. 22, *Nepeta Mussini* iii. 50. 1, *Marrubium Astrakanicum* iii. 50. 2, *Dracocephalum Altaicum* i. 7, *Rhinanthus trifidus* i. 8, *Antirrhinum glaucum* iv. 37, *Orobanche alba* iii. 2, *O. coerulea* iii. 1. 2, *Celsia betonicaefolia* i. 21, *Isatis Armeniaca* i. 4, *Clypeola lasiocarpa* i. 2. 2, *Pugionium cornutum* i. 9. 1, *Lepidium vesicarium* i. 26, *Thlaspi Buxbaumii* i. 2: 1, *Cheiranthus cuspidatus* ii. 33. 1, *Hesperis cretacea* ii. 32. 1, *Arabis aspera* ii. 33. 2, *Raphanus Tauricus* iii. 73, *Cleome ornithopodioides* i. 9. 2, *Erodium oxyrhinchum* ii. 48. 1, *Polygala supina* iii. 70. 2, *P. bracteolata* iii. 71, *Orobus hirsutus* iii. 41, *O. sessilifolius* ii. 38, *Lathyrus incurvus* ii. 44, *Vicia Bithynica* ii. 45. 2, *Coronilla Cappadocica* ii. 40. 2, *Hedysarum circinnatum* ii. 42, *Astragalus varius* iii. 37, *A. brachycarpus* iii. 38. 1, *A. galegiformis* iii. 40, *Oxytro-*

pis lunata iii. 36. 2, *Scorzonera graminifolia* ii. 21, *Lactuca sonchifolia* v. app. 36, *Chrysanthemum carneum* ii. 20, *Achillea filicifolia* ii. 19, *Centaurea nitens* ii. 15. 1, *C. balsamita* pl. 16, *Aristolochia Pontica* i. 45, *Carex Buxbaumii* iv. 59, *C. secalina* i. 54, *Smilax excelsa* i. 27.

Astragalus contortuplicatus of the Uralian plains. Termed "a. repens siliquis undulatis" by Buxbaum cent. iii. pl. 39; — observed by Sibthorp on Cyprus and the plains of Asia Minor; by Gmelin iv. pl. 28, and Pallas i. 224 to v. 325, on the Lower Volga.

Veronica Buxbaumii of middle Asia. Termed "v. flosculis oblongis pediculis insidentibus chamædryos folio major" by Buxbaum cent. i. pl. 40, — and has since extended itself in cultivated ground into middle and Northern Europe; was observed by Sibthorp pl. 8 in the environs of Constantinople, by Chaubard in cultivated ground in the Peloponnesus; by Tenore, in Italy; by Martens and Kóch in Germany, by Lejeune in Belgium, by Fries in Denmark and the neighbouring portion of Sweden, is known to occur in the Calvados, has become naturalized within the present century in the environs of Geneva, and since "1829" has become known in Britain (A. Dec) By European colonists, was carried to Northeast America, observed in Milton near Boston (D. Murray), and in "waste grounds, Philadelphia, rare" (A. Gray).

Corispermum hyssopifolium of the Uralian plains. An annual observed by Buxbaum cent. iii. pl. 55 — (Pers.); by Sibthorp, along the Black Sea in the maritime sands of Thrace; by Pallas trav. i. 53, along the Volga. And perhaps the same species by Lewis and Clark, Nuttall, and E. James along the Missouri as far as the Platte, and by Nuttall along the Arkansas.

Salicornia Caspica of the shores of the Caspian. Described by Buxbaum cent. i. pl. 10; — observed by Pallas trav. i. 676 at the mouth of the Yaik.

Ornithogalum nanum of the East Mediterranean countries. Termed "o. humifusum floribus umbellatis albis" by Buxbaum ii. pl. 37: — observed by Sibthorp, and Chaubard, from the Peloponnesus to the Dardanelles.

"1726 A. D." (Hutch. ii. 316, and Holmes), treaty of peace with the aboriginal tribes on the Eastern frontier of New England. — "A long peace" followed: and the "treaty has been applauded as the most judicious which has ever been made with the Indians."

"1727, Oct. 21st" (Klapr. mem. i. 59), a treaty concluded between Russia and China: — and in conformity in the following year, the first Russian guard-house established at Kiakhta, now the frontier trading-city.

"Oct. 29th, about 10 h. 40 min. p.m." (Hutch. ii. 326, and Holmes), in a very clear and serene sky, with "perfect calm and tranquillity," a severe *earthquake*; lasting about two minutes, and extending from the river Delaware to the Kennebeck. Stone walls and the tops of several chimneys were shaken down. On the same day, many buildings thrown down on the island of Martinico; where the earthquake continued, with very short intervals, eleven hours (univ. hist. xli. 230).

"The same year" (coll. hist. v. 206, and Holmes), death of John Thomas, an aboriginal aged "one hundred and ten." He refused, early in life, to join the Pequods against the colonists; was among the first who joined the church, when it was gathered by Eliot at Natick; and continued exemplary through life.

"In this year" (Spreng.), Threlkeld publishing his Stirp. Hibern. — He died in "1728."

"1728, July 14th" (transl. with Du Halde), after journeying from Tobolsk to Okhotski and thence by sea, ascertaining that the Kuriles "burn their dead," while the Kamtchatkans "throw them in the woods to be devoured by dogs," Bering sailing from Kamtchatka river. Following the coast Eastward, he met eight men in a leathern boat who called themselves "Tzukchi;" and "Aug. 10th" discovered an island, which from the day he named "St. Laurence." Continuing along the land to "Lat. 67° 18'," on the "15th" he turned back; having unawares passed through the straits — which afterwards received his name.

His companion Steller found the Ainos of the Southern point of Kamtchatka * counting with their fingers and toes and having no name for numbers beyond "two hundred," having no idea of the art of writing but making notches to assist the memory, employing besides for the same purpose knots

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* *Gymnandra borealis* of Arctic Asia and America. Observed by Steller from the Lower Lena to Kamtchatka — and on Bering's Island; by Pallas iv. 43 to 682 in the alpine region of Daouria; by Soujef, at the mouth of the Obi (Pall.). Westward, was received by Pursh from the mouth of the Columbia.

Geum anemonoides of Kamtchatka. Observed by Steller, — and to the time of Pallas iv. 699 not found beyond the limits of Kamtchatka. Termed "dryas pentapetala" by Linnæus, "*anemone pusilla*" by Gaertner nov. comment. petrop. xiv. 1. pl. 19 (Pall.): not found in Kamtchatka by Chamisso, but observed by Merk on the Kurile Islands and the Northwest coast of America, and by Egede pl. 2 in Greenland (Pursh).

in leather thongs (the quippus) like the Chinese and natives of South America. He made a vocabulary of the language — (given by Klaproth transl. San-kokf).

"The same year" (univ. hist. xli. 208, and Holmes), the Negroes imported in three years into Barbadoes, Jamaica, and Antigua, ascertained on parliamentary inquiry to number "forty-two thousand."

"The same year" (Hewet 317, and Holmes), *yellow fever* in Charleston sweeping off multitudes of the inhabitants. "The physicians knew not how to treat the disease, which was as unknown as it was fatal;" and the planters suffered no one to carry in supplies, "lest the disorder should be brought into the country."

"The same year" (Spreng., and Winckl.), after residing in the West Indies, as related in his Voyag. Amer. "in 1722," Labat publishing his Afr. Occid. — He died "in 1738."

"In this year" (Spreng.), Franz Balth. Lindern publishing his Tournefortius alsat., enumerating *Lindernia pyxidaria* p. 156, and *Mvagrum dentatum* 94. — He published his Hort. alsat "in 1747."

At this time (Spreng., and Winckler), Zannichelli writing his Plant. Venez. — He died "in 1729," and his Opuscul. bot. were published "in 1730."

"In this year" (Spreng., and Winckl.), Buxbaum publishing his Cent. plant., enumerating* *Erica abietina* iv. 41, *Sigesbeckia Orientalis* iii. 52, *Satyrium cucullatum* iii. 8, *S. coriifolium* v. 10, *Corycium crispum* v. 11, *C. vestitum* v. 12, *Pterygodium catholicum* v. 21, and in Act. i. pl. 8. f. 1 *Andromeda* (*Cassandra*) *caliculata*. — He died "in 1730," Cent. iv. was published "in 1733," and the fifth and last "in 1740."

"In this year" (Spreng. gesch. ii. 223), John Martyn publishing his Plant. rar., enumerating† *Parietaria polygonoides* p. 8, *Phlox Carolina* 10, *Gronovia scandens* 40, *Crassula scabra* 24, *Pancratium Caribaeum* 27, *Baptisia alba* 44, *Cassia ligustrina* 21, *Mesembryanthemum felinum* 30, *Antirrhinum triste* 35. f. 2, *Martynia diandra* 42; *Passiflora serratifolia*, *cuprea*, *holosericea*, and *lunata* 37–56; *Erodium Chium* 4, *E. laciniatum* 19; *Pelargonium inquinans*, *papilionaceum*, and *cucullatum* 3–28; *Aster grandiflorus* 19, *Solidago altissima* 14, *Helianthus atrorubens* 20, *Coreopsis lanceolata* 26, *Millera quinqueflora* 41, *M. biflora* 47, and *Croton lobatum* 46: — the fifth dec. "in 1732;" he died "in 1768."

Amaranthus cruentus of China. Called by the Greeks "vlitō kōkinō" (Forsk.), from transported specimens described by Martyn cent. vi. pl. 6 — (Linn. sp.); observed by Forskal at Constantinople and termed "a. ruber foliis subtus rubris spicis erectis;" cultivated in gardens, and has become naturalized in various parts of France (A. Dec.). Eastward, was observed by Moon under cultivation on Ceylon; by Roxburgh, under cultivation in Bengal; by Blano, on the Philippines; and is known to occur in China (Pers.). By European colonists was carried to America, received by Linnæus from the Bahamas, observed by Maycock on Barbadoes, and by A. Gray "in gardens, etc." in our Northern States.

"In this year" (Spreng., and Pursh), Sherard, continuing his correspondence and receiving plants from John Bartram in the environs of Philadelphia, *Oldenlandia glomerata* (Pursh 745), from Tilden at Hudson's Bay. — He died before the close of the year, leaving the most extensive collection of dried plants at that time in existence, including "twelve thousand" species.

"1729, May" (Hewet, and Holmes), the titles and interest of the proprietors of Carolina purchased and surrendered to George II. The province was now divided into two distinct governments, called North and South Carolina.

Returning from Davis Straits (hist. coll. i. p. 233) along the Labrador coast, Capt. Henry Atkins

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* *Lachenalia tricolor* of Austral Africa. Transported to Europe, described by Buxbaum cent. iii. 20 — (Spreng.), Jacquin rar. pl. 61, and the younger Linnæus. In its wild state, known to grow in Austral Africa (Pers.).

† *Modiola Caroliniana* of the Alluvial margin of Northeast America. A humble Malvaceous annual, transported to Europe, described by Martyn plant. rar. 34 — (Spreng.), Dillenius elth. pl. 4, and Cavanilles ii. pl. 15 (Pers.); has become a weed in cultivated ground around Sorèze (Godron, and A. Dec.). Westward, was observed by Michaux in Virginia and Carolina (as far North therefore as 37°); by Elliot, in cultivated ground in South Carolina; by Croom, as far as 30° 30′; by Chapman, "waste places, Florida to North Carolina, and westward."

Bletia verecunda of Florida and the West Indies. An orchid, transported to Europe, described by Martyn 50 — (Spreng.), Miller dict. pl. 145, and Jacquin rar. iii. pl 602. Westward, observed by Browne on Jamaica, the cormus "bitterish and attended by a clamminess that leaves a light prickly warmth behind it, but this wears off soon," and "when dried it may be used with great propriety as a stomachic" (Lindl.); by Swartz, also in the West Indies; by Michaux, on the Bahamas; by Chapman, "open pine barrens, Middle and East Florida; was received also from Florida by Nuttall (Ell.).

"in Lat. 53° 40′ or thereabouts" descried "twelve canoes with as many" natives proceeding to an island not far off, and following in his ship anchored there. On landing, the natives "by their actions shewed signs of fear and amazement;" but advancing alone "without anything in his hands," he was suffered to come near, and after a time succeeded in making them comprehend, that he wished to exchange different articles for whalebone. The natives were dressed, "some in seal skins," but chiefly in "*beaver* coats" of "many pieces sewed together, being the best patches in the skin;" demonstrating absence of traffic with any civilized people, not even with the Canadian French, nor with the Hudson Bay factories. Their canoes "were made of bark and whalebone, strongly sewed together, covered with seal skin, payed over with a dark sort of gum" (. . . .). The natives "were well made, and strong, very fat and full of blood;" their "limbs well proportioned, their complexion a dark red, their hair black, short, and straight, having no beard nor any hair but on their heads. Their behaviour very lively and cheerful; their language guttural and dissonant; their arms were bows and arrows, some of bone and some of wood; their arrows feathered and barbed; they sling their darts through a piece of ivory, made square and fastened to the palms of their hands. Capt. Atkins conceives them to be a very cunning, subtile people, who could easily apprehend his meaning, when he made signs to them, but took no notice of his speaking to them." Proceeding along the coast, he "found the country full of woods, alder" (*Alnus incana*), "yew" (*Abies balsamea?*), "birch" (*Betula papyracea*, of large size, since the canoes were in part made of bark), "and witch-hazel, a light fine wood for shipbuilding" (*Ulmus Americana?*); "also fine large pines for ship masts, of a much finer grain than in New England" (*Pinus resinosa*). — Capt. Prebble "in 1753" carried with him a young Frenchman, in hopes that some native "might be found who understood the French language," but no one "took more notice of it than of the English; a plain proof these people had never left their own country to trade with the French."

"Nov. 28th" (Charlev., Du Pratz, and Holmes), on the Mississippi, conspiracy of the Natchez tribe to massacre the French colonists: and at a signal, "two hundred" Frenchmen killed, and the women, children, and Negroes captured. Of all the settlers at the trading post, "not more than twenty French, and five or six Negroes escaped." — The following year, the Natchez tribe were all captured by the French, the individuals were subjected to solitary imprisonment, and were afterwards transported as slaves to Hayti.

"In this year" (J. E. Smith, and Spreng.), Micheli publishing his Nov. gen. — He died "in 1737."

Najas tetrasperma of Italy. An aquatic annual observed by Micheli pl. 8. f. 1 in the waters of Italy — (Pers.).

Carex divulsa of Europe and the adjoining portion of Asia. A woodland sedge described by Micheli pl. 33, — and known to grow from Sweden to the Mediterranean (Engl. bot. pl. 629, Pers., and Wats.): observed by Sibthorp, and Chaubard, from the Peloponnesus to Constantinople.

"1730 A. D." (art de verif.), Achmed III. succeeded by Mahmood, twenty-fifth Turkish sultan. Coins issued at Cairo by Mahmood, are figured in Marcel p. 229.

"In this year" (Levchine kirgh. ii. 3 to iii. 6), voluntary submission to the empress Anne of the Kirghiz-Kazaks around the Aral Sea. — The movement though but partial tended greatly to promote their prosperity, by inducing peace with Siberian tribes under the dominion of Russia; traffic commenced in "1736," and though carried on by barter or direct exchanges, soon became very extensive.

"In this year" (Winckl.), Hans Egede publishing his account of Greenland, enumerating *Dryas tenella* pl. B. f. 3 (Ph.).

"1731 A. D." (Hewet ii. 11, and Holmes), arrival in South Carolina of governor Robert Johnson, commissioned by the king; and *bills of credit* continued by the Legislature. The rate of exchange rose in consequence to "seven hundred per cent" or seven for one; — where it continued "with little variation upward of forty years."

In New England, there were now "six furnaces for hollow ware, and nineteen forges" (Dougl. i. 109, and Holmes).

"Nov. 30th" (Pauth. 449), at Pekin, the severest *earthquake* ever experienced there; and "in less than a minute," more "than a hundred thousand persons buried under the ruins of buildings."

"The same year" (Targ.), date of the manuscript Viridarium botanicum Italo-Hyspanum, in which are enumerated "ficoide" *Mesembryanthemum linguiforme*.

"1732, Jan. 11th" (Blair), Pragmatic Sanction confirmed by the Diet.

"In this year" (Linn. fl. suec.), Olaus Celsius publishing his Plants growing around Upsal; — his Auct. Upland. "in 1740," and first investigated the mosses and minute plants of Sweden. He published the first volume of his Hierobotanicon "in 1745," the second "in 1747," and died "in 1756" (Spreng.).

"In this year" (Spreng., and Winckl.), after his Plant. Giss. "in 1718," his Third edition of Ray's Synopsis "in 1724" (A. Dec. g. b. 645–59), Dillenius publishing his Hort. Eltham., enumer-

ating *Canna glauca* pl. 59, *Salvia Mexicana* 254, *Commelina erecta* 88, *Phlox paniculata* 166 f. 203, *P. glaberrima* 166. f. 202, *Ipomaea glaucifolia* 87. f. 101, *I. tamnifolia* 318. f. 414, *Ipomopsis elegans* 241, *Symphoricarpus vulgaris* 278, *Triosteum perfoliatum* 293, *Physalis pruinosa* 9, *P. viscosa* 10, *Solanum Campechiense* 268, *S. Bonariense* 272, *Cestrum diurnum* 154, *Jacquinia rusciflora* 123, *Patagonula Americana* 226, *Sideroxylum inerme* 265, *Achyranthus radicans* of Cav. 7, *Cynanchum suberosum* 229, *Gomphrena perennis* 20. f. 22, *Phyllis nobla* 299, *Portulacaria Afra* 101; *Crassula cultrata, ciliata, nudicaulis*, and *pellucida* 97 to 100 f. 119, *Haemanthus puniceus* 140, *Pancratium Mexicanum* 222, *Eucomis regia* 92. 93, *Anthericum frutescens* 231, *A. aloides* 232. f. 300, *Atraphaxis undulata* 32, *Rumex dentatus* 158. f. 191, *Oenothera mollissima* 219, *Saxifraga Groenlandica* 253. f. 329, *Silene cerastoides* 309. f. 397, *S. Anglica* 309. f. 398, *S. pendula* 312, *S. antirrhina* 313, *S. rubella* 314. f. 406, *S. inaperta* 315. f. 407, *Cotyledon hemisphaerica* 95. f. 111, *Sedum Hispanicum* 256. f. 332, *Oxalis Dillenii* 221, *Cerastium perfoliatum* 217, *Opuntia tuna* 295. f. 380; *Mesembryanthemum latum, obliquum, longum, rostratum, bellidiflorum, stipulaceum, loreum, verruculatum, glomeratum, serratum, scabrum, bracteatum*, and *filamentosum* 183 to 293; *Aizoon Hispanicum* 117, *Rosa pendulina* 245. f. 317, *Helianthemum surreianum* 145. f. 172, *H. marifolium* 145. f. 173, *Clematis crispa* 73, *C. Orientalis* 119, *Ajuga Orientalis* 53, *Trichostema brachiata* 285, *Lantana melissaefolia* 57. f. 56, *Verbena Bonariensis* 300, *Priva Mexicana* 302, *Ruellia clandestina* 248, *R. strepens* 249, *Lepidium Bonariense* 286, *Iberis Gibraltarica* 287, *Sisymbrium bursifolium* 148. f. 177, *S. Monense* 111, *Hermannia lavandulifolia* 147, *Passiflora vespertilio* 137; *Pelargonium hybridum, carnosum*, and *odoratissimum* 131; *Geranium Bohemicum* 133, *Sida Dilleniana* 2, *S. Occidentalis* 6, *S. alnifolia* 172. f. 211, *Malva abutiloides* 1, *M. virgata* 169. f. 206, *M. grossulariifolia* 169. f. 207, *Hibiscus ficulneus* 157, *Baptisia perfoliata* 102. f. 122, *Phaseolus helvolus* 233. f. 100, *P. vexillatus* 234, *P. alatus* 235. f. 303, *Rhynchosia tomentosa* 26. f. 29, *Clitoria Virginiana* 76, *Hedysarum maculatum* 141, *Lespedeza repens* 142, *Vernonia glauca* 262 ("V. oligophylla" of Mx.), *Cirsium altissimum* 69, *Bidens nodiflora* 44, *Melananthera hastata* 46. f. 54, *Cacalia papillaris* 55, *Chrysocoma scabra* 88. f. 103, *Artemisia tenuifolia* 33; *Gnaphalium rutilans, undulatum* 107. f. 127 to 109. f. 132, *Helichrysum retortum* 322, *Erigeron Carolinianum* 306, *E. Bonariense* 257, *Pluchea camphorata* 88. f. 104, *P. fœtida* 89 f. 105; *Senecio pseudo-china, hastatus, halimifolius*, and *coriaceus* 104 to 258. f. 335; *Aster foliolosus* 35, *A. multiflorus* 36. f. 40, *Euthamia lanceolata* 306. f. 394, *Solidago aspera* 305. f. 392, *S. rugosa* 308. 396, *Tetragonotheca helianthoides* 283, *Tagetes minuta* 280, *Silphium asteriscus* 37, *Othonna arborescens* 103, *Bryonia ficifolia* 50, *Cliffortia ilicifolia** 31, *Iris Virginica* 155. f. 188, *Liatris pycnostachya* 72. f. 83, 253. f. 328, *Ipomoea commutata* 84. f. 98, *Dipteracanthus biflorus* 331; "hedysarum trifolium scandens folio longiore splendente" 143. f. 170 *Galactia volubilis* ("Hedysarum" of Linn., "G. pilosum." of Ell.); "aster ericoides dumosus" 36. f. 40 *Aster ericoides*, "a. ericoides meliloti agriæ umbone" 35. f. 39 *A. miser*.

"In this year" (fl. Suec. p. v, and Spreng.), after his Hort. Upland. "in 1731," Linnæus visiting Lapland, meeting with *Campanula uniflora* pl. 9. f. 5. 6, *Luzula pallescens* 10. 2, *Andromeda (Cassiope) hypnoides* 1. 3, *Saxifraga rivularis* 2. 7, *Lychnis apetala* 12. 1, *Ranunculus pygmaeus* 3. 3, *Pedicularis Lapponica*† 3. 4, *P. flammea* 4. 2, *Salix glauca* 7. 5, *S. lanata* 7. 7, *S. nigricans* 8. f. c,

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* *Roubieva multifida* of Austral America A Salsolaceous plant, transported to Europe, described by Dillenius pl. 66 — (Pers.), and termed "chenopodium multifidum" by Linnæus: recently, observed in Greece (Gittard, and Chaubard), Sicily, Spain, Portugal and Southern France (Gussone, Moq., and A. Dec.): and in 1850, by J. Carey in the streets of the city of New York. In the Southern Hemisphere, known to grow along the Lower La Plata (Pers.); and according to A. Decandolle, occurs also in Brazil and Peru.

Alternanthera achyrantha of Brazil. A prostrate Amaranthaceous plant, transported to Europe, described by Dillenius i. pl. 8, — termed "illecebrum achyrantha" and "achyranthes repens" by Linnæus, and has become naturalized; occurring abundantly near Cadiz, and in streets of towns on the Canary Islands (Webb, and A. Dec.). Westward, is known to grow wild along the Atlantic shore of Tropical America, extending also a little farther South (Moq.): was observed by Walter in South Carolina; by Elliot, near Charleston, and in Georgia; by Chapman, "along roads and places much trodden, Florida to South Carolina."

† *Diapensia Lapponica* of the Arctic region. Observed by Linnæus on moss-covered stones throughout the mountains of Lapland. — Westward, by . . . . in Labrador (Collins); by Lapylaie, in Newfoundland; by Peck, Oakes and myself, scattered over the alpine region of the White mountains; is known to grow on the Adirondack mountains of Northern New York (A. Gray); was observed by Parry, rare in Arctic America; by Chamisso, on St. Lawrence Island in the North Pacific.

Saxifraga cernua of the Arctic region and alpine summits farther South. Observed by Linnæus

S. phylicifolia 8. f. d, *S. tenuifolia* 8. f. e, *S. hastata* 8. f. g. m., *S. Lapponum* 8. f. t, *S. obtusifolia* 8. f. u, *Cetraria nivalis* 11. f. 1, *Parmelia centrifuga* 11. 2, *Peltidea crocea* 11. f. 3, *Baeomyces deformis* 11. f. 5, also *Aira Bottnica* n. 49.

Stellaria cerastoides of the Arctic region and mountains farther South. Observed by Linnæus in Lapland; — by Haller, and Decandolle on the Swiss Alps; by Sibthorp, on the Bithynian Olympus; by Pallas, in Verchoturia; and known to grow in Ireland and on the Pyrenees (fl. Dan. pl. 92, Villars iii. pl. 46, Hook., and Wats.). Westward, was observed by Sabine in Iceland and Greenland (Hook.).

"The same year" (Anders., and Holmes), a charter granted by George II. for the territory beyond the Savannah river, extending "westward in direct lines to the South Seas." In his honour, the new territory received the name of "Georgia."

Salem in Massachusetts containing "five hundred and twenty houses, five thousand inhabitants;" and the neighbouring town of Marblehead employing "in the codfishery about one hundred and twenty schooners of about fifty tons burden, and about a thousand seamen" (Brit. emp. ii. 35, and Holmes).

In this year (Spreng.), Houstoun continuing his figures and descriptions of plants observed on Cuba, Jamaica, and around Vera Cruz, *Dicliptera scorpioides* pl. 1, *Cordia gerascanthus* 6, *Richardia scabra* 9, *Petrea volubilis* 11, *Lippia Americana* 12, *Jatropha herbacea* 15, *Melochia depressa* ms., *Inula satureioides* 19, *Clomenoclema aurantia* 18, *Melampodium Americanum* 21, *Croton argenteum* 22, *Salix Houstoniana* at Vera Cruz, *Mitreola sessilifolia* ms. pl. (Linn. sp. pl.), *Schrankia aculeata* 25, *Desmanthus plenus* 23, and *Acacia filicina* 26. — He died in Mexico "in 1733," and his Reliq. was published "in 1781."

"In this year" (Spreng.), Gerber following the banks of the Don and Volga. — He died "in 1743."

"In this year" (Spreng.), Heinzelmann visiting the Ural, the country around Orenburg, and a portion of Tartary.

"1733, Feb. 1st" (univ. hist. xl. 440, and Holmes), founding by James Oglethorpe of the city of Savannah; near the aboriginal village of Yamacraw. "Before June 9th," a treaty of peace was concluded there with the powerful tribe of the Creeks.

"The same year" (coll. hist. iii. 273, and Holmes), the first lodge of Freemasons holden in Boston.

"The same year" (Raynal v. 486, and Holmes), the uninhabited island of Santa Cruz in the West Indies, purchased of France by Frederick V. of Denmark. A fortress soon afterwards built on the island by the Danes.

"In or about this year" (Kobell iv.), the peculiar metal *cobalt*, obtained by Brandt.

One hundred and eighty-first generation. May 1st, 1734, mostly beyond youth: the Greek writers, Vitzentzus Cornarus d. after 1737, Theophilus Corydaleus d. 1744: the Slavonic writers, Antiochus Kantemir, Michael Lomonosof, J. Raitch, and Dositheï Obradovitch: other writers, Jonathan Swift; Edmund Halley; Alexander Pope; Charles Rollin; abbé du Bos; Bernard de Fontenelle; Colin Maclaurin; James Thomson; Henry Fielding; Charles de Secondat; baron Montesquieu; G. Frederick Handell; James Bradley; Conyers Middleton; Jacques Cassini; Benjamin Robins; Bernard de Belidor; N. Louis de la Caille; Edward Young: the zoölogists J. A. Peyssonel, Joh. Steph. Guettard, Petrus Artedi d. 1735: the botanists, Io. Philippus Breynius d. 1764, Anton. Jussieu d. 1758, Claud. Ioseph Geoffroy d. 1752, Renat. Ant. Reaumur d. 1757, Iac. Logan, Io. Ern. Hebenstreit d. 1757, Io. Iac. Lerche d. 1780, Io. Blackstone d. 1753, Carol. Deering d. 1749, Ionas Ramus, Io. H. Heucherus d. 1747, A. Vater d. 1751, Laur. Heisterus d. 1758, Io. Gul. Weinmann, Io. H. Kniphof d. 1762, Isaac Rand, Stephen Hales d. 1761, Io. Wolfg. Wedel d. 1757, Ev. Iac. Wachendorf d. 1758,

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pl. 2. f. 4 in Lapland, — by Soujef at 67° on the Oby (Pall.), and known to grow as far as Daouria and Kamtchatka (Ledeb.); also on the Breadalbane mountains in Scotland (Bab., and Wats.), at some isolated points on the Swiss and Styrian Alps (Koch), and on mountain-summits in Transylvania (Baumg., and A. Dec.). Westward, was observed by Sabine in Greenland, and received by Hooker from Spitzbergen, Melville Island and the Arctic shore of North America, the Rocky mountains and Kotzebue Sound.

Juncus arcticus of Arctic Europe and Asia, and alpine summits farther South. Observed by Linnæus n. 116 in Lapland — (Spreng.); distinguished by Wildenow, and known to grow in Scandinavia (Fries), Northern Russia and Siberia to the vicinity of Lake Baikal (Ledeb.); also on the Pyrenees (Benth.), and Swiss Alps (Koch, and A. Dec.). Regarded by Ledebour as perhaps growing at Sitka, but not certainly found on Iceland.

Alsine biflora of Arctic Europe and Asia and alpine summits farther South. Observed by Linnæus 158 in Lapland — (Oeder fl. Dan. pl. 12, and Swartz); known to grow also on the mountains of Norway and Sweden (Fries), the Northern portion of the Ural mountains and of Siberia and on the Altaian mountains (Ledeb.). Farther South, has been found in a single district in Switzerland, near the perpetual snow at Bex and Fouly (Koch, and A. Dec.).

Io. Th. Gleditsh d. 1786, Jos. Ginnani d. 1753, Car. Alston d. 1760, J. B. R. P. Desportes d. 1748, C. F. Kuhn d. 1761, M. Fabregou, F. Valle, Io. Browal d. 1755; Joh. Mar. Schiera: the painter William Hogarth d. 1764.

"In this year" (Stirling, and W. W. Hunter), death of Muhammad Taki, deputy-governor of Orissa. He was succeeded by Murshid Kuli Khan, who induced the priests of Jagannath to return with the image, its absence seriously affecting the revenue.

The following plants observed by Messerschmid and Heinzelmann, *Veronica Siberica* pl. 4, *Patrinia Siberica* 3, *Hypecoum erectum* 9, *Rhamnus Davuricus* 33, *Gentiana aquatica* 1. f. 2, *Statice aurea* 18. f 2, *Sibbaldia erecta* 15, *Stellera chamaejasme* 2, *Sedum aizoon* 11, *Potentilla verticillaris* 16, *Ranunculus salsuginosus* 13. 2, *Isopyrum fumarioides* 12, *Cymbaria Davurica* 1, *Corydalis Siberica* 20, *Orobus lathyroides* 7. f. 2, *Oxytropis lanata* 19. f. 1, *O. myriophylla* 19. f. 2, *Cineraria Siberica* 24, *Artemisia annua* 23, *Cypripedium guttatum* 22, *C. macranthos* 21, *Urtica cannabina* 25, and *Ephedra monostachya* 26 — (or some perhaps by Gmelin), published by J. Amman stirp. rar. "in 1739."

Messerschmidia arguzia of the Uralian and Mongolian plains. Among the plants described by J. Amman p. 19 — (Spreng.): observed by Gmelin trav. ii pl. 27 in Daouria (Pers.); by Pallas trav. i. 576, as far West as the Yaik.

Leonurus Sibericus of the Uralian and Tartarian plains. Described by J. Amman pl. 8; — observed by Pallas trav. i. on the Lower Volga; and known to grow in Siberia and China. By European colonists, was carried to Brazil, "seeds accidentally brought from China" (Ildef. Gomez); and "thirty years" afterwards was found by Gardner naturalized throughout, as far as his journeys extended (Hook. journ. bot. i. 183).

Caragana frutescens of the Uralian plains. A yellow-flowered leguminous shrub or small tree, described by Amman ruthen. 283, — and Linnæus; observed by Pallas i. 154 at 55° on the Volga; known to grow also in Siberia and Tartary (Pers.).

"In this year" (Spreng.), Gmelin on his way to East Siberia, meeting with (or seen by his predecessors, Schober, Messerschmid, Gerber, Heinzelmann) *Polycnemum Sibericum* iii. pl. 23. f. 1, *Patrinia rupestris* iii. 24, *Iris humilis* i. 5. 1, *Stipa Siberica* i. 22, *Elymus Sibericus* i. 28, *Agropyrum imbricatum* i. 23, *Scabiosa Ucranica* ii. 87, *S. Isetensis* ii. 88, *Pulmonaria Siberica* iv. 39, *Androsace Gmelini* iv. 43. 1, *Phlox Siberica* iv. 46. 2, *Campanula grandiflora* iii. 28, *C. Siberica* iii. 29, *C. punctata* iii. 30, *C. Gmelini* iv. 33, *Viola uniflora* iv. 48. 5, *V. Gmeliniana* iv. 49. 2, *Chenopodium aristatum* iii. 15. 1, *Atriplex Tatarica* iii. 14. 1, *Salsola ericoides* iii. 21. 1. 19. 1, *S. verrucosa* iii. 21. 2, *Swertia dichotoma* iv. 53. 1, *Halenia corniculata* iv. 53. 3, *Gentiana dichotoma* iv. 51. b., *G. adscendens* iv. 51. f. a., *G. macrophylla* iv. 52, *Ligusticum Sibericum* i. 40. 2, *L. vaginatum* iv. 44, *Heracleum Sibericum* i. 50, *Anthriscus nemorosa* i. 49. a., *Peucedanum Isetense* i. 42, *P. album* i. 41, *Viburnum Davuricum* iii. 25, *Statice suffruticosa* ii. 88. 2. 3, *S. Gmelini* ii. 90, *S. speciosa* ii. 91. 1, *S. spicata* ii. 91. 2, *Allium ramosum* i. 11. 1, *A. lineare* i. 13. 14, *A. tenuissimum* i. 15. 3, *A. Stellerianum* i. 16. 1. 2, *A. Caucasicum* i. 10, *Smilacina trifolia* i. 6, *Juncus Bottnicus* i. 17. 2, *Melanthium Sibericum* i. 8, *Erica bryantha* iv. 57. 3, *E. Stelleriana* iv. 57. 2, *Polygonum ocreatum* iii. 8, *P. sericeum* iii. 9. 2, *Saxifraga bronchialis* iv. 65. 2, *Mitella nuda* iv. 68. 2, *Sedum hybridum* iv. 67. 1, *Cerastium maximum* iv. 62. 2, *Peganum Dauricum* iv. 68. 1, *Euphorbia procera* ii. 94, *Potentilla grandiflora* iii. 35. 1, *P. stipularis* iii. 37. 2, *P. agrimonoides* iii. 38, *Paeonia tenuifolia* iv. 73, *Delphinium grandiflorum* iv. 78, *D. exaltatum* iv. 79, *D. hybridum* iv. 76, *D. crassifolium* iv. 79, *D. urceolatum* iv. 80, *Cimicifuga foetida* iv. 70, *Ranunculus Hyperboreus* iv. 83, *Nepeta multifida* iii. 55, *Dracocephalum pinnatum* iii. 52, *D. nutans* iii. 49, *D. thymiflorum* iii. 50, *Scutellaria pallida* iii. 58, *Bartsia pallida* iii. 42, *Pedicularis euphrasioides* iii. 43, *P. resupinata* iii. 44, *P. uncinata* iii. 45, *P. elata* iii. p. 211, *Draba repens* iii. 56. 2, *Cardamine macrophylla* iii. 62, *Sisymbrium integrifolium* iii. 63, *Arabis pendula* iii. 60, *Geranium Sibericum* iii. 67, *Corydalis paeoniaefolia* iv. 34, *Polygala Siberica* iv. 32, *Orobus angustifolius* iv. 5, *Lathyrus pisiformis* iv. 1, *Vicia biennis* iv. 2, *Hedysarum alpinum* iv. 10, *H. argenteum* iv. 13, *H. sericeum* iv. 31, *Astragalus adsurgens* iv. 15, *A. uliginosus* iv. 17. 18, *A. Laxmanni* iv. 19, *A. pauciflorus* iv. 26. 1, *A. Baicalensis* iv. 26. 2, *A. longiflorus* iv. 27, *Oxytropis ambigua* iv. 30, *O. leptophylla* iv. 24. b., *Trigonella Ruthenica* iv. 8, *Scorzonera angustifolia* ii. 1, *Sonchus Sibericus* ii. 3, *Hieracium croceum* ii. 8. 1, *H. Gmelini* ii. 8. 2, *H. lyratum* ii. 9, *Saussurea salicifolia* ii. 27, *S. multiflora* ii. 28, *Serratula centauroides* ii. 17, *S. polyclonos* ii. 16, *Cirsium cernuum* ii. 19, *C. Gmelini* ii. 25, *Rhaponticum uniflorum* ii. 38, *Cacalia hastata* ii. 66, *Tanacetum Sibericum* ii. 65. 2, *Artemisia integrifolia* ii. 48. 1. 2, *A. nitrosa* ii. 50. 1, *A. Lercheana* ii. 2. 3, *A. anethifolia* ii. 54, *A. palustris* ii. 55, *A. laciniata* ii. 57, *A. inodora* ii. 63. 1, *Erigeron gramineum* ii. 76. 2, *Tussilago anandria* ii. 67. 1. 68. 1, *T. lyrata* ii. 67. 2, *T. laevigata* ii. 69, *Cineraria glauca* ii. 74, *Chrysanthemum bipinnatum* ii. 85. 1, *C. millefoliatum* ii. 86. 1, *C. achilleaefolium* ii. 86. 2, *C. Arcticum* ii. 84, *Achillea impatiens* ii. 83. 1, *A. Gerberi* ii. 83. 2, *A. filicifolia* ii. 19, *Centaurea radiata* ii. 47. 1, *C. Ruthenica* ii. 41, *C. ovina* ii. 43, *C. maculata* ii. 44. 1. 2, *C. trichocephala* ii. 45. 1. 2, *Orchis cucullata* i. 3. 2, *O. fuscescens* i. 4 2, *Limodorum epigonium* i. 2. 2, *Axyris amarantoides* iii. 2. 3, *A. hybrida* iii. 4. 1,

A. prostrata iii. 4. 2, *Salix rhamnifolia* i. 35. a, and *S. berberifolia* i. 35. 3, *Euphorbia pilosa* ii. 93. — He returned "in 1743," commenced his Flor. Sib. "in 1747," died "in 1755," and the publication was completed "in 1769."

Potentilla nivea of Arctic and Subarctic climates. Observed by Gmelin iii. pl. 36 throughout Siberia; — by Pallas, on the Yablonoi mountains; by Fries, in Lapland; by Gunner, in Norway; by Ledebour, on Caucasus; and is known to grow on the Alps from the Tyrol to Dauphiny (Koch, and A. Dec.). Westward, was observed by Sabine on Spitzbergen and in Greenland, and according to Hooker grows on Melville Island and in Labrador, and from Carlton House to the Rocky Mountains and Arctic Sea.

Potentilla strigosa of Northern Asia and America. Observed by Gmelin iii. pl. 34, — Pallas, in Siberia; growing throughout, according to Ledebour. Farther East, is known to grow from Kotzebue's Sound to the Rocky Mountains, and from Bear Lake to the Saskatchewan (Hook.) and Missouri (Pursh); was observed by Michaux in Eastern Canada; by C. J. Sprague at Cape Elizabeth, and by Robbins as far as 43° at the Isle of Shoals (A. Gray); is termed "p. Pennsylvanica" by Linnæus, but notwithstanding the name seems unknown within the limits of Pennsylvania. Transported to Europe, was already naturalized in "1812" in the environs of Paris, and has been found by Cosson on the summit of the Serra de Segura in Spain (A. Dec.).

Spiræa sorbifolia of East Siberia. An ornamental shrub observed by Gmelin on the Yenisei, Lena, and beyond Lake Baical; — by Pallas, in Daouria; and known to grow as far as Kamtchatka (Pers.). Received by Pursh from the Northwest coast of America, but has not certainly been found there. By European colonists was carried to Northeast America, where it continues frequent in gardens (A. Gray).

Betula fruticosa of East Siberia. A clustered arborescent shrub observed by Gmelin i. pl. 36. f. 2 in Siberia; — by Pallas iv. 720, abounding in cold subalpine situations in East Siberia, especially around Lake Baical. Westward, has been found in Germany (Schrank, and Pers.).

Artemisia sericea of Siberia. Observed there by Gmelin ii. pl. 64; — by Pallas trav. ii. 406, near Tcheliabinsk.

Aster bifidus of the Uralian plains. Observed by Gmelin trav. in Siberia — (Steud.); by Pallas i. 111, at 55° on the Volga.

Serratula cyanoides of the Uralian plains. Observed by Gmelin ii. pl. 15 in Siberia; — by Pallas trav. i. 60, along the Volga; and known to grow as far West as Germany (Pollich, Spreng. fl. pl. 11, and Pers.).

Centaurea Siberica of the Uralian plains. Observed by Gmelin ii. pl. 42 in Siberia; — by Pall. trav. i. 64, along the Volga.

Iris salsa of Siberia. Observed by Gmelin i. 31. n. 30 in Siberia; — by Pallas iii. 132 to 483, in low saline plains along the Irtich beyond Omsk.

"In this year" (Spreng.), Seba commencing the publication of his Thesaurus, enumerating *Blaeria glabella* i. pl. 20. f. 1; *Erica urceolaris, baccans, Sebana, capitata, nigrita, tenuifolia, calycina*, and *curviflora* i. 2. 1 to ii. 20. 1; *Gnidia pinifolia* ii. 32. 5, *Podalyria calyptrata* ii. 99. 3, *Oxalis grandiflora* i. 22. 10, *Mesembryanthemum pomeridianum* i. 19 5, *Pelargonium melananthum* i. 18. 4, *Rafnia amplexicaulis* i. 24. 5, *Liparia villosa* i. 24. 1. 2, *Syncarpha gnaphaloides* ii. 66, *Helichrysum speciosissimum* ii. 43. 6, *Matricaria Capensis* i. 16. 2, *Osmites asteriscoides* i. 16. 4, *O. camphorina* i. 90. 2, and *Adiantum lanceum* ii. 64. 7. 6. — He died "in 1736," and the fourth volume was published "in 1765."

"1735, May" (Belknap ii. 118, Webster pest. i. 234, and Holmes), an epidemic disease which obtained the name of throat distemper (*diphtheria*) making its first appearance at Kingston in New Hampshire; where of the first forty attacked, none recovered. In "August," it reached Exeter; and in "September," Boston; — and continued its ravages until the end of the next summer: "one hundred and fourteen" persons dying in Boston; and in New Hampshire, "not less than one thousand," of whom "nine hundred were under twenty years of age," for the disease "chiefly affected children." Westward, the disease was two years in reaching the Hudson; but kept on "with some interruptions, until it spread over all the colonies."

"In this year" (Winckl.), Linnæus publishing his Systema Naturæ, enumerating "gnaphalium foliis decurrentibus obtusis mucronatis" *Gnaphalium obtusifolium* ("G. decurrens" amer. auth.).

"In this year" (Spreng.), August Friedr. Walther publishing his Design. plant. hort., enumerating * *Silene gigantea* pl. 11, *Eriocephalus Africanus* 1, and *Bosea yermavora* 10: — he died "in 1746."

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* *Lysimachia ciliata* of Northeast America. Transported to Europe is described by Walther pl. 12 — (Ph.): has become naturalized near Limbourg, observed from 1811–22 (Lejolis rev. fl. Spa, 1824); and from 1843, naturalized in various parts of Britain. Westward, was observed by Drummond from

"1736 A. D. = 1st year of Kien-loung" or Khian-loung, "of the Tai-thsing" or Twenty-fourth dynasty (Chinese chron. table, and Pauth.).

"The same year" (Spreng.), visit of Maupertuis to the Arctic Circle. And of Bouguer and Condamine to the plateau of Quito, to measure a degree of Latitude under the Equator — (Humb. cosm. v.).

"In this year" (Spreng.), Joh. Georg Siegesbek publishing at Riga his Primit. flor. petropol.; — "in 1737," his Epicris. in Linnaei syst. plant.

Hypericum Aegyptiacum of the East Mediterranean countries. Discovered in this year by Granger in Syria or Cyprus — (Del.); subsequently observed by Guerin on maritime rocks of the Peloponnesus. From transported specimens described by Linnæus, but notwithstanding the name has not been observed in Egypt.

"1737 A. D." (Smith 427, and Holmes), *earthquake* in New Jersey. Severe enough to cause "bricks to fall from the chimnies," and excite "great consternation;" yet doing "little actual injury."

"In this year" (Pritzel), John Brickell publishing his Natural history of North Carolina.

"In this year" (J. E. Smith), Elizabeth Blackwell publishing her Herbal.

"In this year" (Spreng., and Winckl.), after his Fund. bot. "in 1736," Linnæus publishing his Crit. bot., in which an *improved nomenclature*, adding a generic to the specific name, is proposed: an arrangement in structural groups greatly facilitating inquiry into the Order of Nature.

"In this year" (Spreng., and Winckl.), Linnæus publishing his Hort. Cliffort., enumerating* *Bauhinia divaricata* 15, *Heliocarpus Americanus* 16, *Browallia elata* 17, *Gloxinia maculata* 18, *Amorpha fruticosa* 19, *Dalea Cliffortiana* 22, *Kiggelaria Africana* 29, and *Cliffortia ternata* 32 (Spreng.); *Monarda didyma* 495, *Diodia Virginica* 493, *Burmannia biflora* 128, *Wistaria frutescens* 361; *Arum (Peltandra) Virginicum* 434.

"1738 A. D." (Hewet ii. 67, and Holmes), among the Negroes in South Carolina, amounting to "forty thousand," an insurrection excited by Spaniards of St. Augustine; who promised an asylum from slavery in Florida. A party commenced marching Southwest, committing outrages on the way; but through want of military skill, were intercepted and defeated.

In Jamaica, escaped Negroes having intrenched themselves in the mountains, a treaty was made by governor Trelawney: Allowing them "fifteen hundred acres of land," with "liberty to hunt" near the settlements; on condition, that they should obey the governor's orders, assist in defending the island, and deliver up all fugitive Negroes.

"Nov. 7th" (Blair), signing of the treaty of Vienna: Ceding Lorraine to France, Tuscany to the Lorraine family, and confirming Naples to Don Carlos.

"In this year" (J. E. Smith, and Spreng.), publication of the plants collected by Thomas Shaw in Barbary and the Levant, including *Telephium oppositifolium* n. 572, *Sedum coeruleum* 550, *Fagonia Arabica* 229, *Ranunculus spicatus* 149, *Psychine stylosa* 91, *Biscutella montana* 583, *Turritis pubescens* 228, *Cleome Arabica* 557, *Erodium guttatum* 260, *Prenanthes sarmentosa* 146, and *Centaurea acaulis* 342.

"In this year" (Linn. sp. pl., and Winckl.), after his Thesaur. Ceilan. "in 1737" Ioan Burmann publishing the plants Hartog caused to be collected in Austral Africa, under the title of Rar. Afr., enumerating *Sebaea albens*, pl. 74. f. 4, *Exacum hyssopifolium* 74. 3, *Struthiola longiflora* 47. 1, *S. angustifolia* 47. 3, *Lobelia lutea* 39. 1, *L. hirsuta* 40. 2, *Cyphia bulbosa* 38. 1, *Rhamnus prinoides* 88; *Phylica stipularis*, *buxifolia*, and *capitata* 43. 2 to 44. 3; *Plectronia ventosa* 94; *Diosma uniflora*, and *pulchella* 46. 2–3; *Gomphocarpus arborescens* 13, *Stapelia mamillaris* 11, *Rhus rosmarinifolia*

54° near Fort Cumberland; by myself, from 45° to 40° along the Atlantic; by Michaux, in Connecticut and New York; by Schweinitz, at 36° in Upper Carolina; by Short, in Kentucky; by Beck, on the Mississippi near St. Louis; by Nuttall, on the Arkansas; by E. James, as far as its sources within the Rocky Mountains.

* *Lobelia inflata* of Northeast America. Annual with small blue flowers, and called *Indian tobacco*; transported to Europe, described by Linnæus hort. cliff. 500 — Westward, was observed in Virginia by Clayton (Gron. 134); in New England by Cutler, who first brought its medicinal properties into notice, and named it *emetic-weed* (acad. Amer. i., and Tuckerm. arch. Am. iv. 191); by Pursh, from Canada to Carolina; by myself, from 45° to 40° along the Atlantic, in sunny situations, and multiplying in clearings and fallow ground; by Schweinitz, at 36° in Upper Carolina; by Elliot, in the upper country of Carolina and Georgia; by Short, near Lexington in Kentucky. Is enumerated by Lindley as "an acrid narcotic, and most powerful emetic."

91. 1, *Arctopus echinatus* 1, *Drosera Capensis* 75. 1, *Crassula columnaris* ix. 2, *C. alternifolia* 24. 1, *Daphne squarrosa* 49 1, *Gnidia sericea* 49. 2; *Passerina capitata, ciliata*, and *uniflora* 47. 1. 2 to 48. 3; *Zygophyllum spinosum* 2. 2; *Cotyledon caryophyllacea, fasciculatis, mucronata, tuberculosa, papillaris*, and *ungulata* 17 to 22. 1; *Grielum tenuifolium* 53; *Oxalis polyphylla, flava, rubella, caprina, Burmanni*, and *pectinata* 27. 1 to 30. 1; *Knowltonia gracilis* 51, *K. hirsuta* 52, *Selago rapunculoides* 42. 1, *S. spuria* 42. 3, *Nemesia bicornis* 75. 3, *Hallera elliptica* 89. 1, *H. lucida* 89. 2, *Hebenstreitia ciliata* 41. 1, *Erinus fragrans* 49. 4, *E. Africanus* 50. 1, *Manulea villosa* 50. 2; *Pelargonium bifolium, longifolium, ferulaceum*, and *ramosissimum* 32. 2 to 36. 1; *Monsonia tenuifolia* 34. 1, *Ailonia Capensis* 21. 2, *Geranium spinosum* 31, *Polygala umbellata* 73. 5, *Pentzia flabelliformis* 68. 3; *Gnaphalium mucronatum, coronatum, grandiflorum, petiolatum, maritimum, auriculatum, discolor, stellatum, imbricatum*, and *notatum* 66. 3 to 80. 3; *Helichrysum paniculatum, spinosum*, and *canescens* 67. 1 to 68. 1; *Arnica Tabularis, gerbera*, and *pyrolaefolia* 55 to 56. 2; *Arctotis anthemoides, dentata*, and *paleacea* 63. 2 to 65. 1; *Osteospermum ciliatum, pisiferum*, and *ilicifolium* 61. 1 to 62; *Othonna denticulata* 59, *Stoebe gnaphalodes* 77. 1, *Euclea racemosa* 84. 2, and *Hermas depauperata* 71. 2. — He completed the work "in 1739;" and died "in 1780" (Spreng.).

"1739 A. D." (univ. hist. xl. 462, and Postlethwayt i. 360), treaty of commissioner Oglethorpe with the Chickasaws and Creeks: Declaring the right of these tribes to the territory as far South as the St. John's river and Apalache Bay, excluding Spanish settlers therefrom, and confirming the grant to the English of the land along the coast from the Savannah river to the St. John's.

"Oct. 23d" (Raynal v. 90, Hewet, and Holmes), difficulties having arisen in regard to the suppression of contraband trade, war declared by Britain against Spain.

"In this year" (Spreng.), after his Iter alpin. "in 1731," Method. "in 1736," Haller publishing his Iter Helvet., enumerating *Saxifraga muscoides* i. pl. 1.

"In this year" (Winckl.), Gronovius publishing his Flor. Virg., descriptions of plants observed by Clayton in Virginia, including "quercus rubra seu hispanica" (*Q. falcata*, Brendel in Amer. Nat. for 1870), *Cynthia dandelion* 114, *C. Virginica* 113, *Gratiola Virginica, Cynoglossum Virginicum* 19, *Asclepias rubra* 27, *Tofieldia pubens, Eriocaulon gnaphalodes, Panicum dichotomum, Hypericum prolificum*, — the work was completed "in 1743;" Gronovius issued a second edition "in 1762," and died in the same year. *Tipularia discolor, Asclepias phytolaccoides, Utricularia subulata, U. gibba, Schollera graminea, Fimbristylis cylindrica, Scirpus* (*Trichelostylis*) *autumnalis, Stipa avenacea* 138, *Erianthus saccharoides* 133, *Holcus? striatus, Osmunda interrupta, Plantago Caroliniana* 753, *Centaurella Virginica, Lycopsis Virginica* 140, *Sabbatia paniculata, Andromeda* (*Leucothoe*) *racemosa, Sedum ternatum, Ilysanthes gratioloides* 3, *Cardamine rhomboidea* 99, *Lobelia Claytoni* 135, *Phaseolus perennis* (Ph.), *Psoralea melilotoides* n. 103, *Arnica Claytoni* 37, *Erigeron vernum, Platanthera blephariglottis* n. 560, *P. bracteata* 136, *Goodyera? obsoleta* 137, *Ponthieva pubera* 137, *Liparis liliifolia* n. 138–40, *Thaspium trifoliatum* 43, *Viburnum acerifolium* 47, *Sedum pulchellum* 71, *Jeffersonia diphylla* 81, *Thalictrum dioicum* 85, "draba caule nudo foliis hispidis" *Draba Caroliniana* 98, *Sisymbrium canescens* p. 100, *Aeschynomene hispida* p. 109, *Arnica nudicaulis* p. 126, *Lippia lanceolata* 7, *Lycopus Virginicus* 8, *Rhynchospora glomerata* 131, *Eleocharis capitata* 12, *Panicum virgatum* 133, *Brizopyrum spicatum* Clayt. 507, *Spartina cynosuroides* 134, *Gymnostichum hystrix, Anychia Canadensis* 14, *Ammania ramosior* Clayt. 774, "saginæ affinis planta minima floribus albis" Clayt. mss. 649 *Centaurella Virginica* (verna Mx.), *Calystegia spithamæa* 141, *Polemonium reptans* 22, *Sabbatia chloroides* 27, *Itea Virginica* 143, *Galax aphylla* 25, *Zizia integerrima* 148, *Viburnum nudum* 33, *Rumex verticillatus* 39, *Sagittaria subulata* 153, *Dirca palustris* 155, *Hydrangea vulgaris* 50, *Saxifraga Virginica* 160, *Penthorum sedoides* 51, *Nesaea verticillata* 52, *Lythrum lineare* 162, *Euphorbia ipecacuanhæ* 58, "mespilus inermis foliis oblongis integris acuminatis serratis parvis utrinque viridibus" 163 *Crataegus viridis* ("C. arborescens" of Ell.?), "lythrum foliis petiolatis" 52 *Cuphea viscosissima, Linaria Canadensis* 67, *Buchnera Americana* 74, *Arabis lyrata* 99, *Galactia glabella* 82, *Desmodium nudiflorum* 107, *Lespedeza hirta* 108, *L. violacea*, 108, *Trifolium reflexum* ii. n. 110; "h. floribus digynis foliis ovatis sessilibus" 112 *Ascyrum mutilum* ("A. stans" of Mx.), "h. floribus digynis foliis linearibus" 88 *Ascyrum setosum* ("A. crux-Andreæ" of Am. auct.), *A. crux-Andreæ* 113 ("A. amplexicaule of Mx.); "sonchus pedunculis hispidis floribus racemosis foliis runcinatis" 115 *Mulgedium macrophyllum* ("Sonchus Canadensis" of Linn. and "m. acuminatum" of Dec.); *Hieracium Gronovii* 114; *Krigia Virginica* 60; "baccharis foliis lanceolatis serrato-dentatis corymbis foliosis" 121 *Pluchea Marylandica; Aster concolor* 123, *Verbesina Virginica* 128, *Erigeron vernum* 124, *Viola primulifolia* 135, *Orchis spectabilis* 136, *Urtica* (*Pilea*) *pumila* 114, "juglans alba fructu ovato compresso profunde insculpto durissimo cavitate intus minima" 190 *Carya sulcata, Populus heterophylla* 194, *Helonias* (*Chamælirium*) *luteum* 158, *Andropogan? nutans* 133, "aira calycibus trivalvibus trifloris" 136 *Uniola gracilis*, "aira panicula oblonga floribus muticis hermaphrodito masculoque calycibus diphyllis" 135 *Eatonia striata* ("aira obtusata" of Mx.).

Sporobolus Virginicus of the shores of Tropical and Subtropical America. A grass observed by Clayton 507 on the sandy seashore of Virginia; — and according to Chapman, growing in "saline marshes and banks along the coast, Florida to North Carolina:" known to grow also on the seashore of Brazil (Nees), Cumana, the West Indies, Mexico, Peru as far as Callao, and on the Hawaiian Islands (Kunth); observed by myself in a natural salt-marsh on Maui. Eastward from America, probably by ocean-currents carried to Equatorial Africa, observed from Cape Verd to Saint-Thomas (Benth. fl. Nigr.); to Austral Africa (Kunth, and Meyer); and even to Australia (R. Brown, Kunth, and A. Dec.).

"1740 A. D." (univ. hist. xli. 429, Thompson seas. sum. 1040, and Holmes), unsuccessful expedition under admiral Vernon against the Spanish settlement at Carthagena.

"The same year" (Hewet ii. 167, and Holmes), first visit of rev. George Whitefield to America. Where, near Savannah, he founded an orphan house.

"The same year" (Nicol.), Frederic William succeeded by Frederic II. the Great, as king of Prussia.

"The same year" (Kobell iv.), by Kaim, *manganese* shown to be a metal.

In this year (see Spreng.), after his Stirp. rar. Ruthen. "in 1739," Joh. Ammann continuing his descriptions of plants, including *Betula nana* (act. ix. pl. 14, Ph.). — He died "in 1741."

Rheum undulatum of the Altaian mountains. A kind of *rhubarb* received by Ammann from China, — produced also from seeds presented "about 1750" by a Tartarian merchant (Lindl.); but according to Pallas trav. iii. 225, an Altaian peak, in sight from Schlangenberg, is called "Révennovaia-Sopka" from R. undulatum growing on it abundantly: R. undulatum was also pointed out by a Cossack to Georgi as the true rhubarb, but its root has not been found by Guilbourt to possess the requisite qualities, and its cultivation in Russia and France is discontinued (Lindl.).

Xylosteum Tartaricum of the Uralian plains. An ornamental shrub described by Ammann ruth. 184 — (Linn. hort. ups.): observed by Pallas along the Volga nearly as far West as Moscow. By European colonists was carried to Northeast America, where it continues frequent in gardens (A. Gray).

"In the time of Teraraku (great grandfather of Pomare," the chief seen by us at the Bay of Islands, Hale ethnogr. Expl. Exp. 146, and Races of man iv. 4), the "kumara" (Batatas edulis) *sweet potato*, brought to New Zealand in a "canoe formed of separate pieces" by Pani and his sister Hinakakirirangi of Hawaiki (Savaii). The account is confirmed by the construction of the canoe, peculiar to the Samoan Islands; by the slender finger-rooted variety, seen by us only in the two localities, and which a separate tradition made "the only kind formerly known in New Zealand."

"1741 A. D." (encycl. method., and Holmes), in Paraguay, the colonies formed by the Jesuit missionaries now extending "about six hundred leagues," and containing "one hundred and twenty-one thousand one hundred and sixty-one" aboriginals.

"The same year" (Adams relig. 466, and Holmes), Bethlehem in Pennsylvania founded by Moravians or United Brethren; abandoning Savannah, on account of military service being required of them.

"In this year" (Linn. sp. pl.) N. American plants published in Act. Ups. p. 81, including *Proserpinaca palustris*.

"In this year" (Spreng.), Steller visiting Bering's Island, meeting with "two hundred and eleven" plants, including *Tiarella trifoliata*, *Dielytra cucullaria*, *Pteris pedata*, and *Lycopodium rupestris*. He also visited the neighbouring American coast and the Fox Islands, — and returning, died "in 1746."

"In this year" (Spreng.), Barrere publishing his Guayan. Plant.: — he died in "1755."

Sida linifolia of Western Equatorial Africa. Known to grow in dry sandy situations in Senegal (Perr. and Rich. fl. Seneg. 72, and A. Dec.), and in Guinea (fl. Nigr.). Probably by European colonists carried across the Atlantic; observed in Guayana by Barrere aeq. 72, — and Aublet (Pers.); known to occur also on Hayti and in Peru (Cav., and Dec. prodr.).

"In this year" (Pursh, and Spreng.), Dillenius publishing his Hist. musc., enumerating * *Selaginella apus* pl. 64. f. 3, *Lycopodium lucidulum* pl. 56. f. 2; — he died "in 1747."

"1742 A. D." (Adams lett. xvii, and Holmes), in Boston, Faneuil hall erected and presented to the town by Peter Faneuil. Who died just at the time of its completion.

"In this year" (J. E. Smith, Spreng., and Winckl.), Haller publishing his Enum. plant. Helv.

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* *Lycopodium Carolinianum* of Northeast America. From transported specimens described by Dillenius pl. 62. f. 5: — growing according to A. Gray in "wet pine barrens, New Jersey to Virginia, and southward:" observed by myself at 40° in peninsular New Jersey, and I think also at 42° 30′ in bogs near Salem; by Chapman, in "low pine barrens, Florida, and northward."

Orchis pallens of middle and Eastern Europe. Observed by Haller 1281 pl. 30 in Switzerland,— by Decandolle in France, by Jacquin pl. 45 in Austria, and by Chaubard in the Peloponnesus.

Spiranthes aestivalis of Europe? Observed by Haller in Switzerland,— and known to grow in wet meads throughout middle Europe (Dec. fl. fr., and Pers.): observed by Chaubard in the Peloponnesus. Possibly by European colonists transported from one continent to the other, observed by Michaux in Northeast America, by Oakes in Western New England, by Torrey in Northern New York, and according to A. Gray is "not rare."

About this time (Spreng. and Winckl.), John Mitchell of Virginia describing new genera of plants in the Act. nat. cur. viii. app. 187, including "malachodendron" 16 *Stewartia pentagyna* (Willd.).

"1743 A. D." (encycl. method., and Holmes), discovery of the water-communication between the Upper Orinoco and the Amazon rivers.

"In this year" (Linn. sp. pl., and Winckl.), Colden in New York State, meeting with *Uvularia sessilifolia*, *Gentiana crinita* fl. noveb. n. 50 (Willd.). The plants sent to Linnæus were published in Act. Ups. from this year — to "1750," and the Flor. noveb. remains unpublished in the Banksian library.

"In this year" (J. E. Smith, and Spreng.), Pococke publishing an account of his travels in the East; — the second volume in "1745."

Colutea Pocockii of the East Mediterranean countries. A flowering shrub — described by Miller pl. 100, termed "c. haleppica" by Lamarck, and brought from the vicinity of Aleppo: observed by Decaisne on mount Sinai, and known to grow abundantly on the mountains of Abyssinia (A. Dec.).

"In this year" (Spreng., and Winckl.), Krascheninikow returning from Siberia with Gmelin, having met with *Lilium Kamtchaticum*, *Spiraea Kamtchatica*, *Rhododendron Kamtchaticum*, *Alyssum hyperboreum* (from Northwest America, Act. petrop. 1747, and Linn. sp. pl.). — He died "in 1754," his account of Kamtchatka and the Kurile Islands was published in Russian "in 1755," and an English translation "in 1764."

In this year (introd.), Loureiro, by his own account, arriving in Anam or Cochinchina, — where he remained "thirty-six" years, and in "1779" reached Canton in China. After "three years," he sailed for home, stopping on the way "three months" at Mozambique. His Flor. Coch. was completed in "1788" (ded.), and was published at Lisbon in "1790."

Calamus scipionum of Sumatra. Described by Loureiro, and furnishing the walking-sticks of great strength called *Malacca canes*: — these though exported from Malacca, are according to Griffith brought from Siak on the opposite Sumatran coast (Royle, and Drur.).

"1744 A. D. = 9th year of Kien-loung" (Chinese chron. table), beginning of the Seventy-fourth cycle.

"March 29th" (Hutch. ii. 4, and Holmes), war declared by Britain against France and Spain. Before the news reached Boston, Canso was captured by the French governor of Cape Breton, and Nova Scotia endangered.

"In this year" (Ph. 323), Linnæus publishing descriptions of plants in Act. upsal.

"The same year" (Spreng.), Charlevoix publishing his history of the French colonies in North America. — He died "in 1761."

"In this year" (Spreng., and Humb. cosm. v.), Condamine from Quito proceeding down the Amazon and reaching Cayenne. — He published an account of his travels "in 1745" (Winckl.).

Hevea Guianensis of Eastern Equatorial America. A forest tree, with milky sap condensing into *caoutchouc* or *india-rubber*; observed by Condamine on the Lower Amazon — (Winckler), and by Aublet ii. pl. 331 5 in Guayana: the product has become a well known article of commerce, exported in the form of bottles (Lindl.) and articles not solid. By European colonists, the tree was carried to the West Indies (Desc.); and from transported specimens is termed "poa seringa" in act. par. 1751 pl. 20, "jatropha elastica" by Linnæus the younger suppl. 422, "siphonia cahuchu" by Willdenow iv. 567, "s. elastica" by Persoon.

"In this year" (Winckl.), Bergen publishing his Hort. med. viadrin. — He died "in 1759."

Phaseolus lunatus of Hindustan. Termed "p. benghalensis scandens siliqua acinaciformi semine ovato compresso striato" by Bergen 99 — (Linn. sp. pl.); described also by Houttuyn viii. pl. 63. f. 1 (Pers.); observed by Wight 749 in peninsular Hindustan, by Lush at Dapooree near Bombay (Graham). Westward, is known to occur in Senegal and Guinea (R. Brown cong. p. 59, fl. Nigr., and A. Dec.). Farther West, in Guayana, the West Indies, and Mexico (Dec. prodr.); cultivated by the colonists of Northeast America under the name of *Lima bean*, but so far as Brackenridge and myself could ascertain, seems unknown in Peru; its pods according to Darlington are not eaten.

"In this year" (Linn. fl. suec.), J. Leche publishing his Floræ Scanicæ primitiæ.

"In this year" (Spreng.), John Wilson publishing his Synopsis of British plants.

"1745, June 16th" (univ. hist. xli. 33, and Holmes), capture of Louisbourg and the island of Cape Breton by an expedition chiefly fitted out by the colonists of New England.

"The same year" (Hewet ii. 138 and 191, Drayton 127, and Holmes), the cultivation of *indigo* introduced from the French West Indies into South Carolina. — Where, aided after three years by a bounty from the British government, the product increased to "two hundred and sixteen thousand nine hundred and twenty-four pounds" for 1754. At a later period the cultivation declined, and at length was abandoned; though (according to Chapman) both *I. tinctoria* and *I. anil* continue to grow as weeds in waste places.

Leucas Martinicensis of Tropical Asia and Africa. By European colonists, carried to the West Indies as early at least as this year: — observed there by Jacquin amer., and Swartz prodr. 88; and known to occur also in Brazil (Benth.). Eastward, is frequent and to all appearance indigenous in Equatorial Africa (A. Dec.); was received by Bentham from peninsular Hindustan; and is enumerated by Mason among the indigenous plants of Burmah.

"The same year" (Nicol.), Charles VII. succeeded by a daughter of Charles VI., Maria Teresa; becoming with Francis joint rulers over Germany and Italy.

"The same year" (Spreng.), arrival of Ternström at Pulo Condor: where he died before the end of the year.

"In this year" (Spreng.), publication of the Roman. agri of Sabbati.

"In this year" (append. Sibth., and Spreng.), Seguier publishing his Plant. Veron., — completed "in 1754."

"In this year" (Linn. sp. pl.), Le Monier publishing his Cat. plant. alvern. — He died "in 1799."

"In this year" (Spreng.), Linnæus publishing his Oelanska, and Flor. suec., enumerating * *Draba nemorosa, Artemisia rupestris, Lathyrus heterophyllus, Carex loliacea* ii. n. 840.

"1746, Oct. 28th" (univ. hist. xxxix. 178, encycl. method., biblioth. Amer. 129, and Holmes), the *great earthquake* desolating Lima. Its seaport Callao was overwhelmed by an ocean wave, and of "three thousand" inhabitants, only one person escaped. In all "twelve thousand" persons perished: and "the concussions continued, with short intervals, four months" — I found the two monuments in the form of a cross and without inscriptions: one, behind rebuilt Callao and half a mile inland, said to mark the spot to which a Spanish frigate was carried; and the other, half way to Lima, said to mark the limit of the inundation.

"1747 A. D." (Pauth. 452), five Spanish Dominican missionaries detected in the province of Foukian, condemned to be beheaded, and the sentence approved by the emperor Kien-loung.

"In this year" (J. E. Smith, and Spreng.), Linnæus publishing his Wastgotha res., and Flor. Zeylan.

"The same year" (Spreng.), Joseph Jussieu travelling on the Upper La Plata. — He reached Lima "in 1750."

"The same year" (Spreng.), the Swedish traveller Kalm arriving in the Delaware, meeting with here and on his journey to Canada *Vaccinium Canadense, Sabbatia gracilis, S. angularis, Viburnum lentago, Rubus hispidus, Digitaria filiformis, Panicum clandestinum, Bromus ciliatus, B. Kalmii, Phlox maculata* ii. 222, *Halenia deflexa, Gentiana quinqueflora, Trientalis Americana* i. 138, *Betula pumila* i. 138, *Cinna arundinacea, Prinos glaber, Vaccinium ligustrinum, Polygonella articulata, Dalibarda repens, Nuphar Kalmianum, Galium trifidum, Hypericum Kalmianum,† Hieracium paniculatum, Erigeron Philadelphicum, Senecio Canadensis, Aster laevis, Viola Canadensis, Carex squar-*

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* *Tillæa aquatica* of Northern Europe. A diminutive annual observed by Linnæus in Sweden, in depressed situations subject to inundation; — known to grow also in Norway, and as far as Germany (Pers., and Dec.); and Westward, observed by Hooker on Iceland.

† *Hypericum Canadense* of Northeast America. Observed by Kalm in Canada — (Linn. sp. pl.); by Michaux, from Hudson's Bay to Pennsylvania and on the Alleghanies of Carolina; by Oakes and myself, frequent around the base of the White mountains, stem slightly geniculate at base with narrow-elliptic leaves, growing on the upland, taller and more obtrusive than the usual form, and seems perennial?: received by Hooker from Newfoundland, Canada, and as far as Lake Winnipeg; observed by Pursh from Canada to Carolina; by Elliot in South Carolina; by Nuttall on the Arkansas; and according to Decandolle grows as far as Mexico. The smaller form observed by myself from 44° to 40° along the Atlantic.

Polygonum Pennsylvanicum of Northeast America. Observed by Kalm in Pennsylvania — (Linn. sp. pl.); by myself, from 43° along the Atlantic, larger and the flowers more showy than in P. persicaria, but occurring in the same situations and hardly having an indigenous aspect; by A. Gray, in "moist soil in open waste places, common;" by Muhlenberg, in Pennsylvania, and received from Illinois; by Beck, on the Mississippi at St. Louis; by Elliot, in South Carolina; by Chapman, in "wet places, Georgia."

rosa, Urtica capitata, Shepheraia Canadensis, Smilax rotundifolia, Acer striatum, Aspidium Novaboracense, A. marginale, Trisetum Pennsylvanicum ("T. palustre" of Tor. ?). — He returned at the end of two years, published an account of his travels "in 1753–61," and died "in 1779."

"1748, Oct. 7th" (Blair, and Holmes), at Aix la Chapelle, signing of a treaty of peace between France and Britain: by which, Cape Breton was restored to France.

The currencies in the American colonies now much depreciated; especially in New England, where the rate of Exchange was eleven for one (Minot i. 146, and Holmes). — Soon afterwards, an Act of parliament restraining *bills of credit* in the colonies, and prohibiting making these bills "a legal tender for the payment of debts."

"The same year" (Maunder), Al Mulck, "nizam" or ruler of the Deccan, succeeded by his son Nazir Jung. Whose elder brother being excluded, war ensued; in which the residents of the British and French East India Companies engaged, taking opposite sides; the British being led by a writer, Clive.

"In this year" (Winckler), G. Juan and Ant. Ulloa publishing their Viage to Chili, Peru, and Juan Fernandez.

"In this year" (Spreng.), Linnæus publishing his Hort. Upsal., enumerating *Crassula verticillaris, Cacalia suaveolens* 254.

"1749 A. D." (univ. hist. xl. 194, and Holmes), Acadié having been by the late treaty confirmed to Britain, its name now changed to "Nova Scotia," and the city of "Halifax" was founded.

"In this year" (Linn. fl. suec.), Eberh. Rosen publishing his Observ. Botanicæ.

"The same year" (Spreng.), arrival of Hasselquist in the East. — He died in "1752," and his Flor. Palest. was published by Linnæus in "1756."

"The same year" (Spreng.), arrival of Adanson in Senegal. — He returned "in 1753," and published his Seneg. "in 1757."

"In this year" (Linn. sp. pl., and Winckl.), Dalibard publishing his Flor. parisiense.

"In this year" (J. E. Smith ed. fl. lapp. 88), Larsius Montin visiting Lapland, meeting with *Juncus biglumis.*

"In this year" (title-pages), Linnæus publishing the First volume of the Amoen. acad., enumerating *Viola Canadensis* 159 (Willd.), — the Second "in 1762."

"In this year" (Linn. sp. pl.), Haller publishing his Hort. Goetting.

Reseda odorata of the North African Desert. Called in Britain *mignonette*, in France "reseda" (Prior), in Italy "amoretti d'Egitto" or "amorino d'Egitto" (Targ.); described by Haller hort. goett. 95, — Miller pl. 217 (Spreng.); termed "r. Ægyptiaca" in Flor. palæst. (Linn. amœn. acad. iv. 457); known to grow in Syria and Barbary, and observed by Delile in gardens at Alexandria. Transported to Europe (Curt. mag. pl. 29, and Pers.) and Northeast America, has become a favourite garden plant on account of the agreeable odour of its flowers.

"1750 A. D." (Minot i. 130, and Holmes), the policy of the British government now tending towards encouraging the production of raw materials in the colonies, and discouraging or even prohibiting manufactures.

"Feb. 28th" (Blair), the interest on the English funds reduced to three per cent.

"In this year" (Winckl.), after his Cat. hort. med. Viadrin. "in 1744," Pet. Imman. Hartmann publishing his Flora Francofurtana.

"In this year" (Winckl.), letter professedly from Emmanuel, a youth of fifteen years, to his father Albert v. Haller, containing objections to the new Classification proposed by Linnæus.

Crepis setosa of the mountains of Switzerland and the Tyrol. Observed by the younger Haller on mount St. Bernard and the Rhaetian Alps — (see Pers.); by Carl Chr. Gmelin in the environs of Baden; and known to occur in cultivated ground in Pannonia, Croatia, Slavonia, and Banatus (Waldst. and Kitaib. i. pl. 43, Pers., and Steud.). In Britain, introduced among imported seeds since 1843, has made its appearance in the Isle of Wight and in Scotland (Bab., Bromf., and A. Dec.).

"In this year" (Spreng.), Georg Rud. Böhmer publishing his Flor. lips. indig. — He died "in 1803."

"In this year" (J. E. Smith, and Spreng.), Trew publishing his Plant. Select. (the figures by Ehret), enumerating his Plant. Rar. "in 1763," died "in 1769," and the last three volumes of his Plant. Select. were published by Vogel "in 1773."

As early as this year (see Spreng., and Winckl.), John Bartram journeying from Philadelphia to Lake Ontario, meeting with here and on his visit to Florida * *Azalea arborescens* (Pursh), *Gymno-*

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* *Rosa laevigata* of China. Known to grow there (Nutt., Red., and A. Dec.). And said to have been introduced by John Bartram into Charleston — (Baldw. rel. 169); observed by Michaux in Georgia; — by Chapman, "common in cultivation;" and by myself near Charleston, climbing among planted trees from trunk to trunk. Eastward, is termed "r. sinica" in European gardens, "r. nivea" by Decandolle, "r. Macartnea" by Dumont de Courset ed. 1 (Steud.); and "R. Sinica, scandent with ternate leaves," was observed by Lush at Dapooree in Hindustan (Graham).

cladus Canadensis, Illicium Floridanum, Boltonia asteroides. — He published an account of the excursion "in 1751," and died "in 1777" (Holmes).

"The same year" (Spreng.), Toren arriving in Malabar. — Where he remained until "1753."

"The same year" (Spreng.), Griffith Hughes publishing his history of Barbadoes.

Perhaps "about ninety years ago" (see Hale ethnogr. Expl. Exp. p. 148), Chatham Island colonized by New Zealanders; in canoes driven out to sea from the East Cape of New Zealand. — Additional emigrants from New Zealand "have lately been carried thither by trading vessels."

"1751 A. D." (Crawfurd vii. 11), by the Spanish colonists at Manila, an expedition sent against Sulu: war declared, and a Second expedition disgracefully beaten.

"April 4th" (trav. p. 20, 33, to 375), Bossu by the way of Cape François arriving at the mouths of the Mississippi. Leaving New Orleans "Aug. 20th" he proceeded up the river to the Illinois, meeting with vines climbing high *Vitis riparia* 349, "jalap" 353 *Ipomœa Michauxii.* — After visiting New Orleans and France "in 1757," he returned to the Mississippi "Aug. 12th 1758," he ascended the Alabama as high as the junction of the Tombigbee, meeting with the "battledoe" common about Mobile 347 *Nyssa candicans*, and was in New Orleans "June 1st, 1762."

"July 12th" (trav. transl. by J. R. Forster), Osbeck arriving "in sight of the East part of Java." "Aug. 22d," he was "off Macao" in China. — He published his Trav. in "1765."

"In this year" (title-pages), Schmiedel publishing Gesner's botanical works. — The second volume "in 1771," and he died "in 1783."

"In this year" (Linn. sp. pl.), F. Sauvages publishing his Flor. monspel. — He died "in 1767."

"1752, Jan. 1st" (Blair, Holmes, and Nicol. 38), New year's day by act of parliament, instead of the ensuing "March 25th." New Style was at the same time adopted; by deducting from this year "eleven days," calling what would have been the "3d of September, the 14th."

"In this year" (Spreng., and Pritzel), after his first edition "in 1731," Second "in 1732," Third "in 1737," Fourth "in 1741," Fifth "in 1747," Philip Miller publishing the Sixth edition of his Gardeners' Dictionary, enumerating *Ixia grandiflora, bulbifera, flexuosa* pl. 156. f. 2 to 239. 2; *Gladiolus recurvus, strictus*, and *Milleri* 40 to 235. 2; *Antholyza cunonia* 113, *Moraea iridioides* 239. 1, *Iris ochroleuca* 154, *Verbascum Boerhaavii* 273, *Nicotiana pusilla* 185. 2, *Physalis arborescens* 206. 2, *Tetragonia decumbens* n. 3 and ic. 263. 1, *Phlomis Nissolii* 204, *Calendula fruticosa* 283, *Tilia pubescens* n. 4, *Solidago pilosa, S. elliptica, Populus angulata** n. 5.

"June 20th" (Hewet ii. 43, and Holmes), the charter of Georgia surrendered to the king: removing the prohibition of Negroes, and enabling settlers to acquire larger tracts of land.

"The same year" (coll. hist. iv. 216, and Holmes), the *small-pox* in Boston, where of "five thousand five hundred and forty-four" persons attacked, "five hundred and fourteen" died; while of "two thousand one hundred and nine" *inoculated*, only "thirty-one" died.

"The same year" (life of Frankl. 118, and Holmes), at Philadelphia, the identity of *electricity* with lightning demonstrated by Franklin; by constructing and experimenting with an electrical kite.

"In this year" (Spreng.), Pontoppidan publishing his Norw., including the plants collected by Lange. — He died in "1764."

"1753 A. D." (W. W. Hunter), Marhattas under a Muslim chief acquire possession of Orissa.

"In this year" (Marshall i. 375, univ. hist., and Holmes), the Ohio company surveying lands granted as part of Virginia as far as the Falls of the Ohio; the country on this river claimed by the French of Canada: who built a fort at Presqu'isle on Lake Erie; another, about "fifteen miles south" on a tributary of the Alleghany; a third, at the mouth of this tributary; and a fourth, at the mouth of the Wabache.

"In this year" (Smith ed. fl. lapp. 238), Solander visiting Lapland, meeting with *Apargia taraxaci.*

"In this year" (J. E. Smith, and Spreng.), Linnæus publishing his Sp. Plant., enumerating "seven thousand three hundred plants," including *Allium striatum* (Ph.), *Hydrastis Canadensis, Ricotia Aegyptiaca* i. p. 656.

"1754, April 17th" (Blair, Minot, and Holmes), war between France and England initiated by French Canadians capturing from the Ohio company an unfinished fort on the Monongahela. "June

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* *Populus tacamahaca* of Canada. A lofty tree called *tacamahac*, from transported specimens described by Miller — (Steud.). In its wild state, was observed by F. A. Michaux from 49° to 47°, and rare on Lake Champlain; by myself, from 47° to 43° along the Atlantic; by Longs' Expedition ii. 81, from Lake Superior to Pembina and Lake Winnipeg (Schw.); by Drummond, near the Rocky mountains; and according to A. Gray, grows from "N. New England to Wisconsin, and northward," its "large buds varnished with a fragrant resinous matter." Transported to Europe, is described by Miller, and Linnæus.

1st" (Blair), "Mr. Washington intercepts a small body of French." Continuing his advance toward the junction, where the French were building Fort Du Quesne (univ. hist. xl. 198, Marshall, and Holmes), Washington was met by a superior force, and on "July 4th," compelled to capitulate.

The British government having ordered the dislodging of the French from the Ohio, and recommended Union among the colonies for defence: a plan of Union drawn up by Franklin was on the same "July 4th" adopted in convention; the Connecticut delegates alone dissenting. The proposed plan was however rejected by the colonial Legislatures, as giving "too much power to the representative of the king;" and by the king's council, as giving "too much power to the representatives of the people" (Minot i. 9, and Holmes).

"The same year" (Inman), a trading-post established by the French on the Mississippi above the mouth of the Ohio, and called "St. Louis." The origin of the city of St. Louis.

"The same year" (Spreng.), Jacquin arriving in the West Indies;* — he returned "in 1759," published his Select "in 1763," and Obs. "in 1764–71."

Triumfetta rhomboidea of Western Equatorial Africa. Known to be frequent in Guinea and on the neighbouring island of Saint Thomas (fl. Nigr., and A. Dec.). By European colonists, carried to the West Indies, where it was observed by Jacquin amer. pl. 90, — and Swartz fl. ind. occ., in "pratis fruticulosis," and from its adhering fruit called "cousin" by the French.

"The same year" (art de verif.), Mahmood succeeded by Osman II. or Othman II., twenty-sixth Turkish sultan.

"In this year" (Linn. sp. pl.), Linnæus publishing his Genera plantarum.

"In or about this year" (Kobell iv.), the peculiar metal *nickel*, discovered by Cronstedt.

"1755, July 9th" (Blair, and Holmes), defeat on the Monongahela of the British and colonial forces under Braddock, by the French from Fort Du Quesne.

"Nov. 1st" (Blair), severe *earthquake*, destroying Lisbon, and felt over a great part of the surface of the Globe.

"Nov. 18th, a little after 4 o'clock, in a serene and pleasant night" (mem Amer. acad. i. 271, and Holmes), the severest *earthquake* experienced in New England. Continuing in Boston "nearly four and a half minutes;" during which time, "about one hundred chimneys were in a manner levelled with the roofs of the houses; and about fifteen hundred, shattered and thrown down in part;" the ends of about twelve or fifteen brick buildings were thrown down from the top to the eaves of the houses; and on new ground, some of the streets were almost covered with fallen bricks. The course was nearly from Northwest to Southeast, "at least one thousand miles, and perhaps many more," the width from Southwest to Northeast being from Chesapeake Bay to Halifax "about eight hundred miles." In the West Indies "about 2 p. m.," the "sea withdrew from the harbour of St. Martin, leaving" dry vessels that had been anchored in "three or four fathom," and after a long interval returned "six feet higher than usual;" but there was no earthquake shock.

"In this year" (Spreng.), Jenkinson publishing his British plants.

"In this year" (append. Sibth.), Duhamel publishing his Traité des Arbres, enumerating *Andromeda nitida*, *Gymnocladus Canadensis* i. 103, *Calycanthus laevigatus*; and in Sem. app. pl. 27. f. 2 *Rhodora Canadensis* (Linn. sp. pl.), — his Physiq. des Arbres "in 1758," and died "in 1782" (Spreng.).

At this time (J. E. Smith, and Spreng.), Loefling writing his Res. on Cumana, Guiana, and Spain; — he died "in 1756," his Res. were published "in 1758," and the flor. Hispan. by Linnæus.

"In this year" (J. E. Smith, and Spreng.), Allioni publishing his Rar. Pedem.

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* *Trichilia trifoliata* of the Northern extreme of South America. A bush or small tree, observed by Jacquin amer. pl. 123 in dry grassy places in Curaçao, called by the Dutch colonists "kerseboom," by the Spanish "ceraso macho," a decoction of the roots used among the slaves to procure abortion, — observed also in the West Indies by Loefling 188 (Linn. sp. pl., Vahl symb. i. p. 31, and Lindl.).

Telanthera frutescens of the shores of Tropical America. An Amaranthaceous plant observed by Jacquin in the West Indies — (Steud.), received by L'Heritier pl. 37 from Lima (Pers.), known to grow also at Guyaquil, and frequent in America (Moq.). By European colonists, was carried across the Pacific to Manila (Moq.); and to the Mauritius Islands, observed by Commerson (A. Dec.).

Cyperus vegetus of the West Indies and neighbouring portion of North America. Observed by Jacquin in the West Indies — (Steud.); by Baldwin, in East Florida; by Walter, on the Santee; by Elliot, from Savannah to Charleston; and known to grow in "low pine barrens" as far as North Carolina (Chapm.). Transported to Europe, is described by Roth, Willdenow, Lamarck, and Moench; and has become naturalized around Bayonne and Bordeaux (Godron, and A. Dec.).

At this time (Spreng.), Patrick Browne writing his Civil and natural history of Jamaica,* enumerating *Rubia Brownei*, *Hypoxis decumbens* 195. — The work was published "in 1756."

"1756, June 15th" (Maunder), capture of Calcutta and the English factory there by Surajah Dowla, nabob of Bengal, Bahar, and Orissa. Of the captured English, "one hundred and forty-six were confined for the night" in the Blackhole; a room "twenty feet square," constructed under their own supervision "for a place of confinement;" in the morning, "only twenty-three were taken out alive."

"Aug 13th and 14th" (Holmes), capture of the forts at Oswego, on the Southern shore of Lake Ontario, by Canadian French under Montcalm. The forts, which had excited the jealousy of the confederate tribes called the "Six nations," were at once demolished. In the Southern provinces (Hewet ii. 205, and Holmes), a fort built in this year on Tennessee river "above five hundred miles" from Charleston, and called "Fort Loudon."

"In this year" (Linn. sp. pl.), Linnæus publishing the Third volume of Amoen. acad., enumerating *Agave Virginica* p. 22.

"In this year" (Spreng.), Russel publishing his Nat. Hist. of Aleppo. — He died in "1768," and a Second edition was published by Solander "in 1794" (append. Sibth.).

"1757 A. D." (art de verif.), Osman II. succeeded by Mustafa III., twenty-seventh Turkish sultan. Coins issued at Cairo by Mustafa III., are figured in Marcel p. 239.

"In this year" (Spreng.), Joh. Gottfr. Zinn publishing his Cat. hort. et agri gottingens.

"At this time" (Europ. settlements ii. 29 to 38, and Holmes), the whole colony of Louisiana containing "not more than ten thousand" Whites and Negroes; the inhabitants of Montreal "about five thousand."

"1758, July 26th" (Blair, and Holmes), Louisbourg and the island of Cape Breton again captured by British and colonial forces. "Aug. 27th" (. . . . univ. hist., and Holmes), Fort Frontenac on Lake Ontario captured from the French; and "Nov. 25th," Fort Du Quesne captured, and the name changed in honour of the English minister to "Pittsburg."

"1759, Sept. 13th" (Blair, and Holmes), capture of Quebec by the British and colonial forces under Wolfe; bringing French power in Canada to a close. — The final surrender of Canada took place on "Sept. 8th, 1760" (univ. hist., and Holmes).

"Sept. 29th" (Kobell ii.), at Jorullo in Interior Mexico, a new mountain, "fifteen hundred and eighty feet above the plain," rising out of a fissure.

"In this year" (Winckl.), Venegas publishing his Nat. and civil hist. Californ.

"In this year" (Winckl.), Arduino publishing his Animadvers. bot., enumerating "vena di Tartaria" *Avena Orientalis*. — He published a second volume "in 1764."

"In this year" (Spreng., and Winckl.), after his Prim. flor. butisbac. "in 1743," Phil. Conr. Fabricius publishing his Hort. med. helmstadt, enumerating *Decumaria barbara* (Linn. sp. 1663): — he died "in 1774."

"1760, Oct. 25th" (Nicol.), George II. succeeded by George III., now British king.

"In this year" (Spreng.), John Hill publishing his Flora britann.

"At this time" (Holmes), New England estimated by Stiles 142, to contain very nearly "five hundred and one thousand nine hundred and nine" inhabitants.

"In this year" (Winckl.), Mariti visiting Cyprus, and Palestine, meeting with "galetti" *Lathyrus articulatus*. — He returned "in 1768."

"In this year" (Winckl., and Spreng.), after his Meth. "in 1754," Scopoli publishing his Flor. Carniol., enumerating *Carex capillaris;* a second edition "in 1772;" his Fund. "in 1783."

Ophrys andragnitis of the East Mediterranean countries. Observed by Scopoli in Carniolia; — by Chaubard, in the Peloponnesus.

Carex agastachys of Europe and the adjoining portion of Asia. Termed "c. maxima" by Scopoli, as observed in Carniolia, — "c. agastachys" by the younger Linnæus suppl. 414, described also by Goodenough, and known to grow throughout middle Europe (Curt. lond. iii. pl. 63, and Pers.); was observed by Sibthorp, on mount Athos, by Chaubard in the subalpine region of the Peloponnesus.

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* *Crotalaria Brownei* of Jamaica. Known to grow wild there — (Gardn.), and described by Bertero (A. Dec.). By European colonists, was carried about 1822 to Ceylon, where it was found by Gardner (bot. mag. for 1848) a frequent weed, spreading in every direction.

Hyptis pectinata of Tropical America. Observed by Browne 259 on Jamaica — (Linn. sp. 799). Transported to Europe, is described by L'Heritier (Pers.): by European colonists also, was carried across the Pacific to the Marian Islands and Madras, and by way of the Atlantic to Guinea, Port Natal, Madagascar, Abyssinia, and Fazokel (Benth., and A. Dec.).

"In this year" (Linn. sp. pl.), Linnæus publishing the Fifth volume of his Amoen. acad., enumerating *Paspalum distichum*.

"In this year" (Spreng., and Pritzel), after his Seventh edition "in 1759," Miller publishing figures of plants adapted to his Gardener's dictionary, including *Pinus inops*, *P. variabilis*, *Xanthoxylum fraxineum*, *Phlox divaricata* 203. f. 1, *Physalis lanceolata*, *Crataegus cordata* 179, *Coreopsis aurea* (Ph.), *Martynia proboscidea* 286, *Hypericum monogynum* 151. f. 2, *Vitex incisa* 275. f. 1. 2, *Bauhinia aurita* 41. t. 61, *Ornithogalum thyrsoides* 128. t. 192, *Anthericum elatum* 38. t. 56, *Rheum compactum* pl. 218, *Phytolacca icosandra* 138. t. 207, *Triumfetta annua* 199. t. 29, *Pyrus prunifolia* 180. t. 269.

Heliotropium Peruvianum of Western Peru. The *heliotrope* of the gardens, a low shrub, is described by Miller pl. 143 — (Linn. sp. pl.), and is known to grow wild in Peru (Pers.). Transported to Europe and to Northeast America, has become a favourite in gardens on account of its fragrance.

"1761, March 12th, between two and three in the morning" (mem. Amer. acad. i. 278, and Holmes), two shocks of an *earthquake* felt throughout New England. "Nov. 1st," another earthquake felt in Boston and the neighbouring towns.

"The same year" (Holmes note to 1732), the *transit of Venus* observed at the Cape of Good Hope.

"In this year" (præf. 9, and flor. lii to 2), Forskal at Marseilles, on his way to Malta and Constantinople, where he arrived in August. He reached Alexandria in the beginning of October, and proceeding to Rosetta and up the Nile to Cairo remained in Egypt — "nearly a year."

"The same year (= A. H. 1139," W. G. Browne in Walp. trav.), the art of printing introduced into Turkey. — After two years, an Arabo-Turkish lexicon, and a History of the Turkish maritime wars, were issued from the press; and during successive years until "1777 (= A. H. 1155"), fourteen additional works.

"In this year" (Spreng.), Fr. Wilh. von Leysser publishing his Flor. halens., enumerating *Nasturtium palustre* (Steud.); — "in 1783" a second edition; "in 1806" tentam. nov.; "in 1807" his Mantissa; "in 1811" a second Mantissa, and died "in 1815."

"In this year" (J. E. Smith, and Spreng.), Louis Gerard publishing his Flor. Galloprov.*

As early as this year (Act. angl. li, and Linn. sp. pl), Garden in Carolina sending plants to Linnæus, including *Bumelia tenax*, *Cyrilla racemiflora* (mant. 50), *Halesia diptera*.

"In this year" (Linn. sp. pl.), after his Flor. geldrica "in 1757," Gorter publishing his Flor. ingrica: — his Flor. belgica "in 1767" (Winckl.); and died "in 1783."

In this year (J. E. Smith, and Spreng.), Oeder editing the first volume of the Flor. Dan.†

"1762 A. D." (Proud, and Holmes note to 1732), two ingenious mathematicians returning from observing the transit of Venus, employed by the inhabitants of Southern Pennsylvania to mark out the boundary separating Maryland.

"The same year" (Nicol.), accession of Peter III. as emperor of Russia. Before the close of the year, he was succeeded by Catharine II.

"May 23d" (Blair), war declared by Portugal against Spain.

"In this year" (Linn. sp. pl., and Winckl.), Gouan publishing his Hort. monspeliens, enumerating *Silphium perfoliatum* 462.

"June 27th" (Blair), St. John's in Newfoundland captured by the French; and "Sept. 18th," recaptured by the English.

In the West Indies, Martinico, Granada, St. Lucia, St. Vincent, and the other French possessions in the Caribbee chain of islands, all captured by the combined British and colonial forces (univ. hist., and Holmes). "Aug. 12th," Havana was captured. but on "Nov. 3d," preliminary articles of peace were signed at Paris. — By a treaty signed on the following "Feb. 10th," the French pos-

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* *Juncus Gerardi* of the seashore of Northeast America. A rush described by Gerard — (Loisel.), and termed "j. Bothnicus" by Wahlenberg. Westward, along our Atlantic coast is called *black grass*, and has been observed by myself forming beds or patches in salt marshes from Lat. 43°; by Torrey, as far as 41°; by A. Gray, in "salt marshes, common along the coast from New Jersey northward;" by Baldwin at 31° in Florida, and was received by Muhlenberg from Georgia and New Jersey, but I was assured by Dr. Emerson that seed imported from the Northward is sown in the salt marshes along Delaware Bay. Allied to J. bulbosus, but may prove distinct.

† *Carex Oederi* of Northern and middle Europe. A low sedge — described by Ehrhart, Schkuhr 67. t. F. f. 26, and Host i. pl. 65: known to grow in moist ground in Northern and middle Europe (Pers.). By European colonists, was carried to Northeast America, observed by myself only in grass-grown clearings in the environs of Salem, Mass.

sessions East of the Mississippi were ceded to Britain, except only the islets of St. Pierre and Miquelon, ceded to France as a fishing station; Guadaloupe, Marigalante, Desirade, and Martinico were restored to France; and Havana, to Spain.

"In this year" (Spreng.), Hudson publishing his Flora anglica, enumerating* *Arabis stricta*:—"in 1778," a second edition; and died "in 1793."

"In this year" (Linn. sp. pl. i. 202, suppl. Sibth., and Winckl.), Linnæus the younger publishing his first decade of Plant. rar. hort. upsal.; — the second "in 1763."

Lithospermum dispermum of the Uralian plains. An annual described by Linnæus the younger dec. i. pl. 7, — cultivated also in the Oxford botanic garden (J. E. Smith). In its wild state, observed by Hawkins on mount Ossa in Thessaly (Sibth.); by Pallas v. 337 to 497, on the Lower Volga.

In the Introduction to the Second edition of his Species Plantarum Linnæus states that he had travelled over the mountains of Lapland, all Sweden, and a part of Norway, Denmark, Germany, Holland, England, and France: and that by his persuasion his pupils had visited and examined other countries, as Kalm, Canada; Hasselquist, Egypt; Osbeck, China; Toren, Surat; Solander, England; Alstrœmer, Southern Europe; Martin, Spitzbergen; Pontin, Malabar; Kæhler, Italy; Forskal, the East; Lœfling, Spain; and Montin, Lapland.

Among botanical friends who had sent from various countries seeds or dried plants, he enumerates B. Jussieu, Royen, J. Gesner, Wachendorf, Sibthorp, Monti, Gleditsch, Krascheninikoff, Minuart, Velez, Kleinhoff, Ortega, Ellis, Seguier, Allioni, Zinn, Gouan, Gerard, Munchhausen, Bielke, Rathgeb, Demidoff, Collinson, Braad, Clifford, Lagerström, Gronovius, Gmelin, Burmann, and Sauvages.

And of botanical writers who maintain or have in some instances adopted his system of arranging and describing, Gorter, Jacquin, Colden, Hill, Hudson, Dalibard, Kramer, Leyser, Meese, Le Monier, Guettard, Haller, and Scopoli.

"Sept. 1st" (introd.) Linnæus publishing a Second edition of his Sp. Plant., enumerating† "fifteen hundred" additional plants = 8800 species: including *Platanthera hyperborea*, *Danthonia spicata* 119, *Anemone Pennsylvanica*, *Aconitum uncinatum*, *Hydrophyllum Canadense* 208, *Chamaenerium latifolium*, *Baptisia coerulea*, *Arenaria* (*Moeringia*) *lateriflora*, *Pedicularis Canadensis*, *Elephantopus tomentosus*, *Croton glandulosum*, *Chrysosplenium Americanum*, "gentiana ciliata Canadæ montibus" *G. detonsa*, *Silphium laciniatum* (sent by Collinson), *Polymnia Canadensis* amoen. acad. iii. 1. f. 5, *Taxus Canadensis*, *Uniola latifolia* (Muhl. in reliq. Baldw. 96).

Silene Italica of the Mediterranean countries. Termed "cucubalus italicus" by Linnæus sp. plant. 593, — "viscago clavata" by Moench, and known to grow in Italy and Southern France (Jacq. obs. iv. pl. 79, Pers., and A. Dec.): observed by Grenier and Godron as far North as Lyons; by Villars, in Dauphiny; by Sibthorp, in the Peloponnesus. In Britain, has escaped from cultivation, and "from 1825" has continued on the sea-cliffs at Dover (Engl. bot. pl. 2748, and Bab.).

Phytolacca dioica of Tropical America? Transported to Europe, and brought by Alstrœmer from the Madrid garden to Linnæus sp. pl.; — cultivated in England by Miller "in 1768;" described also by L'Heritier stirp. i. pl. 70; and enumerated by Clot-Bey and Figari as recently introduced and becoming very large in Egypt.

"In this year" (append Sibth.), Henr. Joh. Nep. Crantz publishing his Stirp. austriac.; — the third fascic. and Umbellif. emend. "in 1767;" the sixth and Crucif. emend. "in 1769;" and died "in 1799" (Spreng.).

"In this year" (Spreng.), Aublet arriving in Guayana, meeting with *Nectris equatica*.

Coumarouma odorata of Eastern Equatorial America. The *tonka bean*, a Leguminous tree,

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* *Sagina subulata* of Subarctic climates. Termed "s. pergula laricina" by Hudson, — and in fl. Dan. (Swartz act. holm. 1789 pl. 1. f. 3, and Steud.); known to grow from Sweden to Switzerland (Wats.); was observed by Curtis near London, and by Brotero in Portugal (Steud.). Westward, was received by Hooker from 56° on the Rocky mountains

† *Amaranthus flavus* of Eastern Asia. Received by Linnæus sp. 1406 from "India" — (Willd. pl. 3. f. 6, and Pers.); by Moquin, from Nepal, apparently a garden specimen (A. Dec.). Probably by European colonists carried to Brazil (see Moq.).

Spiranthes cernua of North America. This spiral-flowering Orchid, described from transported specimens by Linnæus sp. 1340 — has reached without human intervention the Southern extreme of Ireland; found there in 1810, and again in 1843 (Bab., and Power). Westward, is known to grow from Newfoundland to the Pacific, at the mouth of the Columbia (A. Dec.); was observed by Michaux from Hudson Bay to Carolina; by myself, in bogs and marshes from 45° throughout New England; by Schweinitz, at 36° in Upper Carolina; by Elliot, in South Carolina; by Baldwin to 31°; by N. A. Ware, in Florida; by Chapman, "Florida to Mississippi;" by Short, in Kentucky.

observed by Aublet iii. pl. 296 in the Guayana forest, — its fragrant seeds well known in commerce (Pers.). By European colonists, was carried to the West Indies (Descourt.); and recently to Egypt, observed there in gardens by Clot-Bey.

"In this year" (Spreng.), Quer y Martinez publishing his Flor. Hispan. — He died "in 1764," and two volumes were published by Ortega "in 1778."

"At the close of December" (flor. p. lxxxvi), Forskal from Suez arriving at Lohaja in Yemen.— Journeying inland, he died at Taæs "in the beginning of June 1763."

Trianthema crystallina of the Arabian and Abyssinian Desert. The *ice-plant* observed by Forskal p. 69 at Dahi in the Arabian Desert and termed "papularia crystallina;" — by Speke, in the opposite Somali country, and by Grant as far as "18° 45′" on the Nile, sheep said to fatten on it. Transported to Europe, is described by Vahl; and from Europe was carried to Northeast America, where it continues under cultivation in vases.

Malva montana of the mountains of Yemen. Called there "hōrod," and observed by Forskal p. 124 in the middle mountain-region near Hadie. — Transported to Europe, was termed "m. nicaeensis" by Allioni as observed in Piedmont, "m. setosa" by Moench (Cav. ii. pl. 25, Pers., and Steud.): in Britain, has recently been observed in a single locality, near the Botanic garden at Chelsea (Wats. cyb. iii. 329, and A. Dec.).

"1763 A. D." (Blair), the expulsion of the Jesuits from France completed.

"The same year" (Spreng.), Bougainville sailing for Brazil and the Falkland Islands, accompanied by Pernetty. — An account of the Voyage was published by Pernetty in "1770."

"In this year" (J. E. Smith, and Spreng.), Linnæus the younger publishing his second Decad., enumerating *Zinnia multiflora* pl. 12.

"In this year" (Spreng.), Vitalian Donati, after publishing his Hist. nat. adriat "in 1750" and making important collections in Syria and Egypt, shipwrecked on his return and assassinated.

"In this year" (Spreng.), Adanson publishing his Fam. plant., enumerating *Brunnichia cirrhosa*. — He died "in 1806."

"1764 A. D." (Spreng.), Konig arriving in Iceland.

"The same year" (coll. hist., and Holmes), disappearance of the *blue fish*, Temnodon from the waters around Nantucket, after abounding there from the first settlement by the English.*

"In this year" (title-page), Linnæus publishing the Third volume of the Amoen. acad., enumerating *Lechea major* p. 11. f. 4.

"1765, Jan. 10th" (Holmes), by the British parliament, an act requiring stamps on all papers legal and mercantile throughout the American colonies. The act, except in Canada, Nova Scotia, and some of the West India islands, was everywhere resisted; and a congress meeting at New York "on the first Tuesday in October," consisting of delegates from Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, and South Carolina, declared: The colonists entitled to all the rights and liberties of British subjects, among which was the exclusive power to tax themselves. — The view of the colonists was supported in Parliament by Pitt, admitting that "taxation and representation are inseparable;" and on the following "March 18th," the act was repealed.

"In this year" (. . . . Spreng.), Wulff publishing his Flor. Boruss.

"The same year" (J. W. Rosse), "the sovereign rights of the duke of Athol in the Isle of Man," purchased by the British parliament.

"The same year" (Blair, and Maunder), Bengal finally acquired by the British East India Company: and "May 3d," landing of Clive, appointed "commander-in-chief, president, and governor."

Cocculus palmatus of Mozambique. A vine called there "kalumb," growing in the forest: the root imported into Malabar and Ceylon as early as this year, and called in Tamul "columboo vayr," in Cingalese "kalamboo khoo" — (Thunb. trav. iv. p. 185, Fortin, and Ainsl. mat. ind.). The living plant carried by Capt. W. F. W. Owen to the Mauritius Islands, and observed there under cultivation by Bojer. From transported specimens, described by Lamarck enc. iv. p. 99, and Hooker bot. mag.

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* *Eriocaulon septangulare* of Northeast America. Having without human intervention reached the European coast, discovered in this year on Skye, West of Scotland, — afterwards in abundance in Western Ireland (Hook., and A. Dec), and termed "nasmythia articulata" by Hudson: was ascertained by Lightfoot to be an Eriocaulon, by Withering to be an undescribed species (Steud.); and has received the English name of *pipewort* (Prior). Westward, was observed by Lapylaie in Newfoundland; by myself, in shallow water and on exposed mud from 48° on the Saguenay throughout New England; by Torrey, to 41° on the Hudson; by Pursh, from Canada to New Jersey; and according to A. Gray, grows from "Pennsylvania to Michigan;" according to Hooker, as far as the Saskatchewan.

pl. 2970. According to Pereira, and Lindley, *calumba* root "is a valuable and excellent tonic, having aromatic qualities, but mucilaginous and not acting as a stimulant."

"The same year" (Spreng.), Byron among the "Friendly" Islands (consisting of the Tongan and neighbouring groups).

"1765 to 1766 A. D." (Spreng.), Ekeberg visiting China. — He made a Second visit "in 1770," and published his Itin. in "1773."

"1766 A. D." (append. Sibth.), Linnæus publishing the Twelfth edition of his Systema Naturæ.

In or about this year (Pall. trav. i. 705 to 752 and ii. 547), A. Rinder residing as a physician at Orenbourg.

Cynoglossum Rinderi of the Uralian plains. A vernal and remarkable species observed by Rinder in two localities in the environs of Orenbourg; — by Pallas i. 310, as far West as the Kinel affluent of the Volga.

Ornithogalum bulbiferum of the Uralian plains. Observed by Rinder in the environs of Orenbourg; — by Sokolof, on the Lower Yaik and along the Caspian (Pall. ii. 547).

"In this year" (Willd.), Schwenk publishing his Hort. med. hag.

Schwenkia Americana of Tropical America. Known only in cultivated ground and waste places in Northeast Brazil (A. Dec.) and other parts of Tropical America (H. and B., and Steud.). Received from America by Schwenk 328. pl. 1. — Probably by European colonists, carried to Equatorial Africa, known to occur in Senegambia and Guinea (R. Brown cong., and Benth. fl. Nigr.).

"In this year" (Spreng.), Peter Jonas Bergius publishing his Proteac. (stockh. acad. 316).

"In this year" (Spreng.), Carteret sailing among the "Friendly" Islands.

"The same year" (coll. hist. vi. 239, and Holmes), a Marine society formed in Salem, New England: — Incorporated "in 1771." And "in 1799," the East India Marine society of Salem formed.

"In this year" (Humb. cosm. ii.), different kinds of gas or unmixed air recognized by Black and Cavendish; and "fixed air" (carbonic acid) and "combustible air" (hydrogen) shown to be distinct aeriform substances.

"1767, March 31st" (Blair), expulsion of the Jesuits from Spain; and "Nov. 21st," from Naples.

"July" (Gordon, and Holmes), Parliament persisting in taxing the colonies, and receiving news, that New York had refused to provide for troops; an act passed, "restraining the assembly of New York," until compliance. The colonists now became alarmed, jealous of ulterior designs; and "Letters from a Farmer" made their appearance, demonstrating the danger of a small tax, as establishing a precedent.

One hundred and eighty-second generation. Sept. 1st, 1767, mostly beyond youth: the Greek writers Regas of Velestinus d. 1798, Nicephorus Theotokes d. 1800: other writers, Mendelssohn; Jao de Sousa; Von Wisin; Neledinsky-Meletzky: the zoölogists, H. B. Saussure d. 1799, Carolus Bonnet d. 1793, Bonavent. Corti, Turb. Needham d. 1781: the botanists, C. G. Ludwig d. 1773, Io. Gesner d. 1790, Io. Ern. Stieff, P. D. Giseke, Iac. Wernischek, N. Jos. Necker, F. van Berkhey, D. S. A. Buttner d. 1768, J. Ph Ruling, Ios. Theoph. Kölreuter d. 1799, William Watson, Phil. Fermin, C. G. Dalberg, F. X. Wulffen d. 1804, Iac. Christ. Schaffer d. 1790, Io. Iac. Ritter d. 1784, Theoph. Barckhausen, P. H. G. Mohring d. 1792, C. L. Willich, F. G. Weis, Io. F. C. Grimm, S. G. Wilcke, C. E. Weigel, A. B. Kolpin, H. G. comes Mattuscha d. 1779, G. G. Reyger d. 1788, W. Lachenal and Ach. Mieg, B. Dubourg, F. Descurain, A. L. Latourette, Ant. Battarra d. 1789, F. Bassi d. 1774, Geo. Tycho Holm., Io. Strom, Io. S. Leinker, C. L. Roloff, Mich. Matth. Ludolff, Io. Marsilius, A. J. G. C. Batsch d. 1802, James Bolton, Ioan. Hedwig d. 1799, Nicolaas Meerburgh, John Stackhouse, F. H. Wiggers, William Woodville: the painter Antonio Raphael Mengs d. 1779: the engraver Raphael Morghen b. 1755.

"In this year" (Spreng., and Winckl.), Petrus Poivre publishing his Voyage d'un philosophe. He established a botanic garden on the Mauritius Islands, — and continued prefect of those islands and the Seychelles "until 1775."

"In this year" (Spreng.), Mich. Grubb publishing his Descript. plant. e capite bonae spei.

"In this year" (. . . . Spreng.), Gunner publishing his Flor. Norv., enumerating *Ledum latifolium* n. 1067 (Willd.), — completed "in 1772;" he died "in 1773."

"In this year" (append. Sibth., and Spreng.), Linnæus publishing his Mantissa,* enumerating

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* *Sagina apetala* of Northern Europe. An annual described by Linnæus — (Steud.); known to grow in sandy soil in Britain (Curt. pl. 14), and France (Lam., and Pers.). By European colonists was carried to Northeast America, observed by A. Gray in "sandy fields, New York to Pennsylvania, rare" and "adventive" only.

Senebiera didyma of the Andes and vicinity throughout North and South America. A small prostrate Cruciferous annual, transported to Europe, described by Linnæus mant. 92; — termed

Verbena Aubletia 88, *Aster* (*Galatella*) *hyssopifolia* p. 114, *Muhlenbergia Mexicana* 31, *Koenigia Islandica* 35; *Bumelia decandra* 48 ("Sideroxylon" of Linn. and "B. oblongifolia" of Nutt.) received by Munchhausen from N. America.

"In this year" (Spreng.), Linnæus the younger publishing his Fascic. plant. rar., describing *Raphanus caudatus*, *Silphium terebinthaceum*.

"The same year" (Spreng.), Wallis among the "Friendly" Islands.

"The same year = 32d of Kien-loung" (Amyot, and Pauth. 269), under his direction, the Chinese chronological table compiled and published; together with the Li-tai-ki-sse, a collection of annals from the time of Yao. Kien-loung also caused to be published a Chinese and Mantchou dictionary, including words invented by himself for ideas wanting in Mantchou.

"1768, Feb. 11th" (Gordon, and Holmes), a circular letter addressed by the Legislature of Massachusetts to the other colonies. The British ministry taking umbrage, Lord Hillsborough wrote, requiring the rescinding of the resolution. The Assembly, declaring "the right of the subject, jointly or severally, to petition the king for the redress of grievances," voted not to rescind; and on the following day, "Aug. 4th," was dissolved by Governor Bernard. "Sept. 28th to Nov. 10th" (Adams lett. i, and Holmes), arrival in Boston of "four thousand" troops, to protect the revenue officers in collecting the new duties.

"The same year" (Marcel), war between Russia and Turkey declared, and Egypt called upon to furnish "twelve thousand men." An attempt by the sultan to get rid of Ali-Bey having failed, the Memluk chieftain now declared himself independent; — and held possession of Egypt about four years. Coins issued by Ali-Bey, are figured in Marcel p. 335.

"July 14th" (trav. i. 21), Pallas leaving Moscow. Journeying Eastward along the Volga, he reached Sinbirsk "Sept. 22d."

"In this year" (append. Sibth., Spreng., and Winckl.), Haller publishing his Hist. stirp. Helvet. indig., enumerating "twenty-four hundred and eighty-six" species, among them *Veronica fruticosa* pl. 16, *Aretia Helvetica* 11, *A. alpina* 11, *Arenaria multicaulis* 17, *Saxifraga mutata* 16, *Pedicularis recutita* 8. 2, *P. gyroflexa* 11, *Oxytropis campestris* 13, *O. Uralensis* 14, *Inula Vaillanti* 2, and *Cirsium spinosissimum*. — He published his Nomenclat. "in 1769," and died "in 1777."

"The same year" (Spreng.), S. T. Gmelin voyaging on the Caspian, from Astracan along the coast of Ghilan and Masanderan, provinces of Persia. — His Reise were published "1770–84."

"The same year" (Spreng.), Bougainville among the "Friendly" Islands: accompanied by Commerson — who died "in 1773."

"The same year" (second edit.), end of the chronicle of Blair.

"In this year" (Spreng., and Winckl.), Giov. Targioni-Tozzetti publishing his Relaz. viag. Tosc. — The work was completed "in 1779," and he died "in 1782."

"In this year" (. . . . Winckler), Labillardière visiting Syria, — where he remained "until 1787." His Icon. Plant. Syr. were published "in 1791–1812."

Periploca angustifolia of the Atlas mountains. Observed by Labillardière icon. ii. pl. 7 in Syria, — by Desfontaines i. 209 on mount Atlas (Pers.). According to Gussone has not crossed from Favignano to Maritimo, islands only two leagues apart (A. Dec.).

Helichrysum frigidum of mountain-summits in Syria and Corsica. Observed by Labillardière pl. 4 on Lebanon: — elsewhere known to grow only on Corsica (Pers., and A. Dec.).

"lepidium anglicum" by Hudson "in 1778," as found naturalized in Britain; occurring also in waste ground in Sweden (Fries), Italy (Scop., and Savi), Southwestern France (A. Dec.), Spain (Boiss.); and by European colonists carried to St. Helena (Wats.), and Port Jackson in Australia (R. Brown, and Nutt.). Westward, is known to grow in Brazil (A. Dec.), Buenos Ayres, and Chili (Hook.); by Humboldt and Bonpland, on the Equatorial Andes at the elevation of "1350 ?" (Kunth); by Nuttall, to all appearance indigenous along the Missouri and Mississippi: but has become a weed in our Atlantic States, from Virginia Southward (A. Gray); on the Santee before the days of Walter, and Michaux (Steud., and Ell.); was observed by Chapman, in "waste places, Florida to North Carolina;" by Drummond, around New Orleans.

Gentiana Pyrenaica of the Pyrenees, Carpathians, and Caucasus. Described by Linnæus mant. 55, — and Gouan illustr. vii. pl. 2: known to grow on the Pyrenees above "4800 feet," on mount Berzsowa in Hungary, and on Caucasus, but seems unknown in Switzerland (A. Dec.).

Terminalia angustifolia of the Malayan Archipelago. From transported specimens described by Linnæus mant. 297, — and Jacquin hort. iii. pl. 100, and Gærtner ii. pl. 127. Eastward, observed in the countries on the Indian Ocean by Commerson (Steud.); according to Royle, a milky juice flows from the stem and concretes into a fragrant substance resembling benzoin, and in the Mauritius used in churches as a kind of incense (Lindl.). The tree has recently been introduced by Nimmo into Hindustan (Graham. See Styrax benzoin).

"In this year" (append. Sibth., and Spreng.), Miller publishing the Eighth edition of his Gardener's dictionary, enumerating *Berberis Canadensis*. — He died "in 1771."

"In this year" (Spreng.), after his Geran. in "1759," N. L. Burmann publishing his Flor. Indica, enumerating plants collected by Outgaerden, Pryon, Lor. Garcin., and others, as *Cotula minima*, *Thuya cupressoides*. — He published also Prodr. flor. Capens.; and died in "1793."

"In this year" (Winckler), James Bruce visiting Abyssinia, — where he remained "until 1772."

"1769, Feb. 9th" (Gordon, and Holmes), in an address to the king by both houses of Parliament, a proposal to bring persons accused of treason into Britain for trial. Massachusetts having now no Assembly; resolves by the Virginia Legislature "May 16th," That "it is lawful to procure the concurrence" of other colonies in "praying the royal interposition in favour" of violated rights: and that all trials for crime committed in a colony, "ought to be in and before his majesty's courts within said colony." On the following day, the Virginia Assembly was dissolved by Governor Botetourt. "In October," the North Carolina Legislature adopting similar resolutions, was dissolved by Governor Tryon. A Non-importation agreement soon afterwards became general.

Previous perhaps to his voyage with Cook, Solander describing *Vaccinium vacillans*, *Andromeda speciosa*.

"The same year" (Spreng., and D'avezac in rec. voy. et mem. iv.), Cook on his First voyage in company with Banks and Solander, traversing the Pacific Ocean discovered Anaa or Chain coral-island, and farther West the two high islands of Tetouroa and Mauroua. — He reached New Zealand "in 1770," and after visiting Australia and New Guinea arrived home "in 1771."

"In this year" (Spreng., and Winckler), Erich Laxmann, residing at Kolywan, publishing his letter on Siberia. — He died "in 1796."

"April 15th" (trav. i. 224), Pallas at Samara on the Volga in 53°, the ice entirely gone, and the country covered with flowers, including *Ornithogalum minimum*, *Fritillaria Pyrenaica*, *Tulipa sylvestris*, *Iris pumila*, *Valeriana bulbosa*, *Pedicularis comosa*, *Astragalus Uralensis*, *A. tragacanthoides*, *Viola odorata*, and most abundant of all *Pulsatilla patens*: on the heights were growing *Clematis erecta*, *Salvia nemorosa*, *S. nutans*, *Phlomis herba-venti*, *Dracocephalum thymiflorum*, *D. Sibericum*, *Nepeta violacea*, *Hedysarum onobrychis*, *Astragalus pilosus*, *A. grandiflorus*, *Centaurea Ruthenica*, *Inula hirta*, and most abundant of all *Onosma echioides*. "May 2d," leaving Samara, Pallas continued along the Volga, meeting with *Agropyrum prostratum*, *Cheiranthus taraxacifolius*, and on "the 30th" returned to Samara. "June 16th," he proceeded Eastward up the Samara river, meeting with "planta salsa ambigui generis" (. . . .), *Erysimum cornutum*, and "July 1st" reached Orenbourg in "51° 46′" on the Yaik. "Aug. 22d," Pallas at Gourief on the Yaik near the Caspian, meeting with in the environs *Hesperis Tartarica*, *Polycnemum monandrum*, *P. oppositifolium*, *Salicornia strobilacea*, *Salsola arbuscula*, *Serratula Caspica*, *Lycoperdon herculeum* a foot high around the Inderskoi salt lake. Leaving Gourief "on the 31st," he reached Jaïtzkoï on the Yaik "Sept. 17th," Sakmarskoi on the Orenbourg route "on the 28th," and continued through the Baschkir country to Oufa "Oct. 2d."

"July 24th" (append. Pall. v. 484), Lepechin arriving at Zarizyn on the Lower Volga. — He published the first volume of his travels in Russia "in 1774," and the third "in 1783" (Spreng., and Winckl.).

"The same year" (Humb. iii. 8), colonization of North California by the Spanish; who established missions at Monterey and San Francisco.*

"In this year" (J. E. Smith, Spreng., and Winckl.), after his Icon. "in 1766," Schreber publishing the First volume of his Gram., — his Flor. Lips. "in 1771," Verticil. unilab. "in 1774."

Carex intermedia of Europe and the adjoining portion of Asia. Described by Schreber and termed "c. disticha" — (Pers.); known to grow in meads and marshes from Sweden and Russia to the Mediterranean (Engl. bot. pl. 2040, Thuill., Pers., and Wats.); observed by Decandolle in France; by Sibthorp, and Chaubard, frequent in the Peloponnesus.

Carex præcox of Europe and the adjoining portion of Asia. A low vernal sedge described by Schreber, — and known to grow in open woods from Sweden and Russia throughout middle Europe (Engl. bot. pl. 1099, Jacq. aust. pl. 446, Pers., and Wats.): observed by Sibthorp on the mountains around Athens. By European colonists, was carried to Northeast America, observed by myself naturalized on hills around Salem, Mass., and flowering before the development of leaves on the overhanging trees; by Schweinitz, near Bethlehem, Penns.

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* *Vitis Californica* of North California. A wild vine, yielding grapes "assez grandes, mais très aigres," was found by the first Spanish colonists — (Humb. iii. 8): doubtless the species observed by myself, festooning trees along the Sacramento, the fruit rather small, pleasant to the taste, but leaving behind an unusual sense of tartness.

"1769 to 1770 A. D." (Spreng.), arrival of Mariti in the East. — He remained there "eight" years.

"1770, March 5th" (Gordon, and Holmes), in Boston after an affray, the soldiers insulted, and one on receiving a blow fired at the aggressor; a single discharge from six others followed, and of the citizens three were killed and five dangerously wounded. "April 12th," the repeal of the new duties signed by the king: reserving that on tea, to keep up the claim of sovereignty; in effect, leaving the cause of contention between the two countries in full force. An act had been passed by Parliament, "For securing the dependence of America on Great Britain."

"May 16" (trav. ii. 19), leaving Oufa, Pallas proceeded among the Ural mountains and through the Baschkir country to Kaslinskoï, "June 17th:" he here took the main route, reached Ekaterinbourg "in 56° 40′" on the "23d," and "July 4th" the Toura tributary of the Obi in the Vogoul country. Pallas ii. 364 found the *Vogouls* small in stature and effeminate, having very little beard (*Mongolians*), and somewhat resembling the Calmuks but whiter; living in the forest, altogether by hunting and chiefly on the *elk*, having a very few *dogs*, and *cows* kept around their cabins, but no other domestic animals; each community having enclosures miles in diameter; those dwelling along rivers capturing fish and making canoes either of the trunk of a tree or of birch bark; they never eat salt, enjoy excellent health, and use no medicines; their language seems related to the Finnish; all profess themselves Christians, but they have secret rites, sacrifices to idols, invoke particular divinities, and have retained much of their ancient religious views. Returning as far as Tcheliabinsk "Aug. 4th," after various excursions he left "Dec. 16th," and on the "20th" reached Tobolsk on the Irtich "in 58° 12′."

Nicetas Sokolof, sent in the early spring to the Caspian, rejoined Pallas at Tcheliabinsk "in September," having met with *Onosma divaricata*, *Salsola laniflora*, *Amaryllis Caspica*, *Cheiranthus tomentosus*, *Astragalus caudatus*, and *Scorzonera pusilla*.

"The same year" (Pauth. 453), the Tourgaouts withdrawing from Russian rule on the Volga, after reaching the Ili, asked and obtained protection from the Chinese emperor Kien-loung.

"The same year" (Pauth. 32), eleven years after the death of P. Gaubil, his translation of the Chou-King published by De Guignes at Paris.

"In this year" (Pers.), Ellis describing plants in Act. angl. lx, including *Dionæa muscipula*. — He died "in 1776."

"In this year" (Spreng.), Desportes publishing his Maladies de St. Dom.

"In this year" (J. E. Smith ed. fl. lapp.), Chr. Friis Rottböll describing plants in Act. Hafn. x., among others *Stellaria humifusa* pl. 4.

"In this year" (J. E. Smith, and Spreng.), Jacquin publishing his Hort. Vindobon., — completed "in 1776," — enumerating *Geum album* ii. pl. 175.

Convolvulus farinosus of Madeira. Transported to Europe, described by Jacquin hort. vind. i. pl. 35, — and Linnæus mant. ii. 203: said by Sibthorp to occur along hedges and in cultivated ground in Mysia, Livadia, and the Peloponnesus, but there is no specimen in his herbarium (Lindl.).

"In this year" (Spreng.), Davides Cranz publishing his Hist. Groenl., enumerating "eighty-two" phanerog. plants.

"In this year" (Winckl.), after the Second volume, Oeder publishing the Third volume of the Flor. dan., enumerating * *Draba nivalis* pl. 142. — He now retired from the editorship, and died "in 1791."

"In this year" (Spreng.), Thunberg on his way to Austral Africa.†

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* *Utricularia intermedia* of Western Europe. Described by Oeder fl. Dan. pl. 128 — (Pers.); observed by Hayne pl. 5 in Germany; by Thuillier, near Paris; and known to grow also in Britain (A. Dec.).

† *Oxalis cernua* of Austral Africa. Observed there by Thunberg pl. 2 (Pers.). Transported to Europe, has become naturalized in Spain, Sardinia, Sicily, Malta, Algeria, and from "1826" at Gibraltar (A. Dec.).

Gnaphalium undulatum of Austral Africa. Observed there by Thunberg 151 (Pers.). Transported to Europe, is described by the younger Linnæus suppl. 363; and has been observed by Lejolis for several years naturalized in the environs of Cherbourg (A. Dec.).

Solanum Capense of Austral Africa. Observed there by Thunberg (Steud.), and from transported specimens described by the younger Linnæus suppl. 147. By J. Drummond in 1829 introduced into Southwest Australia, and observed by him "ten years" afterwards completely naturalized (Hook. journ. bot. for 1840, and A. Dec.).

Stenotaphrum dimidiatum of the Atlantic shore of Tropical and Subtropical Africa. A maritime grass observed in Austral Africa by Thunberg, and Drège (A. Dec.); and known to grow as far as Saint-Thomas and Guinea (Kunth, and Benth. fl. Nigr.). By ocean currents transported across the

Juncus pygmæus of Europe and the adjoining portion of Asia. A rush described by Thunberg (Steud.): observed by Thuillier in wet places in the environs of Paris (Pers.); by D'Urville in beds of torrents on the island of Milo (Chaub.)..

"In this year" (Spreng.), Peter Jos. Buc'hoz publishing his Traité hist. plant. Lorraine, also his Dict. plant. de la France.

"In this year" (Winckl.), Joh. Andr. Murray publishing his Prodrom. stirp. gottingens.; * and about this time (comm. goet. vii), describing *Euphorbia cyathophora* pl. 1.

"1771, March" (trav. iii. 6), Pallas, proposing to visit East Siberia, joined by Georgi and Falk at Tcheliabinsk. Leaving "April 16th," he proceeded Eastward, and "May 16th" reached Omsk on the Irtich. Leaving on the "22d," meeting with *Sisymbrium salsuginosum*, *Convolvulus spinosus*, *Astragalus ammodytes*, *Thlaspi ceratocarpum*, *Allium coeruleum*, and "June 27th" reached the Schoulba at the commencement of the Altaian mountains. Leaving the vicinity "July 17th," he soon reached a tributary of the Obi and continued Eastward, meeting with *Silene Altaica*, *Berberis Siberica*, *Cardamine nivalis* from the mountain-summits, reached Tomsk "Sept. 9th," and on the "30th" Iourbinskaia or Kemson on the Yenisei. Near Abakansk were *inscriptions*, older apparently than the Conquest of this portion of Siberia and mostly Mongol, two only being in the Tartar language. "Oct. 10th" he reached Krasnoïarsk on the Yenesei, where he passed the winter.

"March 8th" (Pall. trav. iv. 16), under instructions from Pallas, Soujef leaving Tobolsk on the frozen Irtich on his way to the Arctic Ocean. After "two hundred and sixty verstes" at Demianskoïam the Tartar villages ceased, and the Russian villages were soon intermingled with those of the Ostiaks, professed Christians as far as Berezof, "five degrees North of Tobolsk" and where *dog-sledges* were in use as well as *reindeer*. Leaving "June 11th" in a large canoe, on the "14th" he arrived at Obdorskoi, "in 67°" and the last place held by the Russians. Leaving by canoe "July 1st," he landed on the "3d" and proceeded North with reindeer, meeting with *Sedum quadrifidum*, *Acetosa acetosella*, *Andromeda (Cassiope) hypnoides*, *Chrysosplenium alternifolium*, *Sisymbrium sophia*, *Artemisia borealis*, and *Lycopodium complanatum*; on the "14th" he saw the Arctic Ocean, and journeying Westward, reached the Gulf on the "25th;" on the "28th," he commenced his return.

"In this year" (Spreng.), Vandelli residing at Rio Janeiro publishing a few Brazilian plants.

"In this year" (Spreng.), Duroi publishing his Harbk., enumerating of North American plants, *Quercus palustris* pin oak (Brendel in Am. Nat. for 1870), *Acer spicatum*.

"In this year" (title-page), Forster publishing his Catalogue of N. Amer. plants, enumerating *Elatine Americana*, *Parietaria debilis* (Chapm.).

"In this year" (append. Sibth., and Spreng.), Linnæus publishing his Second Mantissa, enumerating *Muhlenbergia Mexicana* 31, *Rhynchospora fusca* (Steud.), *Ipomoea dissecta* (Steud.), *Saxifraga Siberica* (Pers.): †—afterwards turned his attention to Surinam plants; and died "Jan. 10th, 1778."

"In this year" (biblioth. Amer. 165, and Holmes), publication of "Considerations on the expediency of admitting representatives from the American colonies into the British house of Commons."

Avena strigosa of the Tauro-Caspian countries. A grass in this year first observed in Germany (Schreb. fl. lips.),—"in 1779" by Retz in Sweden, and "in the same year" by Withering in Britain; has since become a weed in cultivated ground from Russia to Portugal (Brot., and A. Dec.): was observed by C. A. Meyer to all appearance wild in meads near the Caspian, between Sallian and Lenkoran.

"The same year" (Spreng., and Winckl.), voyage of Sonnerat from the Mauritius Islands to the Seychelles and Malayan Archipelago.—He published his Voy. "in 1776," and died "in 1781."

"In this year" (Spreng.), Oeder succeeded by O. F. Muller as editor of the Flor. Dan. who published the fourth volume,—"in 1782" (Winckl.), the fifth volume, and died "in 1784."

Atlantic, and probably Westward: observed by Baldwin on Flores, Bermuda, also at Bahia, and from Rio Janeiro to the mouth of the La Plata; by Chapman, "along the coast, Florida to South Carolina;" by Le Conte, in Georgia (Collins); by Walter, and Elliot, near salt water as far as the Santee.

* *Rumex conglomeratus* of Northern Europe. A *dock* distinguished by Murray;—termed "r. nemolapathum" by Linnæus jun., "r. divaricatus" by Thuillier, "r. paludosus" by Aiton (Steud.); known to grow in moist shaded situations and along streams in middle Europe (Pers.): observed by Pollich, Moench, Roth, and Sprengel, in Germany; by Thuillier, near Paris. By European colonists was carried to Northeast America, occurring according to A. Gray in "moist places, sparingly introduced, naturalized."

† *Euxolus deflexus* of . . . . Having the aspect of E. viridis, but the stems prostrate, and distinguished by Linnæus—(Willd. pl. 10. f. 20, Pers., and Steud.). By European colonists carried to Northeast America, occurring in "waste places, Albany, New York, etc." (Raf., and A. Gray).

"1772, March 22d" (Pall. iv. 134), Falk having commenced his return to St. Petersburg, and Georgi remaining behind at Irkutzk, Pallas continuing his journey crossed Lake Baical on the ice on the "23d," and "April 6th" reached Kiakta. Leaving on the "9th," he returned down the Selenga as far as Oudinsk, and on the "27th" proceeded Eastward, meeting with *Lycopodium rupestris*, and reached the waters of the Ingoda tributary of the Amour "May 9th." He now entered Daouria, meeting with *Myosotis rupestris*, *M. pectinata*, *Cotyledon malacophyllum*, *Astragalus leptophyllus*, *A. dalguricus*, *A. muricatus*, *Phaca salsula*, *Pedicularis flava*, *Spiraea thalictroides*, *Phlox Siberica*, *Sagittaria alpina*, *Iris ventricosa*, and turning back at Tchindantourouk, left Daouria "June 12th." Continuing Westward, on the "20th" he reached Selenginsk, and on the "25th" Kiakta, observing on the Upper Selenga *Hypecoum erectum*, *Anchusa saxatilis*, *Convolvulus rupestris*, *Astragalus polyphyllus*, *A. oxyphyllus*, *A. laguroides*, *A. (Oxytropis) ampullatus*, *Artemisia pectinata*, *Pedicularis striata*, and returning reached Lake Baical "July 7th." From Irkutzk on the "22d" he continued Westward, and "Aug. 1st" reached Krasnoïarsk. Leaving on the "19th" for the Upper Yenisei, he reached the waters of the Abakan "Sept 5th," and on the "6th" the frontier of Mongolia at Taschtypkaja Derevna: returning, meeting with *Sedum populifolium*, he reached Krasnoïarsk on the "23d."

Sokolof, left behind in Daouria (Pall. trav. iv. 607), meeting with *Phyllanthus ramiflorus*, *Pedicularis myriophylla*, *P. spicata*, *Primula nivalis*, *Galega Daurica*, and returning, joined Pallas at Krasnoïarsk.

"In this year" (Nicol.), Third partition of Poland.

"In this year" (Lindl. med. 408), *Cinchona* forests discovered by Mutis around the city of Santa Fé de Bogota, the attention of Government directed to the fact, and specimens sent to Linnæus.—He continued to reside there and established a Botanical garden, published memoirs "in 1784" and "1792," and died "in 1809" (Spreng.).

"The same year" (encyclop. meth., and Holmes), severe *earthquake* in Guatimala: destroying the city of that name, with "eight thousand families."

"Nov. 2d" (rec. Bost., and Holmes), on motion of Samuel Adams in town meeting at Boston, a committee of twenty-one citizens appointed: To correspond with their brethren in the province, state their grievances, and publish an account of their proceedings.—This committee of Correspondence proved "the basis of the subsequent union of the colonies."

"In this year" (Spreng.), Sparmann in Austral Africa on the arrival of Cook—on his Second voyage, now accompanied by Forster.

"In this year" (D'avezac in rec. voy. et mem. iv), in the Pacific, a low island called by the natives Topatuetota, in "Lat. 17° 15′ Long. 236° 2′," discovered by the captain of the Spanish frigate Aguila; also a low island called by the natives Eruo, in "Lat. 17° 30′ Long. 234° 15′."—The first-named island was visited by Cook in the following year and called by him Resolution.

"In this year = beginning of the years an-yei" (transl. Klapr. 239), Rinsifée, or Fajasi Sivei holding an interview with a Japanese of Matsmaye, from whom he learned many particulars respecting the Ainos of Yeso.—His work, containing besides an account of Corea and the Loo Choo Islands and entitled San-kokf-tsou-ran-to-sets, was published in "1785," and has been translated by Klaproth into French (Orient. transl. lond., and Siebold eluc. Vries p. 4).

The Ainos of Yeso are described in the San-kokf as unacquainted with writing, agriculture, the use of money, and the art of procuring iron and copper from their mines; do not capture whales, and have an account of a sea-monster called "okime" large enough to swallow a whale (the kraken of the Norwegians); have no knowledge of chronology, social laws, nor of the use of wealth, but think only of eating and sleeping with their wives, are in the same condition as people were at the beginning of the world, before thousands of years with religion and commerce gradually brought on civilization: they do not voluntarily dwell with Japanese; all have a healthy aspect; dip new-born infants in the sea; the men are occupied in hunting and fishing, and in general have great bodily strength, the women cutting firewood and doing all the work of the household; no one knows precisely his own age; they make coarse cloth of fibrous plants and bark of trees, but embroider with thread elegantly; wear no covering on the head, and go barefoot even in frost and snow; intermarry with their nearest relations, to keep the family distinct, and those possessing the means marry four to eight wives, each one of whom has a separate house; conceal in the mountains and set a high value on sword-hilts and other antiquities inherited from their ancestors; place their dead in a large chest together with the utensils used by the deceased, and for special honour erect a post five feet high and suspend his sabre, but never wear signs of mourning; their houses have but a single apartment, in which the whole family sleep and eat together, there being no distinction of master and servant; a cage containing an owl (*Strix flammea*) is often alongside, for the sake of feathers for their arrows; they have an instrument of iron called "kouwasaki," or "kwasaki," consisting of a ring having two branches in the form of a swallow's tail and a little bell suspended by a short chain from each branch, regarded as sacred, used when making prayers and sacrifices for recovery from illness, and in general kept concealed in the ground; the people are very stupid, though maintaining an

excellent character; have neither king, princes, nor lords, but in each hamlet the most respectable old man is the chief and has charge of public affairs.

"In this year" (Spreng., and Winckl.), Joh. Fr. Gmelin publishing his Stirp. Tubing. indigen. — He died "in 1802."

"In this year" (Spreng., and Winckl.), Joh. Jac. Reichard publishing his Flor. Moeno-Francof. — The publication was completed "in 1778," and he died "in 1789."

"In this year" (Pursh), G. Wolffg-Knorr publishing his Thesaur. rei. herb.

About this time ("Jan. 7th 1811 — near forty years," lett. to Baldwin reliq. 15 to 181), after returning from the University of Halle "in 1770," Henry Muhlenberg of Pennsylvania at the age of nineteen turning his attention to Botany.

"In this year" (Pritzel), Schreber publishing the Second volume of his Gram., enumerating *Muhlenbergia diffusa* n. 103 (Willd.), *Brachyelytrum aristatum*, *Trichodium laxiflorum*, — completed "in 1779:" the Third volume was issued "in 1810," the year in which he died.

"1773, March" (Holmes), a committee of Correspondence appointed by the Virginia Legislature: To extend communications beyond the province to the sister colonies. On the arrival of ships laden with tea: at Charleston, the tea was stored where it could not be used; at Philadelphia and New York, the ships were sent back; and at Boston, after vain attempts to send back the ships, persons in disguise forced an entrance and threw the tea into the harbour.

"April," Wm. Bartram (according to his own account) leaving Philadelphia on his journey South, as far as Florida, meeting with *Kalmia hirsuta*, *Scutellaria serrata*, *S. canescens*, *Salvia azurea*, *Calamintha grandiflora*, *Sabbatia stellaris*, *S. calycosa*, *Ixia coelestina*, *Lycium Carolinianum* trav. 59, *Azalea calendulacea* p. 321, *Oenothera grandiflora* (Ph.), *Clethra acuminata*, *Hydrangea quercifolia*, *Chrysobalanus oblongifolius*, *Illicium parviflorum*, *Magnolia pyramidata*, *Gerardia? cuneifolia*, *Hibiscus incanus*, *Liatris graminifolia*, *L. heterophylla*, *L. gracilis*, *L. pauciflora*, *Actinospermum angustifolium*, *Actinomeris alata*, *Coreopsis acuta*, *C. angustifolia*, *Rudbeckia discolor*, *Helianthus radula*, *Berlandiera tomentosa*, *Myrica inodora*, *Asimina grandiflora* and *A. pygmaea*, both on the South side of the Alatamaha (B. r. 332); *Mylocaryum ligustrinum* near Savannah p. 31; *Pinckneya pubens* near Fort Barrington on the Darien road p. 16 with *Gordonia pubescens* (B. r. 333); *Hypericum aureum* ("frondosum" of Mx., B. r. 107), *Satureja? rigida* (B. r. 281).

"April 21st" (trav. iv. 56), Pallas on his return from Siberia leaving Sarapoul for the South, to observe the vernal plants between the Yaik and Lower Volga; "May 8th," he crossed the Samara, continuing South along the Yaik, meeting with *Cachrys odontalgica*, *Polycnemum sclerospermum*, and on the "23d" reached Soundaef. Leaving the Yaik on the "24th," and proceeding Southeast, he entered the Naryn Desert "in 49°" on the "31st," meeting with *Spartium aphyllum*, *Delphinium puniceum*, *Anabasis monandra*, *Ornithogalum circinnatum*; "June 8th" came in sight of the Volga, and on the "11th" reached Astrakan; where he met Gmelin jun. preparing for his second visit to Persia. Leaving on the "16th," he returned along the Volga and on the "25th" reached the Moravian settlement of Sarepta, in existence "eight years," and "twenty-two versts" beyond at Zarizyn passed the month of July. Leaving "Aug. 4th" he continued up the Volga as far as Saratof, and returned to Zarizyn on the "28th," to pass the winter.

Soujef among the Inderski mountains meeting with *Molucella tuberosa*, *Plantago minuta*, *Bunias Tartarica*, *Leontice vesicaria*, and *Amaryllis Tartarica*, rejoining Pallas "May 23d" at Soundaef.

"The same year" (Pemberton ms., Morse geogr. i. 122, and Holmes), the settlement of Kentucky commenced by Daniel Boon and family, with five other families, and forty men from Powell's Valley. Said to be in violation of a government treaty with the aboriginals.

"Between sixty and seventy years" before our visit to the Pacific (Hale ethnogr. Expl. Exp. p. 140), Temoe or Crescent Island, a coral-islet "about thirty miles" Southeast of Mangareva, peopled by Mangarevan fugitives "on rafts;" the drifting, it should be observed, being directly against the trade wind. — After many years, Catholic missionaries arrived at Mangareva: through whom the fugitives were brought back to their homes.

"In this year" (J. E. Smith, and Spreng.), after his Flor. Monsp. "in 1765," Gouan publishing his Illustr. of rare plants growing on the Pyrenees, including *Seseli elatum*.

"In this year" (Spreng., and Winckl.), Chr. Friis Rottböll publishing the thesaurus Tranqueb. of J. G. König. — König's Scitamin. were published in Retz. Obs.; and he died "in 1785."

"In this year" (J. E. Smith, and Spreng.), Jacquin publishing his Flor. Austriac., enumerating *Arenaria fasciculata* ii. pl. 182, *Hieracium molle* pl. 119. — Completed, with his Hort. Vindobon. "in 1776."

"In this year" (Spreng., and Winckl.), Tobias Konr. Hoppe publishing his Flor. Gera esculent.

"1774, towards the end of winter" (Pall. v. 362), leaving Pallas at Zarizyn on the Volga, Georgi returning by the way of Kasan to Moscow. — "In the following year" (Spreng., and Winckl.), he published the travels of Falk and himself from Orenburg to Lake Baical and Daouria.

"March 7th" (Holmes), news of the destruction of the tea communicated in a message from the king to both houses of Parliament. An Act was at once passed, Closing the port of Boston. Another Act followed, For "better regulating the government of Massachusetts:" and "May 13th," Thomas Gage, commander in chief of the royal forces in North America, was appointed governor of Massachusetts.

"June 7th" (Holmes), meeting of the Massachusetts Legislature at Salem; having been removed there by General Gage. A resolution was adopted, Recommending the appointment of committees from the several colonies, to consult together on the present state of affairs. Accordingly on "Sept. 4th," committees from eleven colonies made their appearance at Philadelphia; on the following day, formed themselves into a Congress, and elected Peyton Randolph of Virginia president; and after a session of "eight weeks" dissolved, Recommending however, that another Congress be held in the following year, "should events make their meeting necessary." On "Sept. 1st," general and governor Gage seized the powder in the arsenal at Charlestown: military preparations were now made by the colonists; and "toward the close of the year," news arrived of the prohibition of the export of military stores from Britain.

"Towards the middle of March" (Pall. v. 315), spring opening at Zarizyn on the Volga, and Pallas observing the vernal plants, including *Tulipa biflora*, and *T. sylvestris*; leaving "April 24th" for the ruined city on the Aktouba, and continuing beyond, meeting with *Echinospermum minimum*, *Erysimum polyceratum*, on the "28th" he reached the lake and hill of Bogdo-Oola, held sacred by the Calmucks. After a second visit "May 21st," he returned to Zarizyn, took final leave "June 4th," and "July 3d" arrived at Moscow.

"April 6th" (J. Roberts in hist. coll. iv. 240), Hood's Island in the Marquesas Group discovered by Cook, its native name not given. Forster accompanying him meeting with * *Dichondra repens*. — Arriving home, he published his Charac. gen. "in 1776," Discov. in North "in 1786." G. Forster, who accompanied his father on Cook's Second Voyage, — published his own account in "1784," Plant. Escul. ins. austr. in "1786," and died in "1794."

"Aug. 9th" (Humb. iii. 8), Nootka Sound in Northwest America discovered and entered by Juan Perez.

"In this year" (Winckl.), J. A. Murray publishing his Systema vegetabil., enumerating *Spiraea lobata*.

"The same year" (art de verif.), Mustafa III. succeeded by Abd-el-Hamid, twenty-eighth Turkish sultan. Coins issued at Cairo by Abd-el-Hamid, are figured in Marcel p. 249.

"The same year" (Nicol.), Louis XV. succeeded by Louis XVI., now king of France.

"In this year" (A. de J. gen. plant., and Winckler), Bernard de Jussieu publishing his Methodus, establishing in the Royal gardens of Paris an arrangement of plants according to Natural Orders. — He died "Nov. 6th 1776."

"The same year" (Kobell iv.), re-discovery by Priestly of *oxygen* gas. — Leading to the recognition of many of its compounds, and the reconstruction of the science of Chemistry by Lavoisier.

"Sept. 20th" (D'avezac in rec. voy. et mem. iv.), Andia y Varela with two ships sailing from Callao Westward. "Oct. 30th," he discovered a low island in "Lat. 17° 20′ Long. 238° 58′" and named it San-Narcisso; "Nov. 1st," a low island called by the natives Noaroa, in "Lat. 17° 44′ Long. 236° 49′;" on the "6th," a high island Matea, in "Lat. 16° 50′ Long. 230° 6′;" on the "7th," a high island called by the natives Maïtia, in "Lat. 17° 44′ Long. 229° 34′;" and on the "8th," arrived in sight of Taheiti.

"1775, Feb. 26th" (Stiles, and Holmes), troops on their way through Salem to seize military stores, prevented at a bridge, "on the opposite side of which colonel Pickering had mustered thirty or forty men" and raised the draw: (the road being private property, the troops had not the right to pass. Rev. Dr. Barnard, interceding with the British commander to prevent firing, at length hit upon an argument that had weight: saying substantially, This crowd around your troops is as you see unarmed, but all know where to get muskets in a very few moments, and how to use them. C. P. can recollect when every citizen of the military age who did not parade in the militia kept a musket with accoutrements for inspection).

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* *Gentiana montana* of the mountains of Tasmania and New Zealand. Observed by Forster prod. 133 in New Zealand; — known to grow also on mountain-summits in Tasmania and the neighbouring portion of Australia (Griseb., and A. Dec.).

Tephrosia piscatoria of Mexico. Observed by Forster among the Tropical islands of the Pacific — (Steud.); by myself, introduced throughout by Polynesians, from the Hawaiian Islands and Metia to the Feejeean Islands. Eastward, was observed by Barclay at Realejo on the Pacific coast of Tropical America (Benth. bot. Sulph., and A. Dec.). From transported specimens, described by Aiton (Pers.).

"April 19th" (Stiles, and Holmes), troops on their way to seize military stores meeting armed militia at Lexington, fired on them (initiating open war. At Concord the troops were fired upon, but accomplished their mission, and the distance being too great for a circuit, were obliged to turn their backs, and were harassed on the way as though in retreat. The approach to Charlestown led among thousands of resident militia-men, but they were withheld by their commander, perhaps on account of the naval threat, To bombard Boston. C. P.).

"May 10th" (Stiles, and Holmes), Ticonderoga and Crown Point, posts commanding Lakes George and Champlain, seized by colonists under Ethan Allen.

"June 16th," (the British troops being prevented from making excursions into the country, a party of colonists set out on this evening to throw up intrenchments on Bunker hill; a plan that might not have led to immediate collision. But the commander Col. Prescott had more serious thoughts, and passing Bunker hill threw up earthworks on a lower eminence much nearer Boston. In the morning, the British commander surprised made an inconsiderate attack, and though the works after much bloodshed and repeated checks were carried, the British empire in America was virtually at an end. C. P.).

The Second Congress meeting, bills of credit for "three millions of dollars" were issued, with "twelve confederated colonies" pledged for their redemption. Union being especially desirable, New England officers were excluded, and George Washington elected commander in chief. He joined the army in Cambridge "July 2d;" and on the "20th," the adhesion of Georgia was received by Congress (Stiles, and Holmes).

Not later than this date (see Spreng.), Hill kew. 57. pl. 5 describing "carthamus laevis" *Stokesia cyanea* of Carolina. He died before the close of the year.

"The same year" (Humb. iii. 8), in Northwest America, the mouth of the Columbia river discovered by Quadra.

"The same year" (Pauth. 454), the Miao-tseu, wild mountain tribes of Sse-tchouan in Western China, subdued by the emperor Kien-Loung.

"In this year" (Winckl.), Joh. Dan. Leers publishing his Flor. Herbornensis, enumerating *Carex stellulata*.

"In this year" (Winckl.), F. A. Scholler publishing his Flor. Barbyensis. — He died "in 1815."

"Aug. 14th" (trav., and flor. Jap.), Thunberg arriving in Japan, landing at Nagasaki.* — He left "in 1776."

"1776, March 17th" (Holmes), Boston evacuated by the British army. Washington next proceeded to New York city, where he established his head quarters "April 14th." The British government employing foreign mercenaries against the colonists; a pamphlet by Thomas Paine, entitled "Common Sense."

Thus far the colonists had been fighting for their rights as Englishmen, but the question of conciliation arising and Parliament being distrusted, the subject of Independence was introduced on "June 7th" into Congress. On "July 4th," the Declaration of Independence was adopted almost unanimously (see Holmes).

The colonial army having been driven from Long Island, Washington was compelled to withdraw from New York: which city was occupied by the British "Sept. 15th," and was held by them as a base of operations. "Oct. 4th," articles of "confederation and perpetual union between the United States of America" were signed by all the delegates in Congress: but the colonial army retreating Southward, the vicinity of Philadelphia soon became the seat of war; and "Dec. 12th," Congress adjourned to Baltimore. "Dec. 25th," Washington turning upon his assailants, captured a body of about a thousand Hessians at Trenton: which revived the drooping spirits of the country (Holmes).

By the Second census of Massachusetts (coll. hist. iv. 198, and Holmes 1784), the number of Whites ascertained to be "three hundred and forty-three thousand eight hundred and forty-five;" and of Blacks, "five thousand two hundred and forty-nine."

"In this year" (J. E. Smith, and Spreng.), Pollich publishing his Plant. Palatin. — The publication was completed in "1777," and he died in "1780."

Trifolium elegans of the Mediterranean countries. Annual, termed "t. hybridum" by Pollich, — Roth, and Desfontaines, "t. isthmocarpum" by Brotero (Steud.): observed by Savi pl. 1 around Pisa in Italy (Pers.); by Sibthorp, and Chaubard, in the meads of the Peloponnesus. Regarded as exotic in Britain, maintained there by the continued importation of seed for cultivation (Wats., and A. Dec.); in Sweden (Chaub.) also doubtless exotic.

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* *Pinus parviflora* of Japan and the Kurile Islands. Much resembling and mistaken for P. cembra by Thunberg, — distinguished by Siebold as observed on Japan and the Kurile Islands (Endl. conif. 143, and A. Dec.).

"In this year" (Pursh), J. F. Miller publishing Coloured plates of Plants and animals:—the 60th and last "in 1794."

"In this year" (Spreng., and Winckl.), Rottböll publishing the Surinam plants of Rolandr. and Caraib. of Rohr, including *Schoenus setaceus* pl. 21. f. 2.

"In this year" (Willd.) Murray in Comm. goett. describing *Lonicera parviflora* pl. 3.—He died "in 1791."

"In this year" (Spreng.), William Withering publishing his Botan. arrangement of veg. naturally growing in Great Britain.—He died "in 1799," and a fifth edition was issued "in 1812."

"1777, in the spring" (Holmes), arrival of arms and ammunition from France; brought in part in a twenty-four gun ship. The British army driven back, and after attempting to bring on a general engagement, withdrawing from New Jersey; the commander sent a large force by sea into the Chesapeake to the head of tide-water in Elk river, and advancing Northward, obtained possession of Philadelphia "Sept. 27th." In the North at Saratoga "Oct. 17th," surrender of Burgoyne with his army of nearly six thousand men to the colonists.

"The same year" (Williams 230, and Holmes), the Declaration of independence having left the settlers on the New Hampshire grants in a difficult position, they, through a convention of town-representatives, declared their district a distinct State: the origin of the State of Vermont.

"In this year" (Spreng.), Lightfoot publishing his Flora Scotica, enumerating *Carex pauciflora.*

Carex incurva of Northern Europe and mountains farther South. A sedge observed by Lightfoot in Scotland:—known to grow also in Norway and on the mountains of Switzerland (Engl. bot. pl. 97, Pers., and A. Dec.); observed by Allióni ii. pl. 92 in Piedmont; by Sibthorp, on the mountains of Crete.

"In this year" (Pritzel, and Winckl.), Wangenheim with Hessian troops arriving in North America, meeting with *Kalmia glauca, Gaylussacia resinosa.*—Returning "in 1780," he published his Nordamer. trees and shrubs "in 1781," another edition "in 1787."

"In this year" (J. E. Smith, and Spreng.), Curtis publishing his Flor. Lond.

"In this year" (Spreng.), Robson publishing his Flor. Brit.

"In this year" (Spreng., and Winckl.), Moench publishing his Plant. indig. Hassiæ.

"In this year" (Spreng.), Houttuyn publishing his Plant. Ind., Cap., and Japan,—completed "in 1788."

"In this year" (Pursh i. 301), Bergius publishing descriptions of plants in Act. petropol., including *Leiophyllum buxifolium* pl. 3. f. 2.—He died "in 1790" (Spreng.).

"1778, Feb. 6th" (Holmes), by Louis XVI. of France, treaties of amity, commerce, and alliance with the colonies; through their commissioners, Franklin, Silas Deane, and Arthur Lee. On receiving the news, Philadelphia was evacuated "June 18th" by the British; who decided to concentrate their forces in the harbour and city of New York. After "July 5th," arrival on the coast of a French fleet under D'Estaing: the depth of water not admitting his ships of the line into the harbour of New York, he proceeded to Newport, occupied by the British, and reached the offing "July 25th." Incursions during the Summer along the Florida frontier; and the British turning their attention to the South, on "Dec. 29th" captured Savannah.

As early as this year (. . . .), Vahl describing plants in Act. soc. nat. Haf. ii. p. 13.*

"In this year" (Spreng.), Ortega publishing two volumes of Quer's Flor. Hispan.,—completed "in 1784."

"In this year" (A. Dec. g. b. 738), Lamarck publishing his Flor. Franc.

"1779, Oct. 9th" (Holmes), by the colonists and the French fleet under D'Estaing, unsuccessful assault on Savannah. After which D'Estaing and the fleet left the coast.

"In this year" (Winckl.), after a first edition "in 1774," A. Joh. Retzius publishing a Second edition of his Obs. botan., also his Flor. scandinav. prodr.

Veratrum sabadilla of Mexico and the West Indies. Described by Retz obs. i. 31, and known to furnish the *sabadilla* or *cevadilla* seeds used as an anthelmintic and to destroy pediculi,—but of late imported chiefly for manufacturing veratria; an active and dangerous local stimulant, employed as a substitute for colchicum (Descourtilz ann. linn. par. 1824, and Lindl.).

Helonias? officinalis of Eastern Mexico.—Observed there by Schiede and Deppe, and ascertained by them to furnish at least a portion of the sabadilla seeds of commerce (Schlecht. linn. vi. 45, Dón edinb. phil. journ. 1832, and Lindl.).

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* *Carex maritima* of the shores of the North Atlantic. Described by Vahl act. haf. ii. 13—and in fl. Dan. pl. 703, also by Schkuhr t. W. f. 74: known to grow on the seashore of Norway (Pers.). Westward, was received by Hooker from Hudson Bay and Fort Cumberland; was observed by myself in salt marshes around Salem, Mass.

"In this year" (Spreng., and Winckl.), Dombey in Peru, making with Ruiz and Pavon * botanical investigations: — they remained "until 1788," the Flor. Peruv. prodrom. was published "in 1794," and Dombey died "in 1795."

"In this year" (Winckl.), Thom. Forrest publishing his Voyage to New Guinea and the Moluccas.

"1780 A. D." (Holmes), news of the departure of the French fleet having reached New York an expedition fitted out by the British, who on "May 12th" captured the city of Charleston. On or about Sept. 23d, treachery detected in a colonial general on the Hudson, and the intended surrender prevented.

"The same year" (Pauth. 458), by the Chinese emperor Kien-loung, an extensive diverting canal constructed, to control the inundations of the Hoang-ho.

"In this year" (Spreng.), Ant. Turra publishing his Flor. ital. prodr.

At this time (Spreng., and Winckler), Guldenstadt writing an account of his travels in Georgia, Mingrelia, and throughout Caucasus. — He died "in 1781," and his travels were published "in 1787-91."

"1781 A. D." (Holmes), the British forces advancing Northward, opposed by a colonial army under Greene: and after the battle of Guilford "March 15th," Cornwallis marched Eastward to Wilmington, and thence Northward, reaching Petersburg in Virginia "May 20th." Receiving instructions to secure a station for line-of-battle ships, and Portsmouth and Hampton roads having been pronounced unfit, Cornwallis transferred his army increased to "seven thousand" men to Yorktown; and commenced fortifying. A French fleet of "twenty-eight sail of the line" under De Grasse arriving soon afterwards, blocked York river and landed troops; reinforcing La Fayette, who was in command of the colonial army in the vicinity. "Sept. 5th," a British fleet of "twenty sail of the line" attempted relief; but "eight" more line-of-battle ships joining the French, the British admiral concluded to withdraw. On hearing of the state of affairs, Washington abandoning all other plans, sent "twelve thousand" men, the main body of his army, by way of Philadelphia South; and following himself, "Sept. 14th" reached the vicinity of Yorktown. "Oct. 19th," surrender of Cornwallis, with the invested land and naval forces: regarded as the closing event of the war.

"May 9th" (Holmes), by Don Galvez, Spanish governor of Louisiana, Pensacola captured from the British; and soon afterwards, the whole province of West Florida.

"In this year" (Winckl.), Felix de Azara visiting Austral America, — remaining "until 1801."

"May 13th" (Phil. trans. lxxi, and Humb. cosm. iv.), the planet Uranus discovered by Herschel. It had been seen previously by Flamstead "in 1690," and Tobias Mayer "in 1756;" and Herschel himself — for a time supposed it to be a comet. Its six satellites, by an exception almost perpendicular to the ecliptic, were discovered by Herschel at different times from "Jan. 11th, 1787" to "March 26th, 1794."

"In this year" (J. E. Smith, and Spreng.), Linnæus the younger publishing his Suppl., enumerating † *Forstera muscifolia*, *Ranunculus Pennsylvanicus*, *Cyperus distans*, *Rottboella dimidiata*, *Hydrocotyle ranunculoides*, *Arbutus laurifolia*, *Cornus alternifolia* 125. — He died in "1783."

Epipactis ensifolia of Europe and the adjoining portion of Asia. Termed "serapias xiphophyllum" by Linnæus jun. suppl. 404, — "s. ensifolia" in the 14th edit. by Murray, and known to grow from Denmark throughout middle Europe (Ehrh., fl. Dan. pl. 506, Engl. bot. pl. 494, and Pers.): observed by Sibthorp, and Chaubard, in woods from the Peloponnesus to the Bithynian Olympus.

Utricularia stellaris of Tropical and Austral Africa? Received by Linnæus jun. suppl. 86 from the rice-fields and deeper water in Hindustan (Pers.); observed by Graham "floating in tanks" in the environs of Bombay; by Roxburgh cor. ii. pl. 180, in Bengal. Westward, was received by A. Decandolle prodr. viii. 4 from the Mauritius Islands, Madagascar, Austral Africa, and Senegambia.

"In this year" (append. Sibth., and Winckl.), Jacquin publishing the Second and concluding volume of his Miscell. austr, and commencing his Icon. rar., enumerating *Paspalum stoloniferum* ic. rar. 302, *Glottidium Floridanum* ic. rar. i. 48, *Artemisia biennis* i. r. i. 172, *Helenium quadridentatum* i. r. 593, *Rudbeckia amplexifolia* i. r. iii. 592, *Croton argyranthemum* i. r. iii. 621, *Euphorbia cyathophora*, *Wulfenia Carinthiaca* ii. 8. f. 1 and ic. rar. i. pl. 2.

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* *Cuscuta corymbosa* of Chili and Peru. Observed by Ruiz and Pavon in Peru, but in cultivated ground, especially among crops of Medicago sativa (Pers.). Transported together to Europe in "1840" (Choisy), it has continued to make its appearance wherever the mixed seed is sown; but like other species of Cuscuta, does not quit its sustaining plant, nor become truly naturalized (Engelman, and A. Dec.).

† *Carex heleonastes* of Arctic Europe and the mountain-summits of Switzerland. Described by Linnæus jun. suppl. 414, Ehrhart (A. Dec.), and Schkuhr pl. 51. f. 97, and known to grow in the marshes of Sweden (Pers.); also on the Swiss Alps (A. Dec.).

Latania Borbonica of the Mauritius Islands. Received from the Isle of Bourbon, and described by Jacquin frag. i. pl. 11, — and Lamarck enc. iii. 411 (Pers.): observed by Bojer around dwellings and along the margin of the forest on the Mauritius Islands. By European colonists, was carried to Northeast America, where it has become frequent in greenhouses: was observed by myself in Egypt, in the Botanical Garden near Cairo, doubtless derived from Europe.

Pleurogyne Carinthiaca of Switzerland and the Altaian mountains. An annual termed "swertia carinthiaca" by Jacquin misc. ii. pl. 6 as observed on the Salsburg and Carinthian Alps (Pers.); known to grow also in the Saas valley in Valais, and on the Altaian mountains (Griseb., and A. Dec.).

"1782, March 4th" (Holmes), by the English Commons resolved, "That the house would consider as enemies to his majesty and the country, all those who should advise or attempt the farther prosecution of offensive war on the continent of North America."

"April 12th" (Holmes), the French fleet under De Grasse defeated in the West Indies by the British fleet under Rodney.

"In this year" (Winckl.), Hacquet publishing his Plant. alpin. Carniol. — He died "in 1814."

"In this year" (Durand in Am. phil. trans.), André Michaux exploring the Persian provinces on the Tigris and Euphrates. — He returned to France "in 1785."

"In this year" (Winckl.), Molina publishing his Storia nat. del Chili.*

"April 19th" (Holmes), the colonies acknowledged an independent nation by Holland: and "Oct. 8th," a treaty of amity and commerce concluded.

"Nov. 30th" (Holmes), the independence of the colonies acknowledged by Britain, and a treaty of peace concluded: to take effect when peace should be declared between Britain and France.

"1783 A. D." (Holmes), treaties of amity and commerce: with Denmark "Feb. 15th;" with Spain "in March;" with Sweden "in April;" with Russia "in July;" and "Sept. 23d," signing of the Definitive treaty of peace between Britain and the now independent States.

"In the summer" (Amer. acad. sc. i. 401), Manasseh Cutler at Ipswich in Eastern Massachusetts, meeting with "goldenpert" *Gratiola aurea*, "pigeon-berry bush" *Cornus stolonifera*, "trailing cockspur" *Galium triflorum*, "upright cockspur" *G. circæzans*, "water violet" *Hottonia inflata*, "water parsnip" *Sium lineare*, "white pepperbush" *Andromeda* (*Lyonia*) *ligustrina*, "cow-wheat" *Melampyrum Americanum*, "yellow succory" *Hieracium Canadense*, "star thistle" *Cirsium pumilum*, "yellow thistle" *C. horridulum*, "meadow sunflower" *Bidens chrysanthemoides*, "lady's plume" *Platanthera fimbriata*, "moneywort" *Asclepias obtusifolia*, "quaffidilla" *Clintonia borealis*, "sugar maple" *Acer nigrum*; — and soon afterwards, as appears from his unpublished manuscripts (examined by Russell and Tuckerman), "anonymos yellow sandbind" *Hudsonia tomentosa*, "campanula humida" *Campanula aparinoides*, and "anomalos" *Microstylis ophioglossoides*.

"Nov. 3d" (Holmes), disbanding of the American army. "Nov. 25th," evacuation of New York city by the British troops: and shortly afterwards, surrender by Washington of his commission, to Congress at Annapolis.

"Nov. 29th" (Holmes), an *earthquake*, distinctly perceived from New Hampshire to Pennsylvania.

"In this year" (Winckl.), Swartz visiting the West Indies.† — He remained "until 1787," and published his Prodr. Ind. Occ. "in 1788."

"In this year" (J. F. Wats.), publication in London of the "History of Sumatra" by William Marsden.

"1784, Feb. 22d" (Felt ann. Salem), sailing from New York of a ship under Capt. John Green

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* *Flourensia thurifera* of Chili. A shrub called by Molina "thuraria," from yielding incense, — observed by myself in the environs of Valparaiso, Helianthus-like except in being woody.

† *Euphorbia punicea* of Jamaica. A thick-stemmed shrub with large scarlet leaves around the flowers, described by Swartz — (Steud.), Jacquin rar. iii. pl. 484, and Descourtilz pl. "E. Poinsettii" brought from Mexico by Poinsett about 1833?, and soon becoming a favourite in greenhouses, introduced even into the gardens of Burmah (Mason v. p. 421), may be compared.

Jussieua acuminata of Equatorial Africa. Known to grow from Guinea to the island of Saint-Thomas (Benth. fl. Nigr.). Probably by European colonists carried across the Atlantic to the West Indies, where it was observed in moist places by Swartz (A. Dec.).

Laurus montana of the mountains of the West Indian archipelago. Observed by Swartz on the lofty mountains of Jamaica, a tree closely resembling L. camphora (Pers.).

Panicum jumentorum of . . . . Observed by Swartz prodr. p. 24 under cultivation in the West Indies for feeding cattle, and called *Guinea grass* from its alleged place of origin — (Pers.). Eastward from Africa, is enumerated by Mason v. p. 477 as "exotic" in Burmah and "grown by a few Europeans," but called by the Sgau Karens "nau-ka-thau-hau." As transported to Europe, is described by Lamarck (Steud.).

for Canton; a "new branch of trade." The "first appearance of an Anglo-American trader in the ports of India in" this year, is regarded by Crawfurd ix. 3. p. 250 as "the true era of the commencement of fair and legitimate commerce between India and the civilized nations of the West." A ship under Capt. Jonathan Ingersoll sailed from Salem "Nov. 27th" for the Cape of Good Hope, — and for the ensuing forty years, American commerce with the Indian Seas was chiefly carried on from Salem.

"The same year" (coll. hist. iv. 199, and Holmes), by the Third census of Massachusetts, the number of Whites ascertained to be "three hundred and fifty-three thousand one hundred and thirty-three;" and of Blacks, "four thousand three hundred and seventy-seven."

"In this year" (Dallet 13), Christianity first introduced into Corea, chiefly through the philosophical inquiries of Ni Tek-tso or Piek-i, who persuaded his friend Ni Seng-houn-i, one of the ambassadors to Pekin, to procure there the books of the Christians. On arriving at Pekin, Seng-houn-i visited one of the four Catholic churches, was baptized, and before the close of the year returned with the books in question to Corea.

"In this year" (J. E. Smith), L'Heritier publishing his Stirp. Nov., enumerating * *Aristolochia sipho, Ribes prostratum* i. 3, *Rhamnus alnifolius* p. 5, *Siegesbeckia flosculosa* pl. 19, — completed "in 1785;" his Geran., "in 1787–8."

Aloysia citriodora of Austral America. A shrub transported to Europe and described by Ortega, and L'Heritier i. pl. 11, — (Pers.): enumerated by Clot-Bey as recently introduced into the gardens of Egypt. By European colonists also, carried to Hindustan, where it was observed by Law "in gardens at Belgaum and Dharwar," thriving "luxuriantly," and "much esteemed for the delightful fragrance of its leaves" (Graham); to Burmah, enumerated as "exotic" by Mason; and to Northeast America, where it has become frequent in greenhouses. In its wild state, was seen by Dombey in Chili; by Humboldt and Bonpland; and is said to grow also in Buenos Ayres (Pers.).

As early as this year (Baldw. rel. 146), Fraser visiting the mountains of Carolina, meeting with *Collinsonia ovalis, Ceratiola ericoides, Carex Fraseri, Trichodium perennans, Panicum striatum, Stipa stricta, Spermacoce involucrata, Ilex laxiflora, Lonicera flava, Ribes resinosum, Oenothera Fraseri, Vaccinium crassifolium, Liatris cylindrica, Abies Fraseri.* — His plants were communicated to and described by his friend Walter.

"The same year" (Spreng., and Winckl.), Pallas publishing his Flor. Ross., enumerating *Crataegus glandulosa* i. pl. 11, *Spiraea betulaefolia* i. pl. 16, — completed "in 1788."

Ornithogalum fimbriatum of the East Mediterranean countries. Described by Pallas (in n. act. Petrop. x. 309), as received from Tauria — (Pers.): observed by Chaubard in the Peloponnesus.

"1785 A. D." (Holmes), treaty of amity and commerce with Prussia, signed by the American plenipotentiaries at their respective places of residence; by Franklin at Passy "July 9th," Thomas Jefferson at Paris "July 28th;" and John Adams at London "Aug. 5th."

"In this year" (Pursh), Moench publishing his Ausland. baume, enumerating *Aesculus flava, Crataegus flava.* — He died "in 1805" (Spreng.).

"In this year" (Darl., and Brendel in Am. Nat. for 1870), Humphrey Marshall of Philadelphia publishing his Arbust. Amer., enumerating *Salix humilis, S. sericea, Zanthorhiza apiifolia, Quercus prinoides, Lonicera grata, Euonymus atropurpureus* 76, *Viburnum molle, Rhus aromatica.*

As early as this year (, . . .), Walter in South Carolina meeting with *Quercus lyrata, Triplasis purpurea, Polygala polygama, Schrankia uncinata, Diodia teres, Lobelia glandulosa, Ilex myrtifolia, I. dahoon, I. decidua, Styrax grandifolium, S. laeve, Utricularia inflata, U. purpurea, Gratiola pilosa, Gerardia setacea, Stachys hyssopifolia, Sabbatia lanceolata, Gentiana angustifolia, Forsteronia difformis, Asclepias paupercula, Gonolobus hirsutus, G. macrophyllus, Asarum arifolium, Laurus. (Benzoin) melissaefolium, Phoradendron flavescens, Acalypha Caroliniana, Phyllanthus Carolinensis, Aplectrum hyemale, Aletris aurea, Smilax Walteri, Helonias (Amianthium) muscaetoxicum, Xyris Caroliniana, Eriocaulon (Lachnocaulon) villosum, Trichodium elatum, Muhlenbergia capillaris, Ctenium aromaticum, Leptochloa mucronata, Festuca tenella; Andropogon macrourus, dissitiflorus; Cyperus flavicomus, Trautvetteria palmata, Ranunculus pusillus, Delphinium azureum, Hibiscus*

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* *Eupatorium ayapana* of Eastern Equatorial America. Growing on the right bank of the Amazons, and employed as an antidote against the bite of venomous serpents and insects; commended for this purpose by L'Heritier, — said to be also a powerful sudorific and alexipharmic (Vahl symb. iii. p. 97, Vent. malm. pl. 3, Trattenick pl. 16, Pers, and Lindl.). By European colonists, carried to the Philippines, where it is mentioned by Blanco as recently introduced, easily cultivated, and called "ayapana" in Tagalo; also to Hindustan, where it was observed in gardens around Bombay by Lush, and Graham; and to the Mauritius Islands, where the leaves are used as a substitute for tea (Grah.).

militaris, Rubus cuneifolius, Lachnanthes tinctoria, Micranthemum orbiculatum, Gratiola quadridentata, Elytraria virgata, Justicia humilis, Pinguicula elatior, P. lutea, Utricularia fibrosa, U. biflora, Collinsonia praecox, C. serotina, Scleria reticularis, Mariscus maculatus, Fimbristylis castanea, Alopecurus aristulatus; Paspalum serotinum, setaceum; Aristida oligantha, Stipa Virginica, Eragrostis pectinacea, Oxybaphus albidus 84, *Frazera Carolinensis* 88, *Galium purpureum* 87, *Hedyotis rotundifolia* 86, *Ammania humilis* 88, *Cornus stricta* 88, *Jussieua decurrens* 89; *Ludwigia hirsuta, linearis, virgata, capitata, arcuata, glandulosa, mollis; Planera aquatica* 230, *Limnanthemum trachyspermum* 109, *Bumelia lanuginosa, Frangula Caroliniana, Amsonia ciliata, Hydrolea Caroliniana, Dichondra Carolinensis, Eryngium virgatum, Hydrocotyle repanda, Discopleura capillacea, Leptocaulis divaricatus, Tiedemannia Carolinensis* 113, *Viburnum obovatum, Prinos ambiguus, Uvularia flava, Dioscorea quaternata, Aesculus parviflora, Rhexia glabella, R. lutea, Acer barbatum, Polygonum hirsutum, Myriophyllum scabratum, M. heterophyllum, Andromeda ferruginea, Baptisia lanceolata, B. villosa, Hydrangea nivea, Silene Pennsylvanica, Alsine squarrosa, A. glabra, Crataegus apiifolia, Calycanthus glaucus, Helianthemum Carolinianum, Sarracenia rubra, S. variolaris, Nuphar sagittæfolia, Clematis holosericea, C. reticulata, Anemone Caroliniana, Stachys hyssopifolia, Pycnanthemum clinopodioides, Macbridea Caroliniana, Herpestis nigrescens, Lobelia glandulosa, Hibiscus coccineus, H. aculeatus, Petalostemum corymbosum, Polygala cymosa, P. grandiflora, Amorpha herbacea, Crotalaria ovalis, Phaseolus diversifolius, Vicia Caroliniana, Trifolium Carolinianum, Zornia tetraphylla, Indigofera Caroliniana, Lupinus villosus* 180, *Pyrrhopappus Carolinianus, Nabalus virgatus, Cirsium muticum, Liatris pilosa, L. elegans, L. paniculata, L. odoratissima, Carphephorus tomentosus, C. bellidifolius, Vernonia angustifolia, Eupatorium fœniculaceum, E. teucrifolium, E. cuneifolium, Sclerolepis verticillata; Marshallia lanceolata, latifolia, angustifolia; Pterocaulon pycnostachyum, Chrysopsis graminifolia, Sericocarpus tortifolius, Aster squarrosus, A. Carolinianus, Eclipta procumbens, Actinomeris alba, Coreopsis senifolia, gladiata; Galardia bicolor, Chaptalia integrifolia, Silphium compositum, Iva imbricata, Croton maritimum.* — His Flor. carolin. bears the date "1787" on the title-page (A. Dec. 716), and according to his own account he was residing on the banks of the Santee "Dec. 30th" of that year.

"In this year" (Spreng.), J. L. M. Poiret travelling in Barbary. — He returned "in 1786," and published an account of his travels "in 1789."

"In this year" (append. Sibth., and Spreng.), Allioni publishing his Flor. Pedem.,* enumerating *Equisetum variegatum* (Bory). — He published auct. Pedem. "in 1789," and died "in 1804."

Carex tripartita of the mountains of middle Europe. Observed by Allioni pl. 92 in Piedmont, — termed "c. lobata" by Schkuhr 28. t. D. f. 18, and known to grow on the Swiss Alps (Pers.); and received by Link from the Peloponnesus (Chaub.).

"In this year" (J. E. Smith præf. v), Sibthorp in company with Ferdinand Bauer arriving in Greece: — he returned "in 1787." From a second visit he returned "in 1795," and died shortly afterwards. His Flor. Græc. prodr. was published by J. E. Smith "in 1806."

Dianthus tripunctatus of the East Mediterranean countries. An annual observed by Sibthorp on Cyprus; — by Gussone, frequent in Calabria as far as the Western shore, but unknown in Sicily (A. Dec.).

Sternbergia citrina of Greece. Observed by Sibthorp pl. 311, — and Chaubard, in the Peloponnesus.

Allium margaritaceum of Asia Minor and Greece. Observed by Sibthorp pl. 315, — Link, and Chaubard, frequent from the Peloponnesus to Cyprus, Bithynia, and mount Athos.

Allium staticiforme of the Greek islands. Observed by Sibthorp pl. 320 on Cimolo.

Allium pilosum of Greece. Observed by Sibthorp pl. 321 on Cimolo.

Allium junceum of Cyprus. Observed there by Sibthorp pl. 322.

Allium ambiguum of Italy. Observed by Sibthorp pl. 327 in Italy; also by Gawler — (in Curt. mag. pl. 978); by Laterrade 383, in the environs of Bordeaux. Transported to Britain, has made its appearance since "1837" in various localities (Engl. bot. 2803, Bab., and Wats.), probably escaped from gardens (A. Dec.).

1786 A. D. (Durand, in Am. phil. trans.), after landing at New York "Oct. 1st in the previous

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* *Carex bicolor* of Arctic Europe and the alpine summits of Switzerland. Observed by Allioni on mount Cenis, — described also by Schkuhr f. 181 (Pers.) and Balbis (Steud.); growing also according to Wahlenberg fl. ii. 615 in Lapland, but rare (A. Dec.).

Elyna spicata of Arctic Europe and the alpine summits of Switzerland. Observed by Allioni pl. 92 in Piedmont, — termed "carex myosuroides" by Villars pl. 6, "cobresia scirpina" by Willdenow, and known to grow in the alpine portion of Switzerland (Pers., and A. Dec.). Farther North, observed by Wahlenberg in the Scandinavian peninsula (Steud.); and by Hooker on Iceland.

year," and leaving Paul Saulnier to form a nursery in the neighbouring portion of New Jersey, Michaux at Charleston and now fairly commencing his exploration of the forests of Northeast America, meeting with *Clematis cylindrica, Cissus cordata, Gaylussàcia brachycera, Vaccinium? erythrocarpon, Menziesia globularis, Centunculus lanceolatus, Utricularia cornuta, Verbena angustifolia, Pycnanthemum montanum, Centaurella paniculata, Forestiera acuminata, Acnida (Montelia) rusocarpa, Sagittaria natans, Platanthera cristata, Smilax tamnifolia, Trillium grandiflorum, T. erythrocarpum, T. pusillum, Uvularia puberula, Streptopus roseus, S. (Prosartes) lanuginosus, Zygadenus glaberrimus, Veratrum parviflorum, Tradescantia rosea, Mayaca Michauxii, Xyris brevifolia, Eriocaulon (Pæpalanthus) flavidus; Aristida stricta, dichotoma; Spartina juncea, Paspalum laeve, Panicum anceps, P. proliferum, Erianthus brevibarbe; Andropogon scoparius, ternarius; Cyperus virens, C. Michauxianus, Eleocharis quadrangulata, E. tuberculosa, Trichophorum lineatum, Fuirena squarrosa, Rhynchospora longirostris, R. inexpansa; Scleria triglomerata, pauciflora, verticillata, Caroliniana, ciliata; Delphinium tricorne, Cimicifuga Americana, Magnolia cordata, Asimina parviflora, Diphylleia cymosa, Cardamine rotundifolia, Viola rotundifolia, V. hastata, Helianthemum corymbosum; Lechea thymifolia, Parnassia Caroliniana, Hypericum angulosum, Elodea petiolata, Claytonia Caroliniana, Blephilia hirsuta, Valeriana pauciflora, Commelyna angustifolia, Kyllingia pumila; Rhynchospora sparsa, micrantha, fascicularis, distans, capitellata, ciliata; Zizania (Hydrochloa) fluitans, Sporobolus junceus, Anthenanthia villosa (Aulaxanthus* El.); *Panicum Michauxii, nitidum, scoparium, ramulosum, pubescens, melicarium, debile; Paspalum digitaria, plicatum; Gymnopogon racemosus, Lygodium palmatum, Asplenium montanum* ii. 265, *Stipulicida setacea, Lechea tenuifolia* i. 77, *Proserpinaca pectinata* i. 76, *Plantago interrupta* i. 94; *Galium uniflorum, hispidulum; Houstonia serpyllifolia, Cornus asperifolia, Pachysandra procumbens, Phacelia fimbriata, Lysimachia angustifolia, Phlox reptans, Azalea canescens, Bumelia reclinata, Campanula flexuosa, C. divaricata, Ribes (Grossularia) rotundifolia, Rhamnus minutiflorus, Paronychia herniarioides, P. argyrocoma, Heuchera villosa, Crantzia lineata, Thaspium barbinode, Viburnum pubescens, Rhus pumila, Crotonopsis argentea, Schisandra coccinea, Allium mutabile, Clintonia umbellata, Juncus? repens, Helonias (Amianthium) angustifolium, Triglochin triandrum, Rhexia ciliosa, Gaura angustifolia, Menziesia globularis, Polygonum hydropiperoides, Eriogonum tomentosum, Pleea tenuifolia, Vaccinium arboreum, V. galezans, V. myrsinites, Kalmia cuneata, Rhododendron punctatum, R. Catawbiense, Cassia linearis, C. (Chamæcrista) fasciculata, Thermopsis mollis, Saxifraga leucanthemifolia, Alsine Michauxii,* Diamorpha pusilla, Sedum telephioides, Crataegus spathulata, Rosa setigera, Geum geniculatum, G. radiatum, Sagittaria graminea, Verbena angustifolia, Herpestis amplexicaulis, Dipteracanthus humistratus, Dentaria laciniata, Cardamine spathulata, Lobelia amœna, L. puberula, Polygala setacea, Crotalaria parviflora, Astragalus glaber, A. villosus, Psoralea canescens, P. lupinellus, Lespedeza procumbens, Desmodium glabellum, D. ciliare, D. acuminatum, D. lineatum, D. rotundifolium, Tephrosia hispidula, Nabalus crepidineus, Lactuca? graminifolia* ("flos purple," Chapm.), *Hieracium scabrum, Eupatorium serotinum, Bigelowia nudata, Hymenopappus scabiosæus, Baccharis angustifolia, B. glomeruliflora, Senecio tomentosus, Euthamia tenuifolia; Solidago virgata, pauciflosculosa, glomerata; Diplopappus amygdalinus, Aster surculosus, A. acuminatus, Boltonia glastifolia; Coreopsis latifolia, trichosperma; Helianthus tomentosus, Gymnadenia tridentata, Habenaria quinqueseta, Euphorbia pubentissima, Stillingia ligustrina.* — "1787, May 6th," he was with his son exploring the sources of the Keovee river.

"In this year" (Holmes), by the Legislature of Massachusetts, an act establishing a mint; for coining gold, silver, and copper.

Discontent among the people on account of the heavy taxation, decay of trade, large amount of private indebtedness, and a desire prevailing for a paper-money system, the courts of justice obstructed in various parts of Massachusetts; especially after the proclamation by the governor "Sept. 2d." —

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* *Arenaria lanuginosa* of Carolina and the Lower Mississippi. Observed by Michaux in Carolina, and termed "spergulastrum lanuginosum;" — by Elliot "arenaria diffusa;" by Nuttall "stellaria elongata," and observed in Carolina, Georgia, and Arkansas; by N. A. Ware, in Florida; by Chapman, on "shady banks, Florida to North Carolina and westward."

Jussieua grandiflora of Carolina and Georgia. Discovered in Georgia by Michaux; — known to grow in "South Carolina and westward" (Ell., and Chapm.), and observed by Nuttall near Savannah. Transported to Europe, escaped from cultivation in "1838," and has since become abundant in certain localities in Southern France though not as yet producing seeds (A. Dec.).

Paspalum digitaria of Carolina and Florida. Discovered by Michaux; — and known to grow along the Atlantic from Lat. 37° (Pursh) to Florida and Westward (Ell., and Chapm.). By Bosc, was carried in "1802" to Bordeaux, and has since become naturalized in the Southwestern portion of France (A. Dec); also by European colonists, was carried to Brazil and the Mauritius Islands (Kunth).

On the following "Jan. 25th," Shepard, commanding the State forces at Springfield, discovering a body of "eleven hundred" insurgents under Daniel Shays advancing towards the arsenal, gave warning, That if they approached nearer they would be fired upon: the insurgents replying, "That is all we want," continued to advance against firing over their heads; but at length received a volley, and in spite of the efforts of their leader, retreated precipitately. By Lincoln, the State commander in chief, the main body of the insurgents was surprised and dispersed Feb. 4th; many seeking refuge in the surrounding States.

"The same year" (Nicol.), Frederic II. the Great succeeded by Frederic William II., fourth king of Prussia.

"The same year" (Kobell ii.), by Lord Dundonald, first experiments on the illuminating power of the carburetted hydrogen of coal. — After three years or thereabouts, *gas-lighting* was rendered practicable and profitable by Murdoch: but more than twenty years elapsed before the lighting of streets was effected.

"In this year" (Spreng.), Joh. Sim. Kerner publishing his Flor. stuttgard.

"In this year" (J. E. Smith), Villars publishing his Plant. Dauph.

"In this year" (Winckl.), Vahl publishing the Sixth volume of the Flor. dan., — the Seventh "in 1794."

"In this year" (Pursh), C. Fr. Rottböll publishing his Icon. rar. plant., enumerating *Cyperus kyllingaeoides* pl. 4. f. 5, *C. autumnalis* pl. 17. f. 3. — He continued publishing until his death "in 1797."

"In this year" (append. Sibth., and Winckl.), Jacquin publishing his Collect., and continuing his Icon. rar., enumerating * *Plantago Patagonica* ic. ii. pl. 306: — the third and concluding volume of his Icon. rar. "in 1793," and the concluding volume of his Collect. "in 1796."

"1787 A. D." (Holmes), government by a Congress proving inefficient: ordinances being disregarded, many States neglecting or refusing to furnish their quotas of expenditure, treaties with foreign nations being in some States openly violated, and the danger of insurrections being now manifest, a convention of all the States except Rhode Island assembled in "May" at Philadelphia; and "Sept. 17th," unanimously agreed on a federal constitution. In accordance with the prescribed plan of action, Congress "Oct. 4th" unanimously resolved, "eleven States being present," That the new constitution be transmitted to the State legislatures, to be submitted to conventions chosen by the people.

"The same year" (Drayton iv. 155, and Holmes), by the Legislature of South Carolina, the Western territory of that State toward the Mississippi ceded to the general government. Baltimore at this time containing "one thousand nine hundred and fifty-nine houses."

"Aug. 11th" (Sieb. eluc. Vries p. 72), the strait separating Yeso from Krafto (Saghalien), discovered by Lapeyrouse.

"In this year" (Winckl.), David Heinrich Hoppe publishing his Ectyp. plant. Ratisb., † — the eighth volume "in 1793."

As early as this year (see Ph., and Winckl.), Retz publishing the fourth volume of his Obs. botan., enumerating *Pedicularis Groenlandica* n. 760: the sixth and last volume "in 1791."

"In this year" (Winckl., and append. Sibth.), Ehrhart publishing his Beitr., enumerating *Equisetum pratense, Carex choraorhiza, Cornus paniculata* (Pursh), — the Seventh fascic. "in 1792;" died "in 1795."

As early as this year (see Spreng., and Winckl.), Scopoli writing his Del. insubr. — He died "in 1788."

"In this year" (J. E. Smith, and Spreng.), Curtis publishing the first volume of his Bot. Mag. — He completed fourteen volumes; died in "1799," and the work was continued by Sims as far as the forty-second volume inclusive.

"In this year" (Winckl.), J. Dav. Schöpf publishing his Mat. med. amer. ‡ — "in 1788," his travels in North America.

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* *Euxolus caudatus* of Western Equatorial Africa. Received from Guinea, and termed "chenopodium caudatum" and "c. Guineense" by Jacquin rar. ii. pl. 344, 345, — and col. ii. 325 (Pers.). By European colonists, was carried to Tropical America, Bengal, Java, and Australia (Moq., and A. Dec.).

† *Braya alpina* of the Arctic region and alpine summits farther South. Observed by Hoppe on the Carinthian Alps — (Koch, and A. Dec.); by Fries 29, in Lapland only. Westward, according to Hooker, growing on the Rocky mountains from 57° to 52°.

Luzula glabrata of Arctic Europe and the mountains of Switzerland. Observed by Hoppe, — and Rostkow, on the Salzburg Alps (Pers.); termed "j. intermedius" by Host, "j. montanus" by Lamarck; observed by Mougeot on the Vosges; by Lecoq and Lamotte, on the mountains of Auvergne: growing also according to A. Decandolle in Arctic Europe.

"1788 A. D." (Holmes), at Cairo in Egypt, death of the American traveller Ledyard.

"In this year" (Winckl.), Timm publishing his Flor. megapol. prodr.*

"In this year" (Pers. i. 501), Swartz publishing descriptions of Scandinavian plants in N. act. holm.;—"in 1791," his Obs. botan.

"In this year" (Pursh), L'Heritier publishing his Sert. anglicum † and monogr. Cornus, enumerating *Cornus circinata* pl. 3, *Abrouia umbellata* pl. —.

"In this year" (Pursh), . . . Gmelin publishing his edition of the Syst. Nat., enumerating *Mitreola petiolata* 443: —completed "in 1793."

"In this year" (Durand), Michaux with his son journeying in Florida, meeting with *Befaria racemosa* (Pers., and Baldw. 336), *Styrax pulverulentum*, *Forestiera porulosa*, *Pinguicula pumila*, *Vaginaria Richardi*, *Paspalum Floridanum*, *Tripsacum cylindricum*, *Blechnum serrulatum*, *Hedyotis angustifolia*, *Ceanothus microphyllus*, *Cyrilla Antillana*, *Xanthoxylum tricarpum*, *Phalangium croceum*, *Sabal serrulata*, *Schœnocaulon gracile*, *Vaccinium nitidum*, *Sarracenia psittacina*, *Hibiscus grandiflorus*, *Petalostemum carneum*, *Aeschynomene viscidula*, *Leptopoda fimbriata*, *Lepachys pinnata*.

"In this year" (append. Sibth.), Roth publishing his Tent. Flor. Germ.

"In this year" (Spreng.), Pet. Rem. Willemet, accompanying an embassy to Tippoo Saib, visiting Mauritius Island.—He died at Seringapatan "in 1790," and his Herb. maurit. was published "in 1796."

"In this year" (J. E. Smith, and Winckl.), Gærtner publishing his Fruct. plant.,‡—He died "in 1791," and the publication was completed "in the same year."

"1789 A. D." (Holmes), the necessity of an efficient government being generally felt and acknowledged, the constitution, notwithstanding diversities of opinion, was acceded to by eleven States: and on "March 3d," delegates assembled at New York opened the votes for president, and found Washington unanimously elected. "April 30th," he was inaugurated in that city, and the new government organized: and Alex. Hamilton appointed first secretary of treasury. "May 29th," Rhode Island "adopted the federal constitution, and was annexed to the Union."

"May 5th" (Maunder), assembling by Louis XVI. of France of the states-general, "consisting of nobles, clergy, and others." Discovering the situation of the country and feeling their power, the members bound themselves by oath, not "to separate until the constitution of the kingdom, and the regeneration of public order, were established and fixed on a solid basis." July "12th," tumult at Paris, in consequence of the removal of Necker, and interference of the military with some demonstrations of disapprobation: "July 14th," the Bastile attacked and captured by the populace. "Aug. 1st," the new constitution before the National Assembly: after being discussed and adopted, it was accepted by the king.

"The same year" (art de verif.), Abd-el-Hamid succeeded by Selim III., twenty-ninth Turkish sultan. Coins issued at Cairo by Selim III. are figured in Marcel p. 249.

"In this year" (J. E. Smith), Aiton publishing his Hort. Kewensis, enumerating *Andromeda* (*Leucothoe*) *axillaris*, *Mertensia paniculata* i. 181, *Corallorhiza innata*, *Allium tricoccum*, *Viola striata*, *Agrimonia parviflora*, *Potentilla tridentata*, *Mimulus alatus* ii. 361, *Nardosmia palmata* iii. pl. 11; *Solidago serotina*, *gigantea*, *nemoralis*, *arguta*, *petiolaris*, *stricta*, *mul'iradiata* iii. p. 211–3; *Aster paludosus* iii. p. 201, *A. salicifolius*, *spectabilis*, *aestivus*, *corymbosus*, *radula*; *Betula excelsa*, *Pinus Banksiana*, *P. serotina*, *Collinsonia scabriuscula* i. 47, *Asclepias parviflora* i. 307, *Adlumia cirrhosa* iii. 1, *Epidendrum conopseum* (Steud.).

"In this year" (append. Sibth., and Winckl.), A. L. Jussieu publishing his Gen. plant.

"In this year" (Winckl.), Saint-Amans publishing his Voyage dans les Pyrénées.

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* *Calamagrostis stricta* of Subarctic climates. A grass observed by Timm. in Roth n. beytr. i. 118 near Mecklenburg in Germany—(Pers.); known to grow from Lapland and Russia to Switzerland. And Westward, in Greenland, and in British and Russian America (Wats.); observed by myself on the alpine summits of the White mountains, having a contracted spiciform panicle and long acuminate glumes. (agreeing entirely with a specimen from the mountains of Europe marked "C. epigeios").

† *Zephyranthes tubispatha* of Austral America. Transported to Europe is described by L'Heritier sert. angl. 9.—By European colonists also, carried to Hindustan; and "from Dr. Carey's garden at Serampore," introduced by Mason v. 431 prior to 1851 into the gardens of Burmah. Known to grow wild in Buenos Ayres (Pers.).

‡ *Eucalyptus gummifera* of Australia. Described by Gærtner—(Steud.), and J. E. Smith soc. linn. 284; observed in Australia by White trav. pl. (Pers.). By European colonists, carried to Hindustan, and according to Drury growing at Ootacamund.

Tulipa oculus-solis of the East Mediterranean countries. Observed by Saint-Amans naturalized around Montpelier — (A. Dec.); by Gittard, seemingly wild on the hill-sides between Arcadia and Philiatra in the Peloponnesus (Chaub.).

"In this year" (Winckl.), C. L. Hablitzl publishing an account of the Taurian countries on the West side of the Caspian, enumerating *Scrophularia rupestris* (Steud.).

"In this year" (fl. Græc. append.), J. E. Smith publishing his Icon. Ined.*

As early perhaps as this year (see Durand in Am. phil. trans.), Michaux from Charleston making more extended journeys West and North, as far as Illinois, Canada, Lake Mistassiny, and the Southern extreme of Hudson's Bay, meeting with *Allosorus gracilis, Cheilanthes tomentosa, C. vestita* ii. 270, *Asplenium thelypteroides, Sitolobium punctilobulum, Nephrodium acrostichoides, Leersia lenticularis, Vilfa aspera, Muhlenbergia glomerata, Calamagrostis Canadensis, Oryzopsis asperifolia, O. juncea, Aristida ramosissima, Spartina fluviatilis, Bouteloua curtipendula, Diplachne fascicularis, Graphephorum melicoides, Diarrhena Americana, Glyceria Canadensis, Eragrostis reptans, Avenastrum striatum, Equisetum scirpoides, Carex scirpoidea, polytrichoides, vulpinoidea, lagopodioides, lenticularis, miliaris paupercula, triceps, flexuosa, lanuginosa, striata, striatula, intumescens, rostrata, subulata, oligosperma; Magnolia macrophylla, Stylophorum diphyllum, Leavenworthia uniflora, Draba arabisans, Hypericum dolabriforme, H. nudiflorum, H. sphaerocarpon, Alsine patula, Stellaria pubera, Callirrhoe alcaeoides, Desmanthus brachylobus, Najas flexilis, Pinguicula acutifolia, Forestiera ligustrina, Heteranthera acuta, Sparganium angustifolium, Oxybaphus nyctagineus* i. 100, *Plantago cordata* i. 94, *Galium asprellum*, i. 78, *Spermacoce glabra* i. 82, *Lithospermum angustifolium, L. latifolium, Onosmodium Carolinianum, Hydrophyllum appendiculatum, Phacelia bipinnatifida, Primula Mistassinica, Ipomoea ciliolata, Pyxidanthera barbulata, Xylosteum ciliatum, X. villosum, Ribes (Grossularia) lacustre, Gonolobus laevis, Gentiana puberula, G. acuta, Erigenia bulbosa,† Viburnum lantanoides, Cycloloma platyphyllum, Juncus marginatus, J. acuminatus, Luzula melanocarpa, Tofieldia glutinosa, Polygonum ramosissimum, P. tenue, P. (Helxine) cilinode, Vaccinium cæspitosum, Pyrola chlorantha, Rubus pistillatus, Waldsteinia fragarioides, Calomelissa glabella, Verbena bracteosa, V. stricta, Conobea multifida, Herpestis rotundifolia, Gerardia auriculata, Pedicularis lanceolata, Echinocystis lobata, Petalostemum candidum, P. violaceum, Astragalus secundus, Nabalus asper, N. racemosus, Artemisia Canadensis, A. caudata, Bellis integrifolia, Cænotus divaricatus, Aster uniflorus, A. sericeus, Boebera glandulosa, Actinomeris helianthoides, Coreopsis aristosa, Helianthus mollis, Rudbeckia subtomentosa, Silphium integrifolium, Ambrosia bidentata, Listera convallarioides, Croton capitatum, Tragia macrocarpa, Euphorbia dentata, E. mercurialina, Salix candida, Populus grandidentata; Quercus imbricaria, macrocarpa, castanea; Dalea alopecuroides* pl. 38 (Nutt.), *Lycopodium lucidulum* (Willd.). — After travelling more than three thousand miles he sailed for Europe, and reached Paris "Dec. 26th 1796." Joining Baudin's expedition "in

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* *Ehrarta panicea* of Austral Africa. Known to grow wild there. Transported to Europe, is described by J. E. Smith i. pl. 9, and Lamarck enc. ii. p. 347 — (Pers.); and prior to 1848 had become naturalized around Portici (Parlat., and A. Dec.).

† *Ligusticum acteaefolium* of the Atlantic shore of North America. Observed by Michaux at Tadousac on the Lower St. Lawrence — (Hook.); by myself, among the sea rocks of the Northern portion of Massachusetts Bay, the flowers greenish; termed by Nuttall "angelica peregrina."

Hieracium nudicaule of Canada. Allied to H. venosum, but having larger flowers and the leaves not veined: — described by Michaux; and observed by myself near Quebec.

Anacharis Canadensis of Northeast America. Discovered by Michaux in the waters of the St. Lawrence, — and observed by A. Gray (probably in Western New York) in "slow streams and ponds common;" but not seen by myself in New England, its Northern limit along the Atlantic being perhaps 41°; observed by myself as far South as 39°, by Pursh in Virginia, by Curtis in North Carolina and Cherokee (Chapm.); and Westward, by Nuttall in Arkansas. Transported to Europe, was first observed in Britain "in 1842," and has since become widely extended, multiplying by division, the flowers being all female (A. Dec.).

Glyceria nervata of Northeast America. Discovered there by Michaux: — observed by myself in wet ground along the Atlantic from Lat. 46° near Montreal to 39° beyond Philadelphia, by Schweinitz at 36° in North Carolina, by Chapman in West Florida; and by Short, in Kentucky. Transported to Europe, has become naturalized prior to "1853" at Mendon near Paris (J. Gay, and A. Dec.).

Trisetum molle of Northeast America. Much resembling T. subspicatum: observed by Michaux in Canada — (Kunth); by myself, from 48° on the Lower St. Lawrence to 42° 30′ near Salem; growing according to A. Gray on "mountains and rocky river-banks, N. New England to Wisconsin, and northward;" according to Chapman, on the "mountains of North Carolina."

1801," he left at Mauritius Island; and after "six months," proceeded to Madagascar, where he established a botanic garden at Tamatave and died at the "end of December 1803." His Flor. bor. am. was published in this year by L. C. Richard at Paris.

"In this year" (J. E. Smith), Lamarck publishing his Dict. encycl. bot.,* enumerating *Panicum agrostoides, Carex crinita, C. plantaginea, C. Pennsylvanica, Coreopsis delphinifolia* ii. p. 108.

Piddingtonia nummularia of the mountains of Eastern Asia. A creeping Lobeliad described by Lamarck enc. iii. 589. — In its wild state known to grow only in Nepal and on Java (Pers., and A. Dec.).

Boerhaavia paniculata of Equatorial Africa? Received from Guinea by Bentham fl. Nigr. p. 495. Described from American specimens by Lamarck, — and Richard (Steud.), and regarded by Choisy as an American species. By European colonists was carried from one continent to the other (A. Dec.).

Lipocarpha argentea of Equatorial Africa and Madagascar. A Cyperaceous plant received from Senegal by Lamarck, — and known to grow in other parts of Equatorial Africa and in Madagascar (Ad. Juss). Probably by European colonists, carried Eastward, and to Tropical America (R. Brown cong., and A. Dec.).

"The same year" (Brendel in Am. Nat. for 1870), in the expedition of Malaspina, Née visiting South America; also Mexico, where he met with *Quercus circinata, magnoliæfolia, microphylla, splendens, acutifolia, elliptica, castanea, candicans, tomentosa.*† — Leaving Mexico, he continued Westward to the islands of the Pacific, until "1794."

Dahlia variabilis of Mexico. Known to grow wild there (Pers.); and in this year, received at Madrid (Cav. ic. i. pl. 80 and iii. pl. 265): soon becoming a favourite flower in the gardens of Europe, and by way of France according to Clot-Bey was introduced into Egypt: by European colonists also, was carried to Hindustan, "several varieties" observed "in gardens" there by Graham; to Burmah, "exotic" there according to Mason; and to Northeast America, where it continues under cultivation for ornament.

"1790 A. D." (Holmes), by census, the United States found to contain "three million nine hundred twenty-nine thousand three hundred and twenty-six" inhabitants: including "six hundred ninety-five thousand six hundred and fifty-five" slaves.

"In this year" (Spreng.), Ludw. Castiglione publishing an account of his travels in North America, containing a List of plants.

The aboriginals of Surinam, described by G. H. Apthorp (hist. coll. i. p. 61) as "a harmless friendly set of beings," in "general short of stature, but remarkably well made, of a light copper color" (Mongolians), "straight black hair, without beards, high cheek-bones, and broad shoulders;" both "men and women go naked;" the women wearing "ornaments of silver, etc.," in "their ears, noses, and hair;" one tribe "tye the lower part of the leg of the female children, when young, with a cord bound very tight for the breadth of six inches about the ancle, which cord is never afterwards taken off but to put on a new one; by this means the flesh which should otherwise grow on that part of the leg increases the calf to a great size and leaves the bone below nearly bare." The language "appears to be very soft." They manufacture "a few articles, such as very fine cotton hammocks, earthen water pots, baskets, a red or yellow dye called roucau (. . . .), and some other trifles, all which they bring to town and exchange for such articles as they stand in need of. They paint themselves red, and some are curiously figured with black. Their food consists chiefly of fish, and crabs, and *cassava*, of which they plant great quantities, and this is almost the only produce they attend to." Though not "absolutely wandering tribes," their huts, "merely a few cross sticks covered with branches" to keep out the rain and sun, are frequently abandoned "if they see occasion, and" they "establish themselves elsewhere. They do not shun the Whites, and have been serviceable against the run-away Negroes."

"In this year" (append. Sibth.), J. E. Smith commencing the "English Botany," the figures by Sowerby, — completed in "thirty-six volumes in 1814."

"In this year" (Winckl.), Thuillier publishing his Flor. des environs de Paris, enumerating *Carex teretiuscula.*

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* *Carex Virginiana* of Northeast America. A sedge forming hassocks or large projecting tufts in marshes subject to overflow, and wounding the fingers if handled incautiously: from transported specimens termed "c. stricta" by Lamarck, — "c. Virginiana" by J. E. Smith in Rees cycl.: observed by myself from 43° to 39° along the Atlantic; by J. Carey, "very common" (A. Gray); by Muhlenberg, in Pennsylvania and Virginia; by Schweinitz, to 36° in North Carolina; by Elliot, in upper Carolina; and according to Torrey, grows from Canada to Georgia.

† *Quercus lobata* of California. Specimens procured and described by Née.

"In this year" (append. Sibth., and Winckl.), Martin Vahl publishing his Symbol. bot.*

Thalia dealbata of Carolina and the Lower Mississippi. Discovered by J. Millington in the "impenetrable swamps of" South Carolina (Roscoe act. linn. viii. 340, and Ph.), and "in this year" according to John Fraser pl. (Pritzel): observed by Leconte in Southern Georgia; by Baldwin, at the mouth of the Satilla; by Nuttall, on the Arkansas, as far North as Lat. 35°. Transported to Europe, is termed "Peronia stricta" by Laroch. (Red., Poir., and Steud.); was sent by Delile from the Montpelier garden to Egypt, observed by Clot-Bey among other aquatic plants.

"1791 A. D." (Holmes), by act of Congress, Vermont, which during the war had assumed a provincial government, admitted into the Union as the fourteenth State.

"The same year" (Holmes), by the British parliament, the province of Quebec divided into Upper and Lower Canada.

"April 19th to 21st" (hist. coll. ii. p. 20), by Capt. Joseph Ingraham on his way to Northwest America, seven islands discovered in continuation of the Marquesas Northward to within 8° 3′ of the Equator. The natives resembled those of the Marquesas, "except one young man, who had his hair stained white at the ends, as is common at the Sandwich Islands." Opye, a Sandwich islander on board, returning after twenty months absence at New York and Boston, was unable to understand the language of the Marquesas.

"The same year" (Kobell iv.), *galvanism* discovered by Galvani. — And shown not long afterwards by Volta to be an electrical phenomenon.

"In this year" (suppl. Sibth.), publication of the first volume of the Transactions of the Linnæan Society of London.

As early as this year (Willd. sp. pl. ii. 311), Curtis mag. 352 describing *Oenothera purpurea* of Northwest America.

"In this year" (Winckl.), P. K. A. Schousboe Danish consul in Marocco. — He continued until "1793," and commenced publishing his researches "in 1800."

"In this year" (J. E. Smith), after his Monadelph. diss. "in 1790," Cavanilles publishing his Icon. Plant. enumerating† *Madia viscosa* iii. pl. 298. — The sixth and concluding volume in "1801."

"In this year" (Spreng.), Lamarck publishing his Illustr. gen. plant.; — completed in nine hundred plates "in 1800."

"In this year" (Willd.), Thaddeus Haenke publishing an account of his excursion to the Riesengebirge. — His observations in North and South America, the Ladrone or Marian Islands and the Philippines, were published by Presl "in 1830–6" (Pritzel).

"In this year" (Pursh), J. E. Smith publishing his Spicileg. bot., enumerating *Hypoxis juncea* pl. 16.

"In this year" (Winckl.), La Billardière sailing with D'Entrecasteaux in search of La Perouse.‡

"In this year" (J. E. Smith), Salisbury publishing his Icon. Rar., enumerating *Canna flaccida* pl 2 (Willd.), — his Hort. Allerton "in 1796," and Nymphaeae in Sims ann. bot. ii.

"1792, April 17th" (art de verif.), Vancouver arriving by way of the Hawaiian Islands in Northwest America, near Cape Mendocino in "N. Lat. 40° 19′," and turning Northward Menzies accompanying him and meeting with *Menziesia ferruginea, M. empetriformis, Myginda myrsinites, Arbutus Menziesii, A. tomentosa, Vaccinium obtusum, Saxifraga pectinata, Tiarella Menziesii, Mitella grandiflora, Spiraea capitata, Rubus pedatus, R. stellatus, Lupinus Nootkatensis; Ribes laxiflorum, speciosum, Menziesii; Quercus Garryana* (Brendel).

"In this year" (Jap. mann. 272), Laxmann in a Russian ship at Matsmai, bringing shipwrecked Japanese. He was formally thanked, but informed, That "if the Russians ever again landed" at any port except Nagasaki, "they would be made prisoners."

"June 1st" (Holmes), Kentucky admitted into the Union as the fifteenth State. The revenues of the United States for this year, estimated at "three million seven hundred thousand dollars:" and

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* *Carex Vahlii* of Arctic Europe and the alpine summits of Switzerland. Termed "c. alpina" in fl. Dan. pl. 403 (Pers.), but distinguished by Schkuhr, and known to grow in Lapland (Pers.); also on the alpine portion of Switzerland (A. Dec.).

† *Chenopodium fœtidum* of Mexico. Known to occur there (Moq.). Transported to Europe, is described by Cavanilles, — Schrader, Lagasca, and Schultes (Steud.): probably by European colonists, carried to Buenos-Ayres, Austral Africa, and Abyssinia (Moq., and A. Dec.).

‡ *Eucalyptus globulus* of Australia. Observed there by La Billardière. — Introduced into Hindustan and at Ootacamund attained nine feet in girth in eighteen years, has spread rapidly on the Neilgherries and other high lands and has "become naturalised" as low down as "three thousand or four thousand feet" (Drur.). By European colonists also was carried to the Mediterranean countries, and has become acclimatized in Algeria, Spain, Corsica, and Southern France.

the tonnage of vessels paying duty during the year ending "Sept. 30th," including coasting and fishing vessels, amounted to "eight hundred thousand two hundred and sixty-one" tons; of which "five hundred forty-nine thousand two hundred and seventy-nine," were owned exclusively in the United States (Coxe).

"The same year" (Nicol.), Leopold II. succeeded by Francis II., forty-third emperor of Germany and Italy.

"Sept. 23d" (Maunder), at Paris, the new constitution set aside and a so-called "republican" government instituted.

"In this year" (append. Sibth.), publication of the first volume of the Act. soc. nat. paris.

Nardosmia fragrans of Dauphiny and the Pyrenees. Termed "tussilago fragrans" by Villars act. soc. nat. par. i. pl. 12, — and soon afterwards cultivated in gardens for its fragrance (Pers.). In Britain has escaped from cultivation in four or five localities, and according to Watson seems naturalized (A. Dec.).

As early as this year (Pers. i. p. 55, and Pritzel 417), J. B. Leblond in Cayenne, meeting with *Commelyna Cayennensis, Cyperus brizaeus*. — A Catalogue of plants sent by him published in Soc. d'hist. nat. de Paris i. 105–14.

"In this year" (soc. linn. lond. ii. and iii.), memoir by Goodenough and Woodward on Carex sp., enumerating *C. vulgaris*, — a second memoir read "in 1795."

Carex stricta of Europe and the adjoining portion of Asia. Described by Goodenough, — and Schkuhr 60 pl. v, f. 73: known to grow in marshes from Sweden and Russia throughout middle Europe (Engl. bot. pl. 914, Thuill., Pers., and Wats.): observed by Sibthorp frequent in the marshes of the Peloponnesus.

Carex rigida of Northern Europe and the adjoining portion of Asia. Described by Goodenough (soc. linn. ii. pl. 22) as observed on the mountains of Scotland: — described also by Schkuhr 56 pl. u. f. 71 (Pers.); and the species figured in Engl. bot. pl. 2407 was observed by Sibthorp in the open country around Constantinople. Westward, C. rigida was observed by Hooker in Iceland; and according to J. Carey grows on "alpine summits of the mountains of Northern New England and New York, and high northward" (A. Gray).

Carex fulva of Europe and Northeast America. Described by Goodenough, — and known to grow in meads and on mountains throughout middle Europe (Schkuhr t. T. f. 67, Host i. pl. 77, and Pers.): observed by Chaubard in moist places in the Peloponnesus. Westward, was received by Goodenough from Newfoundland (Hook.); was observed by B. D. Greene on the border of a lake at Tewksbury in Eastern Massachusetts (J. Carey).

"In this year" (Spreng.), after his Baiersch. flor. "in 1789," Franz von Paula Schrank publishing Primit. flor. salisburg.

"In this year" (Winckl.), Moritz Balthas. Borckhausen publishing his Nov. meth. plant. germ. — A second edition was published "in 1809," after his death.

Atriplex nitens of Eastern Europe and the adjoining portion of Asia. A large species termed "a. viridis" by Ehrhart, "a. sagittata" by Borckhausen (Schkr.), and known to occur along hedges in Germany (Hoffm., and Pers.). In Britain, found adventive on the isle of Wight (Bromf., and A. Dec.).

"In this year" (Spreng., and Winckl.), G. A. Olivier travelling in Persia.

"1793, Jan. 21st" (Maunder), Louis XVI. of France beheaded; "Oct. 16th," his wife Marie Antoinette beheaded. The European governments having armed against France, and civil war breaking out at home, the so-called "reign of terror;" during which, the guillotine was kept in constant action.

"April 29th" (Holmes), proclamation of neutrality by president Washington.

"The same year" (Nicol.), Fourth partition of Poland.

"In this year" (Winckl.), Uster publishing his Neuen Ann. Bot., — continued "until 1801."

Ornithogalum spathaceum of Eastern Europe and the adjoining portion of Asia. Described by Hayne in Ust. n. bot. annal 15, — termed "o. Haynii" by Roth, and known to occur around Hamburg and in the duchy of Oldenburg (Pers.): observed by Sibthorp near Abydos on the Dardanelles, and on Cyprus.

"In this year" (Winckl. 379), J. E. Smith publishing his Specimen of the botany of New Holland.*

"The same year" (Pauth. 463), arrival at Pekin of the first English ambassador, Macartney. An account of the proceedings and the journey through China, is given by G. Staunton; and among the plants collected were *Penthorum Chinense* (Pursh 323).

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* *Eucalyptus robusta* of Australia. Received by J. E. Smith soc. linn. iii. 283 (Pers.). By European colonists, carried to Hindustan; and according to Drury growing at Ootacamund.

"End of July" (Walp. trav. 169), arrival of W. G. Browne in Dar-Fur, accompanying the Soudan caravan. He was detained in the country — until "the spring of 1796," when he was allowed to depart with a return caravan for Siout.

"1793-4 A. D." (Mann), Vancouver re-visiting the Hawaiian Islands, where Menzies "made large and valuable collections, mostly on Hawaii."

"1794, March" (Holmes), by Congress, acts passed: To provide a naval armament; and For fortifying and garrisoning the principal ports in the United States. "July," insurrection in Western Pennsylvania; the insurgents surrendering in "October," on the approach of a body of fifteen hundred militia. "Nov. 19th," treaty with Britain of amity, commerce, and navigation, signed at London by John Jay on the part of the United States.

"July 28th" (Maunder), Robespierre, member of an executive committee, beheaded; and comparative quiet restored. The constitution of "the third year" was soon afterwards put in force; a "directory" of five persons having the executive power.

"In this year" (Spreng.), Adrian Hardy Haworth* publishing his Obs. on *Mesembryanthemum;* — "in 1812," his Synops. plant. succulent.

"In this year" (Spreng.), after his letters from Sicily and Turkey in "1779–84," Domenico Sestini publishing his Viagg. da Bucharest à Constantinople.

"In this year" (title-page, and Winckler), Ottav. Targioni-Tozetti publishing his Institut. botan.; — "in 1809," his Dict. botan. nom. vulg., a second edition "in 1825," and died "in 1829."

"The same year" (Maunder), the Dutch driven out of Ceylon by the English. — The island was afterwards confirmed to Britain by the treaty at Amiens.

"Dec. 23d" (Dallet 70 to 136), first entrance of a Catholic priest into Corea, a Chinese called P. Jacques Tsiou. He entered clandestinely at midnight, and for assisting on this occasion, Paul Ioun in the following year was put to death.

"1795 A. D." (Maunder), in the beginning of this year, the French armies in general successful on the land had not only repelled invasion, but were in possession of the Austrian Netherlands, Holland, part of Germany as far as the Rhine, and Savoy.

"The same year" (Pauth. 463), arrival at Pekin of an ambassador from the Dutch East India company. An account of the proceedings and journey, is given by Van Braam.

"The same year" (Nicol.), Fifth partition of Poland.

"The same year" (Kobell ii.), by A. Sennefelder at Munich first experiments in *lithography;* with "Solenhofen or Killheimer" calcareous slate from the neighbourhood. — The material has proved the best anywhere discovered to the present day, and is exported to all parts of the civilized world.

"In this year" (Winckl.), Santi publishing his Viagg. al Montamiata; — the third and concluding volume "in 1806."

Allium album of Italy and Greece. Described by Santi — (Chaub.); observed by Sibthorp pl. 325 in Italy, and termed "a. lacteum;" by Chaubard, in the Peloponnesus.

"In this year" (append. Sibth.), Retz publishing a Second edition of his Flor. Scand. prodr., enumerating *Saxifraga tricuspidata, Alsine Groenlandica* n. 552; — his Flor. oeconon. suec. "in 1806;" Fl. Virgil. "in 1809;" and died "in 1821."

"In this year" (J. E. Smith, and Spreng.), P. P. Lapeyrouse publishing his Flor. pyr. illustr., — the fourth and last volume "in 1801," and his Hist. abrég. plant. pyren. "in 1813."

"In this year" (Winckl.), Roxburgh publishing his Plants of Coromandel,† — completed "in 1819."

"1796 A. D." (Holmes), Tennessee admitted into the Union as the sixteenth State.

"Feb. 8th, first day" of the Chinese year (Pauth. 463), abdication of Kien-loung in favour of his son Kia-king, now three hundred and fourth Chinese emperor.

"April" (Maunder), the Austrians and Piedmontese defeated by Bonaparte; a young man just appointed commander of the French army in Italy.

"The same year" (Kobell ii.), in the North Pacific among the Aleutian Islands, rising of a new volcanic island out of the sea. — After a while, it gradually sunk down and disappeared.

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* *Yucca recurvifolia* of Carolina and Florida. Introduced "in 1794" into Britain, — and described by Haworth, and Salisbury par. lond. 31 (Loud. encycl. plant.). Westward, observed by Leconte in Lower Georgia; by Nuttall, "in sandy fields, North Carolina."

† *Indigofera cærulea* of Eastern Hindustan. Discovered by Roxburgh, cultivated by him and found to yield quantities of the most beautiful light *indigo* — (A. Dec., and Drur.).

Pyrethrum Indicum of Eastern Asia. Observed by Roxburgh iii. p. 436 in Eastern Hindustan; — and at Bombay, by Nimmo (Graham). Farther East, the *Indian feverfew* is enumerated by Mason v. 432 and 789 as "exotic" in Burmah, "often seen in gardens in" the city of Maulmain. By European colonists, carried to the Mauritius Islands and cultivated in gardens (Boj.); and to Europe, Sims bot. mag pl. 1521.

"The same year" (Nicol.), Catharine II. succeeded by Paul, now Russian emperor.

"In this year" (Spreng.), Karl Gottl. Rafn publishing his Flor. Dan. and Holstein; — the second and concluding volume "in 1800."

"The same year" (Holmes), by Benjamin Thompson of Massachusetts or count Rumford of Munich, a donation of "five thousand" dollars to the American academy of sciences: the interest to be given as a premium every second year, for the most important discovery or improvement relating to heat and light. This being confined to America: while (as appears from other authorities), a like sum was given for the same purpose to a Society in Britain.

"In this year" (Winckl.), F. A. Marschall von Bieberstein visiting the countries along the Western shore of the Caspian, meeting with .... (Willd. iii. 274). — He made subsequent visits "in 1798, 1802 and 1805," published his Flor. taur.-caucas. "in 1808," completed with a supplement "in 1819," and died "in 1826."

"In this year" (Spreng. gesch.), Jo. Aloys. Froelich publishing his Gentian. libell., enumerating *Gentiana linearis* 37. n. 11.

"In this year" (Spreng.), Francis Masson publishing his Stapel. nov.

In this year (Act. linn. soc. vi. pl. 28), Forster describing *Solea concolor* of North America (Ph.). — He died "in 1798."

"In this year" (Willd.), James Donn publishing his Cat. hort. cantabrig.*

"In this year" (Spreng.), Lamarck completing the Fourth volume of his Dict. encycl. bot., enumerating *Hypericum fasciculatum* iv. 153, *H. galioides* iv. 154.

Momordica Senegalensis of Tropical Western Africa. Known to grow wild from Senegal to Guinea (Pers., and A. Dec.). Transported to Europe is described by Lamarck enc. iv. 239. — By European colonists, transported also to Brazil, where it continues to occur near dwellings, following the footsteps of man (M. A. de Cazal, and A. St. Hilaire).

"1797, Feb. 4th" (Cavanilles, and Humb. cosm. v.), *earthquake* destroying the city of Riobamba on the Andes, and in the course of a few minutes more than twenty thousand of its inhabitants. The columns of smoke of the volcano of Pasto, at least 200 miles distant, diaappeared on the same morning, and never reappeared.

"In this year" (append. Sibth.), Roth publishing his Catalect. Botan.

Erysimum virgatum of the mountains of Western Europe. Described by Roth cat. i. 75 — (A. Dec.): observed by Brotero i. 575 in Portugal; by Schleicher, in Switzerland (Pers.). Transported to Britain, has been found adventive, springing up spontaneously (Wats. cyb. iii. 384).

"April 17th" (praef), after his Amaranth. "in 1790," C. L. Willdenow publishing the First volume of his Species plantarum, enumerating among botanical friends who had contributed dried specimens Günther, Hedwig, Hayne, Humboldt, Isert, Klein, Panzer, Pohl, Reiner, Roth, Rottler, Rudolphi, Schmidt, Schrader, Timm, Trattinick, Usteri, Vahl: and among plants describing *Muhlenbergia Willdenovii*, *Calamagrostis confinis* (Steud.), *Elymus striatus*, *Rhynchospora cymosa*, *Eleocharis obtusa* (Steud.), *Leersia Virginica*, *Ceratochloa unioloides* "festuca" of W. (Baldw. rel. 106–12); North American plants, communicated perhaps in all instances by Muhlenberg.

"July 7th" (Holmes), a system of predatory violence under the authority of the French government continuing, an act passed: To declare the treaties heretofore concluded with France, no longer obligatory on the United States.

"In this year" (Jap. mann. 268), first appearance of an American ship in Japan, the Eliza of New York, Capt. Stewart, hired by the Dutch authorities at Batavia in consequence of the war: the Japanese officials were sorely perplexed by the crew speaking English, but at length convinced that they were not "real English," the Eliza was admitted "as a Dutch ship." — Capt. Stewart afterwards attempted unsuccessfully to open direct trade with Japan.

"The same year" (Nicol.), Frederic William II. succeeded by Frederic William III., fifth king of Prussia.

"In this year" (append. Sibth.), Jacquin publishing his Hort. schoenbr., enumerating *Asclepias quadrifolia*.

"In this year" (Winckl.), Host publishing his Synops. plant. austr.; — and "in 1827–31," his Flor. austr.

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* *Claytonia perfoliata* of Northwest America. Growing according to Hooker from the mouth of the Columbia to the Rocky mountains. Probably as a potherb transported to Mexico and Cuba (Dec.), and thence to Europe, where it is described by James Donn hort. cantab. p. 25, — (Willd.); is termed "limnia perfoliata" by Haworth (Steud.), and of late years escaping from cultivation has become naturalized around London: "in 1852," was observed by Corder at Ampthill, at a long distance from any garden; and "in 1853," was found at Weybridge and at Clapham (phytol. 485 to 982, and A. Dec.). Was seen in Cuba by Humboldt and Bonpland, and termed "c. Cubensis."

Euphorbia salicifolia of Central and Eastern Europe. Distinguished by Host syn. 267 as observed in Austria, — and known to grow as far as Central and Eastern France (A. Dec.); observed by Waldstein and Kitaibel pl. 55 in Hungary (Pers.). In Britain, has maintained itself more than forty years on a point of Scotland, but does not appear to spread around (Lawson, and A. Dec.). "E. agraria" of Bieberstein as well as "E. segetalis" of Pallas are regarded as not distinct (Steud.).

"In this year" (Winckl.), A. B. Lambert publishing his gen. Cinchona.

In this year (Spreng., and Pers. ii. p. 272), Poiret preparing the fifth volume of the Dict. encycl. bot., enumerating *Polygala ramosa*, *Aristida purpurascens*, *Ranunculus recurvatus*, *Smilacina ciliata*, *Erigeron? longifolium* viii. p. 480. — The concluding volume was issued "in 1808."

"In this year" (Act. linn. soc. vii. 96), Rudge publishing descriptions of Carices, including *Carex ovata*.

"In this year" (Pursh), John Abbot publishing his Lepidopt. insects of Georgia.

"In this year" (J. E. Smith), Andrews publishing his Bot. Repos.,* enumerating *Gentiana Andrewsii*, — completed in ten volumes.

"The same year" (Kobell iv.), after discovering the peculiar metal *chromium*, its presence in an ore of iron in sufficient quantity to be of use in the arts, ascertained by Vauquelin.

"The same year" (Hale ethnogr. Expl. Exp. p. 145), Searle Island in the Paumotuan coral-archipelago discovered by Wilson; and found deserted, though there were traces of its having been visited. — "Thirty years later," a scanty population was found on the island by Beechey: and this continued when visited by our expedition in 1839.

"1798, June" (Holmes), an act, To authorize the defence of merchant vessels of the United States against French depredations. And "July 13th," by President Adams, Washington appointed commander in chief of the defensive army: the appointment was accepted.

"In this year" (Spreng.), L. A. G. Bosc residing in Charleston, examining especially the grasses and fungi, and meeting with *Hydrocharis* (*Limnobium*) *spongia*, *Panicum autumnale*, *Drosera capillaris* (Baldw. 75), *Phalaris intermedia* (Baldw. 141, and Chapm.).

In this year (Act. linn. soc. viii. 303), Salisbury describing *Trollius laxus* of North America (Ph.).

"July 1st" (Thiers, and Ryme), after overthrowing the independence of Malta, landing of Bonaparte with a French army near Alexandria. Obtaining possession, — the French held Egypt more than three years.

"Aug. 1st" (Maunder), naval combat in the Bay of Aboukir; the French fleet defeated by the English under Nelson.

"In this year" (J. E. Smith), Desfontaines publishing his Flor. Atlant. — The work was completed "in 1800" (Winckl.).

Arabis albida of mountain-summits around the Mediterranean. Observed by Desfontaines on Atlas and termed "turritis verna" — (Boissier); by Lemann, on Madeira; by Webb, between "seven and nine thousand feet" on the Canaries; by Gussone, on Sicily; by Ledebour, in the Crimea, and on Caucasus and the Talush mountains; was received by A. Richard from the elevation of "ten thousand feet" in Abyssinia, agreeing with fig. 71 in Jacquin f. ecloge (A. Dec.).

Orchis longicornis of the Mediterranean countries. Observed by Desfontaines pl. 246 in shaded situations in Algeria — (Pers.); by Sibthorp, in the Peloponnesus.

Juncus Fontanesii of the Mediterranean countries. A rush — distinguished by Gay: observed by Chaubard in the Peloponnesus.

Carex distachya of the Mediterranean countries. Observed by Desfontaines atl. pl. 2 in Barbary; — by Chaubard, in grassy places in the Peloponnesus; known to grow also on the Alps at Salsburg (Schkuhr 36. t. G. f. 33, and Pers.).

"In this year" (Winckl.), A. F. Link and Hoffmannsegg visiting Spain and Portugal. — They published their Flor. portugaise "in 1809–14."

Ophrys bombylifera of the Mediterranean countries. Described by Link, — and known to grow in Portugal (Pers.): observed by Chaubard in the Peloponnesus.

"In this year" (Spreng.), Gaetano Savi publishing his Flor. pisan.; — "in 1808–15," his Botan. etrusc.

Not later than this year (see Spreng.), Hamilton-Buchanan accompanying the embassy of Symes to Ava.

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* *Acacia longifolia* of Australia. Known to grow wild there (A. Dec.). Transported to Europe, is described by Andrews pl. 20, — Willdenow, Poiret, and Ventenat pl. 6 (Pers., and Steud.). By European colonists was carried to St. Helena, where it has become abundantly naturalized (Seeman).

Acacia stricta of Australia. Transported to Europe, described by Andrews pl. 53, — and Desfontaines (Pers., and Steud.). By European colonists, was carried to Hindustan, where it continues "thickly sown and planted in the neighbourhood of Ootacamund" for firewood (Morgan, and Drury).

Torenia parviflora of Madagascar and the Mauritius Islands. Observed by Hamilton-Buchanan in Southern Hindustan — (Benth.), and known to occur also in Burmah (herb. Dec.). Westward, is termed "nortenia Thouarsii" by Cham. and Schlect. as growing on Madagascar and the Mauritius Islands. By European colonists, was carried to Brazil and Guayana (A. Dec.).

"In this year" (Pursh), Jacquin publishing the Third volume of his Hort. Schoenbr., enumerating *Cyperus speciosus*.

"In this year" (W. sp. pl. iv. 183), Willdenow describing plants in Act. berol., including *Chara foliolosa* from Muhlenberg.

Najas Indica of Hindustan. Received from Tranquebar and described in this year by Willdenow act. berol. 1. f. 3: — growing also according to Bory on the Mauritius Islands (Kunth enum. iii. 114, and A. Dec.).

"In this year" (Spreng.), Joh. Christoph Wendland publishing his Ericarum icon., — the seventeenth and last fascic. "in 1806."

"1799, Feb. 10th" (Holmes), the French frigate Insurgente of "forty-four" guns, captured by the Constellation under Truxton. The American navy in this year consisting of "forty-two vessels, carrying nine hundred and fifty guns."

"Aug. 29th" (Nicol.), death in France of the captive pope Pius VI. He was succeeded at Rome by Pius VII., ninety-seventh pope.

Euphorbia calendulæfolia of . . . . Discovered by Delile, occurring as a weed in cultivated fields near Cairo. — Its native country remains unascertained.

"Oct. 13th" (Maunder), arrival from Egypt of Bonaparte at Frejus in France. "Nov 9th," he drove out the Legislature at the point of the bayonet, and abolished the constitution "of the third year." The Directory was declared extinct, and a new constitution formed, vesting the executive power in three consuls: Bonaparte was made first consul.

"In this year" (Spreng.), Jak. Sturm publishing his Deutschlands flora.

"In this year" (title-page), Willdenow publishing the Second volume of his Sp. plant.

Nov. 10th (. . . .), meteoric shower witnessed by Humboldt and Bonpland shortly after their arrival on the Northern coast of South America. In traversing this portion of the continent from the Orinoco to the Magdalena, they met with *Quercus Humboldtii*, and *Q. Tolimensis*, in New Granada* (Brendel).

"Dec. 14th" (Holmes), death of Washington.

"1800 A. D." (Holmes), removal of the seat of government into a slave State, to Washington city on the Potomac. The more prominent Northerners now took one another out of the way, and their places were filled by slaveholders, and Emancipation was effectually arrested.

"The same year" (Holmes), *vaccination* introduced into America by Benjamin Waterhouse of Cambridge.

"In this year" (suppl. Sibth.), J. E. Smith publishing his Flora Britannica.† And as early perhaps wrongly including among British plants *Salix petiolaris*.

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* *Mikania guaco* of the banks of the Magdalena. An herbaceous vine, regarded as a remedy for the bites of venomous serpents: observed by Humboldt and Bonpland æq. ii. pl. 105 in hot damp places along the Magdalena — (Steud., and Lindl.).

Nelsonia canescens of Equatorial Africa. An Acanthaceous plant observed by Humboldt and Bonpland in Tropical America (Steud.). Known to grow at Fazohkel and in other parts of Equatorial Africa — (Nees in Dec. prodr. xi). Occurring also in Australia; but probably by European colonists carried to the West Indies and Columbia (H. and Bonpl. and A. Dec.).

Telanthera maritima of the shores of Tropical America. Observed there by Humboldt and Bonpland (Steud.); — known to grow in the West Indies and Brazil (A. Dec.), and in "South Florida" (Chapm.). From transported specimens, described by Willdenow (Steud.). Occurring also on the opposite African coast, at Oware (Moq.), and in Guinea (fl. Nigr.), probably transported by the ocean currents.

Iresine aggregata of the shores of Tropical America. Observed there by Humboldt and Bonpland (Steud.); — known to grow from Cuba to Bahia (A. Dec.), and from transported specimens described by Willdenow (Steud.). Occurring also on the opposite African coast, in Senegambia (A. Dec.), probably transported by the ocean currents.

† *Rosa micrantha* of Western Europe. The small-flowered sweet-briar distinguished by Smith on account of its deciduous calyx-lobes. By European colonists was carried to Northeast America, — has been found in "Eastern New England, naturalized" (A. Gray).

Carex lævigata of Western Europe. Observed by Smith iii. 1005, in Britain; — described also by Schkuhr t. 2. f. 83, t. Bbb. f. 116, t. Sss. f. 162; and known to grow in marshes in middle Europe (Pers.). Westward, was received by Dewey from Massachusetts and termed "c. Greeniana," is enumerated by J. Carey as "introduced?"

In this year (Act. linn. soc. x.), Lambert pl. 6 describing *Pentstemon frutescens* of North America.

"In this year" (Winckl.), J. C. Schleicher publishing his Plant. Helvet.*

"In this year" (title-page), Willdenow publishing the Third volume of his Sp. plant., enumerating *Arabis laevigata* (Muhl. in litt.), *Polygala paucifolia* (Muhl.), *Lathyrus myrtifolius* (M.), *L. venosus* (M.), *Vicia Americana* (M.), *Desmodium cuspidatum* (M.), *D. glutinosum* (M.), *Cirsium discolor* (M.), *Bidens connata* (M.), *Cacalia reniformis* (M.), *Eupatorium pubescens* (M.), *Aster prenanthoides* (M.), *Solidago patula* (M.), *S. ulmifolia* (M.), "erigeron nervosum" (*Chrysopsis graminifolia*).

Medicago denticulata of the West Mediterranean countries. An annual described by Willdenow, — and known to grow in Southern Europe (Pers.): observed by Savi in Italy (Steud.). By European colonists was carried to Northeast America, "sparingly introduced into New England etc." (A. Gray).

"In this year" (J. E. Smith), after his Hist. Salic. in "1785–91," Hoffmann publishing his Deutschl. Flora; — "in 1816," a second edition of his Gen. umbellif.

"In this year" (append. Sibth., and Winckl.), after his Tabl. regne veg. "in 1794," Ventenat publishing his Hort. Cels.

"In this year" (Winckl.), Georg Wahlenberg visiting Lapland,† — and subsequently in the summers of "1802, 1807, and 1810."

As early probably as this year (see Baldw. rel. 117–72), Brickell in Georgia meeting with *Prinos coriaceus*, and corresponding with Muhlenberg.

At this time (= "1816 — about 16 yrs." of Baldw. 344), John Fraser at Savannah, meeting with *Chamaerops hystrix*. — He sailed from Charleston in June 1817 (B. 190).

One hundred and eighty-third generation. Jan. 1st, 1801, mostly beyond youth: the Greek writer, Zalikoglous; the lexicographer, Eugenius of Bulgaria d. 1806: other writers, G. Gallesio; J. J. Schmidt; Dobrovsky; Hugius: the French writers, De Sacy, Solvyns, Amedée Jaubert, Roux: the English writers, John Webb, Terrick Hamilton: the Slavonic writers, Gabriel Dershavin, Nicholas Karamzin, Ivan Dmitrief, Timkofsky, Hyacinth Bitchourin, Igumnof of Irkutzk, Giganof, Volkof, Shishkof, Vuk Stephanovitch Karadshitch, and Kopitar: the botanists, J. Dickson, L. W. Dillwyn, E. J. C. Esper, J. L. Knapp, Burchell, Carmichael, H. F. Colebrooke, Correa de Serra, Benj. Delessert, N. A. Desvaux, J. P. R. Draparnaud, Jonas Dryander d. 1811, Leo Dufour, F. E. L. Fischer, G. Koch, C. F. B. Mirbel, Mocino and Sessè, Wm. Roscoe, Henr. Salt, I. C. Savigny, Schoubert, D. F. L. de Schlechtendal, Chr. Fried. Schumacher, Chr. Fr. Schwaegrichen, Aug. Friedr. Schweigger, N. C. Seringe, Joh. Sievers, Chr. Sigis. Sonnini, Caspar Sternberg, Georg. Adol. Suckow, Rob. Teesdal, Joh. V. Thompson, Andr. Thouin, L. C. Treviranus, Fr. Sigism. Voight, Wormskiold, Zeyher, Att. Zuccagni, Vinc. de C[illegible] Gust[illegible] Schuebler, and Jos. Woods: the painter D. Wilkie b. 1785.

"On the same day" (Humb. cosm. iv.), an asteroid or minor planet discovered by Piazzi and named Ceres; — a second asteroid, Pallas, was discovered by Olbers "March 28th, 1802;" a third, Juno, by Harding "Sept. 1st, 1804;" and a fourth, Vesta, by Olbers "March 29th, 1807."

"Apr. 8th" (Dallet 121 to 135), First persecution of Christians in Corea. Seng-houn-i and six others put to death. "On the 25th," five more were put to death.

"In this year" (Ph.), Rostkow publishing his diss. de June., enumerating *Juncus setaceus* 13. pl. 1. f. 2.

"In this year" (Pers., and Ph.), Willdenow in Act. nat. cur. berolin. iii. describing *Floerkia proserpinacoides*, of Northeast America.

"In this year" (Spreng.), Guillemeau publishing his Calendrier de flore des environs de Niort.

"In this year" (append. Sibth., and Winckl.), Chr. Schkuhr publishing his descript. Caric.,‡

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* *Alsine stricta* of Arctic Europe and Asia and alpine summits farther South. Observed by Schleicher on the Swiss Alps; — known to grow on [illegible] Jura and Eastern Alps (Koch, and A. Dec.), in a single locality in the county of Durham in Br[illegible] Bab., and Wats.), in Norway, Sweden, Lapland (Swartz, Wahl., and Fries), and in Arctic Rus[illegible] Siberia to beyond Lake Baikal (Ledeb.).

† *Carex lagopina* of Arctic Europe and the alpine s[illegible]mits of Switzerland. Observed by Wahlenberg among the mountains of Lapland, — known to grow also on the Swiss Alps (A. Dec.).

‡ *Carex ustulata* of Arctic Europe and the alpine summits of Switzerland. Termed "c. atrofusca" by Schkuhr — (Pers.); observed by Wahlenberg in Scandinavia, and known to grow in the alpine portion of Switzerland (A. Dec.).

Carex Persoonii of Arctic Europe and the alpine summits of Switzerland. Distinguished by Schkuhr 206, — and Sieber; observed by Fries in Scandinavia and termed "c. vitilis;" known to grow also on the Swiss Alps (A. Dec.).

Cobresia caricina of Arctic Europe and the alpine summits of Switzerland. Described by Schkuhr f. 161 — (Willd.), and known to grow on mount Cenis (Pers.); also in the Scandinavian peninsula (A. Dec.).

enumerating *Carex Willdenovii, C. bromoides, Muhlenbergii, rosea, scoparia, festucacea, straminea, tetanica, conoidea, grisea, oligocarpa, umbellata, miliacea, pubescens, trichocarpa, vestita, hystricina, tentaculata, lupulina, bullata, retroflexa, virescens, granularis, pedunculata* f. 131 (Willd.), *stipata, sparganioides, varia, cephalophora* f. 133 (Willd.), *lagopodioides* f. 177 (Willd.), *lacustris* f. 152 (Willd.), — "in 1806," his Enchirid. Botan.; and died "in 1811."

"The same year" (Nicol.), Paul succeeded by Alexander, now Russian emperor.

"In this year" (Miller ii. 485, and Holmes), "about two hundred" newspapers printed in the United States.

"In this year" (Winckl.), Bory Saint-Vincent sailing with Baudin to the Canary Islands and Mauritius.

"1802, March 27th" (Maunder), signing of the treaty of Amiens. And about this time or shortly afterwards, agreement between Bonaparte and the pope, for "the establishment of the free exercise of the Catholic religion" in France.

"In this year" (Winckl., Ph.), Ventenat describing plants in Mem. de l'Inst, including *Tilia heterophylla.*

"April 28th" (Holmes), by act of Congress, Ohio admitted into the Union as the seventeenth State. Washington city at this time containing "four thousand three hundred and fifty" inhabitants.

"In this year" (Ph. pref. p. viii to xiii), John Lyon, leaving the charge of the Woodlands garden at Philadelphia, but continuing his explorations, chiefly Southward along the Alleghanies, meeting with *Rhamnus lanceolatus, Collinsonia anisata, Houstonia tenella, Urtica chamaedroides, Hamamelis macrophylla, Euonymus angustifolius, Ceropegia palustris, Amsonia salicifolia, Heuchera caulescens, Drosera brevifolia, Prinos coriaceus, Andromeda floribunda, Calycocarpum Lyoni, Chelone Lyoni, Sida? hispida, Helianthus longifolius, Veratrum (Stenanthium) angustifolium, Aristolochia tomentosa.* — He published a Catalogue "in 1812" (Ph. 730), and died among the Alleghanies before 1817 (Nutt.).

"In this year" (pref. v.), after landing at Baltimore "in 1799," visiting Muhlenberg, and Marshall, Pursh succeeding to the charge of the Woodlands garden at Philadelphia, finding the "collection particularly valuable for furnishing" "a general knowledge of the plants of that country," and during his stay, — until the end of 1804, he "received and collected plants from all parts of North America," probably at no great distance meeting with *Talinum teretifolium, Desmodium strictum, Panicum depauperatum, Scirpus debilis, Cerastium tenuifolium, Sagittaria heterophylla.*

"July 14th" (Durand in Am. phil. trans.), F. A. Michaux leaving Pittsburgh for Wheeling, where he purchased a canoe and descended the Ohio as far as the site of Maysville; and leaving Lexington "Aug. 10th" continued by land to Nashville, and Eastward all the way to Charleston, meeting with *Cladrastis lutea, Carya aquatica, C. myristicæformis.*

"July 20th" (Holmes), Louisiana ceded by Spain back to France.

"In this year" (Spreng.), Dawson Turner publishing his Synops. brit. fuci; — "in 1807–11," his Hist. of fuci.

"In this year" (J. E. Smith, and Spreng.), Redouté publishing his Liliac., — completed "in 1815."

"In this year" (Pers. syn. ii. 345), Decandolle publishing his Astragalogia; — "in 1805" (A. Dec. g. b. 737), his Flor. Franc.

"In this year" (Spreng., and Winckl.), J. R. Suter publishing his Flor. Helvet.

"In this year" (J. E. Smith), Waldstein and Kitaibel publishing their Plant. Hungar., — completed in "1812."

Atriplex microsperma of Eastern Europe and the adjoining portion of Asia. An annual observed by Waldstein and Kitaibel in Hungary. — In Britain, has been found springing up spontaneously, but is clearly exotic (Bab., Wats., and A. Dec.).

"In this year" (Pritzel), Thomas Horsfield in Java; — he resided there "until 1818," and his Plant. Javan. rar. was published "in 1838–44."

"1803 A. D." (W. W. Hunter), the Marhattas expelled, Orissa occupied by the British, and the temple of Jagannath placed under their protection.

"In this year" (Spreng.), Leschenault leaving Baudin's expedition at Timor. — He proceeded thence to Madura and Java, and returning reached Philadelphia "in 1806," and France "in 1807."

"In this and the preceding year" (Winckl.), Antonio Bertoloni observing the plants of the environs of Genoa. — He published his Plantae Genuenses "in 1804," the third and last Decas of his Rar. Liguriæ plant. "in 1810," his Flor. Ital. "in 1833–46," and his Florul. Guatimal. "in 1840."

"*Festuca Ligustica* of Italy. Observed by Bertoloni in Italy, — by Gussone about Naples and in pasture-land in Sicily especially along the sea (A. Dec. 707 and 1356).

"In this year" (Winckl.), Lambert publishing his monogr. Pin. enumerating *Pinus pungens.*

"March" (Nouv. Esp.), Humboldt and Bonpland arriving in Mexico, meeting with* *Quercus confertifolia, crassifolia, crassipes, depressa, lanceolata, laurina, obtusata, pulchella, repanda, reticulata, Xalapensis* (Brendel), *Lobelia fulgens*.

"In this year" (title-page), after his Fragm. nat. hist. Penns. "in 1799," Benjamin S. Barton publishing his Elements of Botany.

"In this year" (Ph.), Willdenow publishing his Hort. berolin., enumerating *Polygonatum giganteum* 45.

"In this year" (Pers. ii. p. 542), returning from Lapland, Wahlenberg publishing descriptions of Carices in Act. holm., including *Carex salina, aquatilis, tenuiflora, livida*.

"In this year" (Winckl.), Ventenat publishing his Hort. malmais., enumerating *Parnassia asarifolia, Tilia heterophylla, Tiarella biternata*: — "in 1808" his Decas gen. nov., and died before the close of the year.

"In this year" (append. Sibth.), publication of the first volume of the Ann. mus. d'hist. nat.

About this time (Pers. i. p. 88, and Winckl.), Poiteau visiting Hayti: † writing also his monogr. Hypt. (ann. mus. ined. to iv., and Pers. ii. p. 120).

Hyptis atrorubens of Tropical America. Known to grow wild in Cayenne (Pers.); and from transported specimens described by Poiteau. — By European colonists, was carried across the Atlantic to Sierra Leone (Benth., and fl. Nigr.).

Hyptis brevipes of Tropical America. Known to grow wild there (A. Dec.). Described by Poiteau. — By European colonists, was carried across the Pacific to the Philippines (Benth.), Celebes, Bouton near Pulo-Penang (herb. Dec.), Java (Zoll.), and across the Atlantic to Fernando Po (fl. Nigr.).

"In this year" (Pursh), after his Astragal. "in 1800," Pallas publishing his Illustr. plant.

"April 30th" (Holmes), through president Jefferson, Louisiana purchased of the French republic for "fifteen million dollars."

"In this year" (J. E. Smith), publication of the Annal. du Mus.; — continued in twenty volumes.

"1804 Jan. 1st." (Maunder), the French troops having finally abandoned Hayti, accession of Dessalines to the supreme authority, under the title of "emperor."

"The same year = 9th" of the emperor Kia-king (Pauth. 488), beginning of the seventy-fifth Chinese cycle.

"In this year" (app. Sibth., and Winckl.), Brotero publishing his Flor. Lusitan.‡

"In this year" (Winckl.), Aubert du Petit-Thouars publishing his Gen. nov. Maurit. et Madagasc.; — "in 1811," his Melang. bot. et voy.

"In this year" (Winckl.), A. Afzelius publishing his Plant. Guineens.

"In this year" (Winckl.), Palisot de Beauvois publishing his Flor. d'Oware et de Benin, — completed "in 1807."

Coleus? Africanus of Western Equatorial Africa. Observed there by Beauvois (A. Dec.), and known to be frequent from Guinea to the island of Saint-Thomas (fl. Nigr.). By European colonists, was carried to Brazil, observed near Bahia by Gardner, and Blanchet.

As early as this year (Willd. sp. pl. iii. p. 2035), *Aster sagittifolius* observed or received by Wedemeyer from North America.

"In this year" (Winckl.), Lewis and Clark ascending the Missouri, on their way overland to the Pacific, meeting with *Veronica reniformis, Salvia trichostemoides, Airopsis brevifolia, Festuca spicata, Oxybaphus ovatus, Swertia fastigiata, Elaeagnus argentea, Shepherdia argentea, Phacelia linearis, Ipomopsis aggregata, Ceanothus sanguineus, Fritillaria pudica, Lilium umbellatum, Oenothera caespitosa, Jussieua subacaulis, Bartonia ornata, Atriplex canescens, Linaria tenella, Mimulus Lewisii, Atalanta serrulata, Malva coccinea, Amorpha microphylla, Lupinus pusillus; Psoralea tenuiflora,*

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* *Cosmos caudatus* of Mexico. Observed there by Humboldt and Bonpland — (A. Dec.). By European colonists was carried to Ceylon about 1822, observed by Gardner a frequent weed, spreading in all directions (bot. mag. for 1848).

† *Hyptis spicata* of Tropical America. Observed by Poiteau on Hayti; — by N. A. Ware, in Southern Florida (Nutt.); and by myself, along roadsides in Brazil and in the outskirts of Rio Janeiro. Clearly by European colonists, was carried across the Pacific to the Marian Islands and the Philippines (Benth.), was observed by myself on Mindanao.

‡ *Soliva nasturtiifolia* of the Lower La Plata. Known to grow in the district around Buenos-Ayres (A. Dec.). Transported to Europe, observed by Brotero naturalized in Portugal and termed "hippia stolonifera" (Pers., and R. Brown); termed "gymnostyles nasturtiifolia" by A. L. Jussieu in ann. mus. iv. pl. 61. f. 2 — (Pers., and Winckler). Also by European colonists was carried to Northeast America, observed by Nuttall in the outskirts of Charleston.

lanceolata, argophylla; Chrysocoma graveolens, C. nauseosa; Artemisia gnaphalodes, cernua, Columbiensis; Brachyris sarothræ, Aster canescens, Grindelia squarrosa, Amellus? spinulosus, Diotis lanata, Euphorbia marginata, Astragalus tenellus, Polygala alba (Ph. 750), — and beyond the Rocky mountains, on the waters of the Columbia, *Phacelia heterophylla, Phlox speciosa, Lonicera ciliosa, Ribes viscosissimum, R. sanguineum, R. aureum, Frangula alnifolia, Claytonia lanceolata, C. alsinoides, Berberis nervosa, Zygadenus elegans, Trillium petiolatum, Clarkia pulchella, Polygonum bistortoides, Vaccinium ovatum, Cerastium elongatum, Sedum stenopetalum, Purshia tridentata, Spiraea discolor, Geum ciliatum, Clematis hirsutissima, Scutellaria angustifolia, Gerardia? fruticosa, Bartsia tenuifolia, Dentaria tenella, Lupinus argenteus, L. sericeus, Astragalus Missouriensis, Trifolium microcephalum, T. macrocephalum, Matricaria discoidea, Erigeron? compositum, Trichophyllum lanatum, Buphthalmum? sagittatum, Galardia aristata.* — They returned "in 1806."

"In this year" (append. Sibth., and Winckl.), Martin Vahl publishing his Enum. plant., including *Fimbristylis laxa; Scirpus polyphyllus* ("brunneus" of Muhl., A. Gray). — He died before the close of the year, — and the publication was completed "in 1806."

"May 1st" (Maunder, and Nicol), shortly after the seizure and execution of the duke d'Enghien, a motion in the Tribunate for conferring on Bonaparte the rank of emperor, with hereditary succession. The decree was adopted by the Senate. And "Dec. 2d," pope Pius VII. having come to Paris, anointed the new emperor; who placed the crown upon his own head.

"In this year" (Winckl.), Rebentisch publishing his Prodr. flor. neomarch.; — "in 1805," his Plant. berolin.

"The same year" (Hale ethnogr. Expl. Exp. 173), Langsdorff with Krusenstern at the Nukuhivan or Marquesas Islands.

"Oct. 7th" (Jap. mann. 274), Krusenstern off Nagasaki bringing a Russian ambassador, count Resanoff. After entering the port, fears of connivance between the Russians and Dutch arose among the Japanese, and on the arrival of a commissioner from Yedo, diplomatic intercourse was refused.

"In the beginning of 1805" (pref. p. ix), Pursh journeying through Maryland and along the Alleghanies of Virginia and Carolina, "returning late in the autumn through the lower countries along the sea-coast," meeting with *Heuchera pubescens, H. hispida, Phacelia Purshii, Euphorbia obtusata, Lophiola aurea, Schizaea pusilla, Eragrostis Purshii, Amphicarpum Purshii, Dicliptera brachiata, Cyperus poaeformis, Woodwardia thelypteroides, Exacum pulchellum, Ceanothus perennis, Impatiens pallida, Prinos lanceolatus, Saxifraga erosa, Silene ovata, Agrimonia suaveolens, Scutellaria nervosa, Dielytra eximia, Aster flexuosus, A. reticulatus.*

"In this year" (Pers. ii. p. 403, and Winckl.), after his Gen. plant. "in 1802," Leopold Trattenik publishing his Thesaur. botan., — the 80th and last coloured plate "in 1819:" his Gen. nov. plant. "in 1825."

"Oct. 21st" (Maunder), *naval combat* of Trafalgar; the French and Spanish fleets "nearly annihilated" by the English under Nelson. "Nov. 13th," Vienna occupied by the French.

"In this year" (Spreng.), Thonning and Palisot de Beauvois publishing their Flore d'Oware et de Benin, — completed "in 1810."

"In this year" (title-page), publication of Vol. i. of the Persoon Synopsis Plantarum; — "in 1807," the second and concluding volume, completing the enumeration of nearly "twenty-two thousand" species (Spreng.).

"In this year" (title-page), Willdenow publishing the Fourth volume of his Sp. plant., enumerating* *Platanthera fissa* labell. "laciniis cuneiformibus dentatis" (Muhl.), *Cypripedium candidum* (Muhl.), *Carex digitalis, Scleria verticillata* (Muhl.), *Salix longifolia* (Muhl.), *Andropogon furcatus* (Muhl.), *Hierochloa alpina* (Swartz in litt.), *Parietaria Pensylvanica* (Muhl.).

"In this year" (Spreng.), Erich Acharius publishing his Methodus lichenum; — "in 1810," his Lichenograph. univers.; and "in 1814," his Synops. method. lichenum.

"In this year" (Spreng.), J. V. F. Lamouroux publishing Dissertations sur espéces de Fucus.

"In this year" (Spreng.), J. B. von Albertini and L. D. von Schweinitz publishing their Conspect. fung. niesk.

"In this year" (A. Gray man. bot. p. 552), Mar. Lagasca publishing descriptions of grasses, including *Bouteloua hirsuta.*

"1806 A. D." (Jap. mann. 281), under instructions from the repelled ambassador Resanoff, two Russian officers landing upon Saghalien, belonging to Japan, plundering villages and carrying off many of the natives. The Japanese government was utterly confounded, but the only immediate result was

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* *Acacia mollissima* of Australia. From transported specimens described by Willdenow (Steud.). By European colonists was carried to Hindustan, where it is "thickly sown and planted in the neighbourhood of Ootacamund" for firewood, but its bark "is useful for tanning, and a tar has been obtained from the wood" (Morgan, and Drury).

the degradation of the prince of Matsmai, judged incapable of protecting his subjects, and the conversion of his principality with Yezo and the Kuriles into an imperial province.

"In this year" (Klapr. mem. ii. 299), Klaproth at Irkoutsk in Siberia.

"In this year" (suppl. Sibth.), Bivona Bernardi publishing his Cent. Plant. Sic.; — his Monogr. Tolpid. "in 1809."

Carex serrulata of the Mediterranean countries. Observed by Bivona in Sicily: — by Chaubard, in the subalpine portion of the Peloponnesus.

Orchis Brancifortii of the Mediterranean countries. Observed by Bivona in Sicily; — by Tenore, in Italy and termed "o. quadripunctata," by Chaubard on the flanks of Taygetus in the Peloponnesus.

Orchis longibracteata of the Mediterranean countries. Observed by Bivona pl. 4 in Sicily; — by Chaubard in the Peloponnesus.

Feb. 8th (Durand in Am. phil. trans.), F. A. Michaux on his way to America captured by a British ship, but allowed to go on shore at Bermuda. He reached Maine towards the end of May, and his Notice of Bermuda was published at Paris before the close of the year (Winckl.).

"July 12th" (Nicol.), through the emperor Napoleon, the Confederation of the Rhine; Francis II. ceasing to be emperor of Germany and Italy; but becoming Austrian emperor, with the succession made hereditary.

"Oct. 25th" (Maunder), Berlin occupied by the French under Napoleon. "Dec. 24th," war carried by the French beyond the Vistula into Eastern Prussia.

As early as this year (Pers., and Winckl.), Heinrich Gustav. Floerke publishing descriptions of plants; — "in 1809-15," his Lichen. Germ.; and died "in 1835."

Pedicularis asplenifolia of alpine summits from Austria to the Himalaya and Northwest America. Observed by Floerke on the Salsburg Alps (bot. zeit. pl., Willd., and Pers.), and known to grow on the Himalaya (Benth.), but not found in the intervening country (A. Dec.). Farther East, observed by Mertens around Norton Sound.

"In this year" (append. Sibth.), after the first volume "in 1805," Sims and Konig publishing the Second volume of their Annals of Botany,* enumerating *Atragene Americana*, *Silene regia*.

"In this year" (Winckl.), Swartz publishing his Synops. filicum, enumerating *Woodsia obtusa* (Willd.): — his Summ. veg. scand. "in 1814," and died "in 1818."

"In this year" (Winckl.), H. A. Schrader publishing his Flor. German. — He died "in 1836."

"In this year" (Spreng.), Edw. Rudge publishing his Plant. guian. rar.

As early as this year (Pers. ii. p. 301), Turpin visiting Hayti, meeting with *Glycine lignosa*.

"In this year" (A. Dec. p. 717), Shecutt publishing his Flor. Carol.

In this year (Pursh pref. p. xii), Aloysius Enslen in Georgia and Lower Louisiana, meeting with† *Lythrum alatum*, *Iris cuprea*, *Centaurella aestivalis*, *Rhexia stricta*, *Helianthemum rosmarinifolium*, *Dipteracanthus ciliosus*, *Tephrosia chrysophylla*, *Silphium laevigatum*.

"In this year" (pref. p. ix.), Pursh journeying across Pennsylvania to Lake Ontario and the mountains of New Hampshire, "returning as before by the sea-coast," meeting with‡ *Ranunculus cymbalaria*, *Viola rostrata*, *V. clandestina*, *Prinos laevigatus*, *Lysimachia longifolia*, *Acerates viridiflora*, *Salix angustata*, *S. pedicellaris*, *Platanthera orbiculata*, *Cyperus inflexus*, *Panicum depauperatum*, *P. elongatum*, *Galium micranthum*, *Swertia pusilla*, *Allium triflorum*.

"1807, June" (Maunder), an American ship of war fired into by a British ship of superior force, and after striking her flag, searched for deserters; and four men carried away. — The affair led first to an embargo, and eventually to war.

"The same year" (. . . .), Selim III. succeeded by Mustafa IV., thirtieth Turkish sultan. The English in this year (Clot-Bey, and others) took possession of Alexandria: but after about six months, were compelled to re-embark.

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* *Nymphæa ampla* of the West Indies and neighbouring portion of Tropical America. Described by Salisbury in ann. bot. ii. 69 (Steud.). Known to grow wild on Hayti, Jamaica, around Vera Cruz, and in Guayana (Dec. syst. ii. 54, and A. Dec.).

† *Sagina decumbens* of Carolina and the Lower Mississippi. Observed by Enslen in Carolina (Ph., and Wats); termed "spergula decumbens" by Elliot; observed by Chapman, in "damp cultivated ground, common;" was received by Torrey and Gray from Louisiana. Eastward, is termed "s. Eliotii" by Fenzl, though according to Decandolle, and A. Decandolle, occurring in middle Europe.

‡ *Potentilla arguta* of Northeast America. Observed by Pursh in Canada and along the Susquehanna in Pennsylvania, and termed "geum agrimonoides;" — by Bigelow, near Boston, and termed "Bootia;" by myself, near Salem, the flowers white: its Southern limit may thus be placed at about 41° 30′.

"Nov. 9th" (Maunder), in consequence of French invasion, sailing of the royal family of Portugal for Brazil.

"The same year" (. . . .), by Fulton, the steam engine successfully applied to navigation. F. A. Michaux, taking passage in the boat on its return voyage down the Hudson, continued Southward through the Atlantic States as far as Georgia, — and after nearly three years stay left America "in 1809" (Durand in Am. phil. trans.).

"In this year" (Winckl.), A. L. Jussieu publishing memoirs on *Dicliptera*,* *Curanga*, *Hydropityon*, and *Physkium*.

"1808 A. D." (Maunder, and Nicol.), Charles II. of Spain succeeded by Ferdinand VII.; who before the close of the year was superseded by Joseph Bonaparte, a brother of Napoleon.

"The same year" (. . . .), Mustafa IV. succeeded by Mahmood II., thirty-first Turkish sultan.

"In this year" (Jap. mann. 232), Capt. Pellew in a British armed ship, looking for Dutch vessels, arriving off Nagasaki seized the Dutch boat and entered the port without ceremony; and not finding the expected vessels, again retired. The affair caused the suicide of several Japanese officials, and instilled among the people hatred of the English.

As early as this year (Pursh pref. xiv to p. 228, and Baldw. p. 329–32), John Leconte residing thirty-nine miles South of Savannah, meeting with *Gerardia aphylla* (Baldw. 155), *Utricularia striata*.

"April" (biogr. not., and pref. p. vii), Nuttall landing at Philadelphia, and on the following day mistaking a Smilax for a passion-flower his attention was directed to Botany. Before the close of the season, he made an excursion in the Delaware peninsula as far as Dagsborough and Lewiston, meeting with *Lobelia paludosa*, *Gymnopogon brevifolius* (A. Gray).

"In this year" (Spreng.), Turpin and Poiteau publishing their Flore des environs de Paris, — the seventh and last number "in 1809."

"In this year" (Spreng.), Pieri publishing his Corcir. flor. cent. i.

"In this year" (Spreng.), F. R. de Tussac publishing his Flor. des antilles, — completed "in 1811."

"In this year" (Spreng.), Claude Louis Richard publishing his Analyse du fruit.

"1809, March 13th" (Nicol. p. 207), decree of Napoleon uniting the Roman States to the French empire: and "July 5th or 6th," pope Pius VII. taken prisoner.

"July 5th and 6th" (Maunder), the Austrians defeated at Wagram by the French under Napoleon. Followed by the dissolution of his marriage with Josephine in "December," — marrying afterwards in "April" Maria Louisa, daughter of the Austrian emperor.

"In this year" (Spreng.), F. Batard publishing his Flor. de Maine et Loire; — "in 1812," a Supplement.

"In this year" (Winckl.), Willdenow publishing his Enum. plant. hort. berol., including *Philadelphus grandiflorus*, *Gillenia stipulacea*, *Corydalis aurea*, *Aster simplex*: "Nov. 21st" (praef.), the Fifth volume of his Sp. plant., comprising Equisetac., Lycopodiac., and ferns. — He died "in 1812."

In this year (. . . .), having made the acquaintance of Dr. B. S. Barton who had conceived the idea that there must be many unknown plants "in the country beyond Lake Superior," Nuttall in company with John Bradbury ascending the Missouri from St. Louis to and beyond the Mandan villages, meeting with *Ranunculus Purshii*, *Linum rigidum*, *Psoralea argophylla*, *Geum triflorum*, *Androsace Occidentalis*, *Hedeoma hispida*, *Cheilanthes dealbata*, *Batschia longiflora*, *Bumelia serrata*, *Solanum* (*Nycterium*) *heterandrum*, *Viola Nuttallii*, *Evolvulus Nuttallii*, *Cymopterus acaulis*, *Suaeda depressa*, *Gamassia Nuttallii*, *Yucca angustifolia*, *Gaura coccinea*, *Oenothera albicaulis* (Nutt.), *Oe. pinnatifida*, *Eriogonum sericeum*, *E. pauciflorum*, *Bartonia nuda*, *Hyssopus foeniculum*, *Hedeoma hispida*, *Vesicaria argentea*, *Polanisia graveolens*, *Dalea aurea*, *D. laxiflora*, *Petalostemum gracile*, *Amorpha canescens*, *Lathyrus decaphyllus*, *Psoralea cuspidata*, *Orobus longifolius*, *Glycyrrhiza lepidota*, *Hosackia sericea*, *Mulgedium pulchellum*, *Troximum glaucum*, *T. cuspidatum*, *Hymenopappus tenuifolius*, *Artemisia longifolia*, *A. Ludoviciana*, *Iva axillaris*, *Erigeron pumilum*, *Actinella acaulis*, *Amellus? villosus*, *Rudbeckia columnaris*, *Oxybaphus angustifolius*, *Pulmonaria lanceolata*, *Myosotis glomerata*, *Seseli divaricatum*, *Rumex venosus*, *Cactus viviparus*; *Pentstemon cristatum*, *erianthera*, *angustifolium*, *granaiflorum*; *Castilleia sessili flora*, *Stanleya pinnatifida*, *Astragalus carnosus*, *A. racemosus*, *Phaca triphylla*, *Oxytropis Lamberti*, *Prenanthes juncea*; *Poly-*

* *Dicliptera ciliaris* of Madagascar. Known to grow there in arid situations (A. Dec.); and from transported specimens described by A. L. Jussieu in ann. mus. ix. (Winckl.). Occurs also in Guayana and at Pernambuco and Bahia (Nees in Dec. prodr.), probably carried by European colonists.

cnemum Americanum, Crypsis? squarrosa, Sesleria? dactyloides, Bouteloua oligostachya, Lepturus? paniculatus.

"1810, in the spring" (gen. i. 219 to ii. 142), after visiting Prairie du Chien on the Mississippi, Fox river, Green Bay on Lake Michigan, and Michilimakinak, Nuttall near the confluence of Huron river with Lake Erie, meeting with *Iris lacustris* near Michilimakinak.

As early as this year (Baldw. reliq. p. 50–79), Stephen Elliot near Waynesboro', Georgia, meeting with *Elliottia racemosa, Galactia Elliottii* (B. r. 211), *Baldwinia uniflora* (B. r. 307).

"Oct. 24th" (Nicol.), mental aberration of George III. of England, and his eldest son George appointed regent or acting king.

"As early as this year" (Winckl.), Steven publishing descriptions of plants of Southern Russia and Caucasus in Acad. St. Petersburg iii and soc. nat. Mosc. ii to ix.

Allium guttatum of Eastern Europe and the adjoining portion of Asia. A rare species observed by Steven in the countries about the Black Sea; — by Chaubard, only on the summit of mount Diaforti in the Peloponnesus.

"In this year" (Winckl.), I. F. Lehmann publishing his Flor. Wirceburg; — "in 1815," the Second volume with a supplement.

Echinospermum deflexum of Eastern Europe. Observed and distinguished by Lehmann; — observed also by Wahlenberg (Steud.). In Britain, made its appearance "in 1846" in a locality not far from a garden (Wats. cyb. iii. 365), and is regarded by A. Decandolle as adventive only.

"In this year" (Winckl.), Goran Wahlenberg making his fourth visit to Lapland. — He published his Flor. lappon. "in 1812."

"In this year" (A. Dec. g. b. 800), Decandolle at Montpelier, — where he continued to reside until "1816."

Onopordum virens of the West Mediterranean countries. A thistle observed by Decandolle frequent around Montpelier — (A. Dec.).

Myriophyllum alternifolium of the West Mediterranean countries. Distinguished by Decandolle; — observed by Gussone on Sicily, by Moris on Sardinia (A. Dec.). Probably by European colonists carried to the Azores, received from those islands by Watson (lond. journ. bot. vi. 382).

"In this year" (append. Sibth.), by William Townsend Aiton, a Second edition of Aiton's Hortus kewensis, in which are enumerated *Cypripedium arietinum*: — the fifth and concluding volume "in 1813."

"In this year" (Spreng., and Winckl.), Robert Brown publishing his Prodr. flor. N. Holl.

"1811 A. D." (Clot-Bey and others), the breaking of Memluk power by the French having brought into Egypt an army of four thousand Albanians, their chieftain Mohammed Ali acquired prominence: and "March 11th" extinguished the remnant of Memluk aristocracy. — Mohammed Ali made himself virtually independent; and even threatened Constantinople, twice rendering European interference indispensable.

"In this year" (Spreng., and Winckl.), death of Pallas, leaving in his herbarium *Trillium Camtschaticum* (obovatum of Pursh), *Epilobium luteum, Potentilla villosa, Cheiranthus Pallasii, Dielytra tenuifolia.*

"July 4th" (Kobell ii.), among the Azores, a new volcanic island rising out of the sea, to the height of "seven hundred" feet: but during the "six months" following, gradually settled down and disappeared.

"In this year" (. . . . Winckl.), W. J. Hooker publishing his Travels in Iceland.

"In this year" (Winckl.), Michele Tenore publishing his Flor. Neapolitan. — The fifth volume was issued "in 1838."

Lamium flexuosum of Italy and Sicily. A woodland species observed by Tenore in Southern Italy, — by Gussone around Naples as well as in Sicily (A. Dec. 707 and 1358).

"In the autumn" (Ph. pref. and i. p. 71), after a visit to the West Indies "in 1810," Pursh landing at Wiscasset in Maine, and journeying South called on Peck in Cambridge, collected plants "in Monmouth county, New Jersey," and before the close of the year sailed from New York for England.

"In this year" (Spreng.), Jos. Franz von Jacquin publishing his Ecl. plant. rar., — completed "in 1816."

Not later than this year (Pursh i. 310), Nelson on the Northwest coast of America, meeting with *Saxifraga serpyllifolia, S. setigera, Arenaria macrocarpa, Senecio cymbalaria, Aster peregrinus, Salix obovata.*

"In this year" (Winckl.), after his Etrennes de Flore "in 1804," Gaudin publishing his Agrostolog. Helvet.; * — "in 1828–33," his Flor. Helvet. in vii vols.

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* *Oxytropis Lapponica* of Arctic Europe and the alpine portion of Switzerland. Described by Gaudin, — and rare in Switzerland, growing according to Koch on the Alps of Valais, and found by Moritzi at l'Albula in the Grisons (A. Dec): is rare also in the Scandinavian peninsula and in Lapland (Fries); and according to Ledebour seems unknown in Siberia.

In this year (reliq. Baldw. 25 to 79), Muhlenberg at Lancaster Penns., meeting with or receiving from correspondents *Scirpus planifolius* 26, *Oryzopsis melanocarpa* 45, having completed his Catalogue N. Am. plants, in which are enumerated *Ranunculus fascicularis*, *Trifolium stoloniferum*, *Desmodium humifusum*, *Hydrocotyle interrupta*, *Xylosteum oblongifolium*, *Solidago squarrosa*, *Gentiana alba*, *Smilax hispida*, *Festuca? nutans*, *Eleocharis tenuis*, *Aesculus glabra*, *Epilobium coloratum*, *Acerates connivens* (Baldw. rel. 107); *Scirpus atrovirens* ("exaltatus" of Ph., B. r. 289); — the work was published "in 1813" (Winckl.).

"Apr. 8th to Nov. 4th" (reliq. 25 to 51), William Baldwin at Wilmington Del. sending plants to Muhlenberg, including *Cerastium oblongifolium* 26.

"In this year" (Sieb. eluc. Vries 50, and Jap. mann. 282), Golownin in a Russian frigate exploring the Japanese seas, but landing on the Kurile island Kunashir, was surprised, overpowered, and with his officers and boat's crew made prisoners. They were conveyed bound to Matsmai, — and detained "nearly two years" until the arrival of a satisfactory disavowal of the Saghalien incursion.

"1812 A. D." (Inman), Louisiana, with restricted boundaries, admitted into the Union as a State.

"Apr. 20th" (reliq. 53–75), after landing at Charleston in the beginning of December 1811, and visiting Savannah, Baldwin at the "Creek Agency on Flint river" in "Lat. 32° 39′" at the foot of the Alleghanies, meeting with *Silene Baldwini* 73, *Waldsteinia lobata* 93, *Rumex* (*Acetosella*) *hastatulus* 147; after visiting Coweta town on the Chatahoochee, he returned to Savannah, and "May 30th" reached his station at St. Mary's where he met with *Eleocharis* (*Chætocyperus*) *Baldwini* 341, *Eryngium aromaticum*, 203, *Palafoxia integrifolia* 335, — and in the two following years *Gratiola subulata* 117, *Gymnadenia nivea* 117, *Eryngium Baldwini* 154, *Erianthus strictus* 335, *Psoralea virgata* 337, *Xyris Baldwini* 337, "x. cylindrica" white-flowered 210 to 337 *X. torta?*, *Panicum viscidum* 207, *Salvia* (*Dicerandra*) *linearifolia* 280, *Rhynchospora Elliottii* 285, *Dichromena latifolia* (Chapm.).

At this time (Baldw. 52 to 153), Oemler at Savannah, sending plants to Muhlenberg, and Elliot, including *Collinsonia verticillata*, *Coreopsis Oemleri*.

As early as this year (see Pursh), Colmaster at Labrador, meeting with *Potentilla emarginata*, *Artemisia spithamæa*, *Arnica plantaginea*, *Platanthera dilatata*.

"In this year" (Pritzel, and Lindl.), after his Botanico-med. brasil. "in 1803," Gomez publishing in acad. Lisb. ii. 23 a memoir on certain plants.*

"June 18th" (Maunder), act of the American congress, declaring war against Britain.

"Aug. 17th" (Maunder), capture of Smolensko; followed by the battle at Borodino, and the entrance of the French army into Moscow. The city was burned by its inhabitants, and "Oct. 19th" the French army commenced their retreat; but through the want of supplies, the severity of the winter, length of the journey, and the pursuing Russians, was almost annihilated before reaching Saxony.

"In this year" (Spreng.), Palisot de Beauvois publishing his Agrostographie, enumerating *Triplasis Americana* (Chapm.). — He died "in 1820."

"1813, February" (Maunder), manifesto of the emperor Alexander at the head of his army in Poland; serving as a basis for the coalition of other European powers against Napoleon. Prussia joined at once, and was followed by Austria; and "Oct. 18th" at Leipsic, the French, abandoned in the midst of battle by the Saxon troops, were defeated. After another defeat "Oct. 30th" at Hanau, the French were driven across the Rhine; the pursuing army following them into France.

"In this year" (A. Dec. 627, and Winckl.), Hugh Davies publishing his "Welsh botanology:" a flora of Anglesey, with Welsh names of the plants.

"In this year" (Spreng.), C. S. Kunth publishing his Flor. berolin.

"In this year" (Spreng.), Mich. Fel. Dunal publishing his Hist. des Solanum.

"The same year" (Pauth. 3), under the editorship of the younger De Guignes, publication at Paris of the first Chinese dictionary for the use of Europeans.

"In this year" (J. F. Wats.), Whitelaw Ainslie at Madras publishing his "Materia medica of Hindoostan."

"In this year" (Pursh p. 735), publication of Fraser's Catalogue, including plants collected by Nuttall on the Missouri.

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* *Mikania opifera* of Brazil. A climbing plant called there "erva da cobra," employed externally and internally in cases of bites of venomous serpents, and said to effect a cure by its powerful diuretic action — (Mart. trav. i. 327, and Lindl.).

Tristegis glutinosa of Southern Brazil. A grass called "capim gordura" that extended itself from "17° 40′ S." into the province of Minas Geraes a few years before the visit of A. Saint-Hilaire, taking possession of the soil wherever an isolated forest in the midst of the plains "campos" is burned (ann. sc. nat. xxiv. 76, and A. Dec.).

At this time (Ph. ii. 609), G. Anderson engaged in examining and cultivating *willows*, and assisting Pursh in his arrangement of the N. American species, contributing in addition *Salix uvaursi, cordifolia, planifolia.* — Pursh at this time describing plants from various herbaria in London, from the Banksian herbarium *Arenaria Labradorica* ("thymifolia"), *Potentilla dissecta, Draba glabella, Tussilago sagittata, Chrysopsis falcata, C. gossypina, Aster graminifolius, Coreopsis aspera, Silphium elatum, S. reticulatum, Platanthera rotundifolia, P. obtusata, Salix vestita.* — He published his Flor. am. sept. "in 1814" (title-page).

"In this year" (Baldw. reliq. 114), Zaccheus Collins exploring peninsular New Jersey meeting with *Gymnadenia flava* (Nutt. gen.).

"1814, March 31st" (Maunder and Nicol.), entrance of the allied armies and sovereigns into Paris: Napoleon was exiled, and succeeded in France by Louis XVIII.; pope Pius VII. was restored to his dominions, as also Ferdinand VII. of Spain.*

"In this year" (Spreng.), Georg Wahlenberg publishing his Flor. carpath.

"In this year" (Baldw. rel. 146, 68–71), Van Vleck at Salem in North Carolina, corresponding with Muhlenberg; and his companion Schweinitz with Leconte.

"1815, Jan. 8th" (Inman), attack by the British on New Orleans repelled by the Americans under Jackson. News soon arrived of the conclusion of peace on the preceding "Dec. 24th" at Ghent.

"March 1st" (Maunder), return of Napoleon from Elba to France. "June 18th, Sunday," Napoleon defeated at Waterloo; and soon afterwards, exiled to St. Helena.

"The same year" (Nicol), Alexander now "king of Poland," thus uniting Poland with Russia.

"In this year" (Dallet 273), Second persecution of Christians in Corea.

"The same year" (Maunder), by the English, a missionary station first established in New Zealand.

In this year (Winckl.), Muhlenberg writing his Descript. gram., enumerating † *Cyperus erythrorhizos, Hemicarpha subsquarrosa, Cladium mariscoides; Carex decomposita, foenea, polymorpha; Vilfa vaginæflora, Eragrostis? uniflora, Muhlenbergia sobolifera, M. sylvatica, Eatonia Pennsylvanica, Poa brevifolia, P. flexuosa, Panicum microcarpon, P. verrucosum, Glyceria obtusa. Cyperus dentatus.* — He died "before the close of the year," leaving in his herbarium specimens of *Boykinia aconitifolia, Alnus maritima, Polytaenia tenuifolia.* — His Descript. gram. was published "in 1817."

In the autumn (Baldw. rel. 184), Nuttall visiting Savannah, and continuing his explorations as far as Natchez and New Orleans (gen. p. 57), meeting with *Aristida tuberculosa, Danthonia sericea.*

"October" (title-page and pref.), William P. C. Barton publishing his Flor. Philadelp. prodr., a catalogue of plants "collected since the month of April, 1814."

"1816 A. D." (Inman), the territory of Indiana admitted into the Union as a State.

"June 10th" (Humb. cosm. iv. p. 145), *eclipse*, remarkable for the disappearance of the disk of the moon, which was not visible from London even with telescopes. (Probably the one witnessed by myself while a boy at Salem: the moon rose eclipsed, and the assembled company were looking for it in vain, when suddenly a bright star made its appearance several degrees above the horizon, the moon's disk emerging.)

"Aug. 27th" (Maunder), Algiers attacked by an English fleet under Exmouth; partially destroyed; and on Sept. 1st, all the Christian slaves released.

"In this year" (Spreng., and Winckl.), after his Flor. Lips. "in 1790," J. C. G. Baumgarten publishing his Stirp. Transilvan.

"In this year" (Winckl.), Auguste Saint-Hilaire visiting Brazil. — He remained there and in Paraguay "until 1822," and returning, published his Plant. usuelles Bras. "in 1824," and Flor. Bras. "in 1825–32."

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* *Xanthium macrocarpum* of North America. Transported to Europe, and from this year naturalized in Languedoc — (Dec. fl. fr. suppl. 356); extending thence into Piedmont and Lombardy (Moretti, and Balb.), and observed by Ledebour rare in Southeastern Russia. Westward, observed by myself wild along the banks of the Ohio; by Berlandier in Mexico; and the Xanthium "four feet high" seen by Chapman in or near Florida, may be compared. X. macrocarpum according to A. Decandolle was observed by Dombey in Peru, and occurs also at Buenos-Ayres.

† *Juncus Muhlenbergii* of Northeast America. The "juncus no 15" of Muhlenberg gram., — named by Sprengel, is probably the "j. dichotomus" observed by Elliot in South Carolina, or "j. viviparus", observed by Conrad in peninsular New Jersey, as well as by myself frequent in the environs of Salem: according to A. Gray, it grows in "Canada," and from "Northern New England to Virginia, and southward," and perhaps in Wisconsin.

"Dec. 6th" (reliq. 174–86 and 343), after visiting the Bermudas in "May 1815," Baldwin "in a packet from St. Mary's" arriving at Fernandina, and proceeding farther South in Florida, meeting with *Stellaria prostrata* 192, *Xyris fimbriata* 210, — and on another excursion in the following year as far as New Smyrna.

"1817 A. D." (Inman), the territory of Mississippi divided, and its Western portion admitted into the Union as the State of Mississippi.

"In this year" (Spreng.), Joh. Jak. Römer and Jos. Aug. Schultes publishing their Systema vegetabil.

"In this year" (Spreng.), Karl Ad. Agardh publishing his Synops. algar. scan.

"The same year" (Hale ethnogr. Expl. Exp. p. 119), Kadu, a native of Ulea in the Carolines, found by Kotzebue upon Aur in the Radack coral-archipelago; having "been driven in a canoe with three" companions "nearly fifteen hundred miles due east." Chamisso * accompanying Kotzebue to Oahu late in this as well as in the preceding year (Mann).

At this time (Nutt. gen. 35, and B. r. 292), Isaac Cleaver in the environs of Philadelphia, meeting with *Cyperus Cleaveri.*

"In this year" (reliq. Baldw. 202–48), Stephen Elliot publishing the first four numbers of his sketch bot. S. Carol. and Georgia, enumerating in these and the succeeding numbers *Desmodium rigidum, Ludwigia sphærocarpa, Schweinitzia odorata, Sabbatia brachiata, Aristida gracilis, Paspalum fluitans, Panicum amarum, Andropogon argenteus, Carex comosa, Nabalus Frazeri, Diplopappus obovatus, Boltonia diffusa, Utricularia bipartita, Eragrostis conferta, E. nitida, Tricuspis ambigua, Festuca parviflora:* — his Second and concluding volume "in 1824."

"To this year" (title-page), Nuttall's Genera and Catalogue of the species of N. American plants extends, including *Anychia capillacea.* — The work was published "in 1818."

"In this year" (Winckl.), Martius travelling in Brazil. — He remained "until 1820," and commenced publishing his Palms "in 1823," and Flor. Brazil "in 1829."

"1818 A. D." (Inman), the territory of Illinois admitted into the Union as the "twenty-second" State.

"In this year" (Pritzel), Conrad Loddiges publishing his Botanical Cabinet, coloured plates of plants — "two thousand" in all down to the Twentieth volume "in 1833."

"In this year" (Winckl.), Bonpland appointed professor at Paraguay: † — he proceeded there "in 1820."

"In this year" (Winckl.), Wallich at Calcutta publishing his Rar. plant. Ind. — His Plant. asiat. rar. was published in London "in 1830–2."

"Oct. 9th" (Maunder), evacuation of French territory determined on by the congress at Aix-la-Chapelle; and before the close of the year, the foreign troops withdrawn.

"1819, June 11th" (B. r. 252 to 321), after visiting Rio Janeiro and the La Plata "Jan. 29th to May 4th, 1818," St. Salvador "May 29th to June 5th," Margarita "23–5th," Baldwin at St. Louis on Long's Expedition, meeting with *Astragalus Mexicanus.* He died "Sept. 1st" at Franklin; — and a portion of his Botanical correspondence was published by Darlington "in 1843."

"August" (Humb. cosm. iv), the return of a comet after a short period of revolution, "1204 days", only, ascertained by Encke. — Five other interior comets, those of Biela, Faye, De Vico, Brorsen, and D'Arrest, were discovered "between 1826 and 1851."

"August" (Mann), Gaudichaud accompanying Freycinet to the Hawaiian Islands. — He made a second visit in "1836."

"Dec. 17th" (Maunder), after a victory over the Spaniards by Bolivar dictator of Venezuela, union with New Grenada under the name of Colombia.

"In this year" (biogr. mem.), Nuttall travelling from the Mississippi along the Arkansas river, to Salt Lake river and across to the confluence of the Kiameska and Red river, meeting with ‡ *Phacelia glabra, P. hirsuta.* — Returning, he reached New Orleans "Feb. 18th, 1820."

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* *Escholtzia Californica* of North California. Discovered there by Chamisso. — Transported to Europe and already naturalized around Angers in "1850" (A. Dec.).

† *Osbeckia princeps* of the Cape Verd Islands. Observed by Bonpland pl. in Brazil; — but according to Naudin fl. Nigr. 130, brought there by imported Negroes (A. Dec.).

‡ *Coreopsis tinctoria* of the unwooded central and Western portion of North America. Discovered by Nuttall far up the Arkansas. — From seeds brought by him, cultivated, soon becoming a favourite garden flower; was observed by myself in 1838 in Brazil, at the window of a dwelling in the midst of the gorgeous vegetation investing the Organ Mountains; about the same time by Graham in Hindustan, "common in gardens" and found by Law "almost naturalized about Belgaum."

In this year, William Oakes in college at Cambridge, devoted to Botany.*

At this time (Nutt. gen.), Zaccheus Collins continuing his explorations of peninsular New Jersey and the environs of Philadelphia.†

Before the Expedition of Ismael Pasha up the Nile, the king of Sennar held dominion over Nubia as low down as Wadi Halfa (Leps. eg. and sin. 176).

"In this year" (Spreng. comm. Diosc. iii. 84), P. della Cella publishing his Travels from Tripoli to the frontier of Egypt.

"In this year" (Winckl.), Dumont d'Urville visiting the Greek islands and the shores of the Black Sea. — He published his Enum. of observed plants "in 1822."

"1819-20" (. . . .), Edwin James, having succeeded Baldwin, accompanying Long's Expedition from Missouri to the Rocky Mountains, meeting with *Quercus undulata* (Brendel), *Mimulus Jamesii*.

"1820, Sept. 2d" (Pauth. 469), death of Kia-king, "of the Tai-thsing" or Twenty-fourth dynasty. He was succeeded by Tao-kouang, three hundred and fifth Chinese emperor.

"The same year" (Inman), the district of Maine detached from the jurisdiction of Massachusetts and admitted into the Union as a State: the territories of Arkansas and Alabama also admitted into the Union as States.

"In this year" (Levchine kirgh. i. 6), mission of Meyendorf from Orenbourg to Boukhara, accompanied by the naturalists Pander and Eversmann. — A second excursion into the region around the Aral Sea was made by Eversmann in "1825."

"In this year" (Winckl.), J. G. Chr. Lehmann publishing his monogr. Spiræa, — completed "in 1835." He published his Cycad. "in 1834," and Plant. Preissianae "in 1844-7."

"In this year" (Winckl.), Karl Joh. Hartmann publishing his Handbok i Skandinaviens Flora; — a Second edition "in 1832," Third "in 1838," and a later one "in 1849" (A. Dec. 706).

"1821 A. D." (Inman), the territory of Florida ceded by Spain to the United States. In the U. S. congress, the Missouri compromise; establishing beyond the Mississippi Lat. 36° 30′ as the Northern boundary of slave labor, but admitting territory with a strip extending below this line, as the State of Missouri.

"March 7th" (Maunder), proclamation of Ypsilanti at Jassy in Moldavia, foreshadowing the rising of the Greeks against the Turkish government. "March 23d," outbreak at Calavrita in the Peloponnesus, and "eighty Turks made prisoners." A collision "on the same day" at Patras.

"In this year" (Burnouf introd. 1 to 4), by B. H. Hodgson, English resident at Kathmandu in Nepal, discovery of numerous Buddhist works written in the Sanscrit language; the source of the Buddhist sacred books existing in translations throughout Thibet Mongolia and China. — In "1824," he commenced sending copies of these Sanscrit writings to Calcutta, transmitted some to London in "1830," and some to Paris in "1837."

"In this year" (A. Dec. g. b. 1032), Bacle in Senegal. — He afterwards visited Montevideo and Buenos Ayres.

Schultesia stenophylla of Tropical America. By European colonists, carried across the Atlantic to Senegal, observed there by Bacle near Fel da Terra — (herb. Dec.). Westward, known to grow wild from Mexico and the West Indies to Guayana and Brazil (Mart., Griseb., and A. Dec.).

"In this year" (title-page), Descourtilz publishing his Flor. med. Antill., — continued in . . . . volumes.

"In this year" (Fritzel), after his Muscor. propag. "in 1818," T. F. L. Nees von Esenbeck publishing his Plant. officinales.

"The same year" (title-page), Steudel publishing his Nomenclator Botanicus, an alphabetical list of the genera and species of plants.

At this time (Winckl.), commencing "in 1814," Elias Fr. Fries continuing his Novit. fl. suec.,‡

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* *Hypericum Oakesii* of Northeast America. Upright, a foot or more high, resembling H. Canadense, but with ovate pointed five-nerved leaves: — mentioned to me by Oakes on my first acquaintance in 1823, and observed by myself from 45° on Mount Desert to 38° in the Delaware peninsula; by Nuttall, along the Arkansas, marked as undescribed but not named. (See H. quinquenervium).

† *Scirpus* (*Isolepis?*) *subterminalis*. An aquatic, its terete rush-like pointed stem rising obliquely out of the water, accompanied by tuft of slender floating fronds: — observed or received by Collins from Quaker-bridge in New Jersey; — described by Torrey; and observed by myself in Pleasant lake in Wenham, where of late years I have looked for it in vain: grows also according to A. Gray in "Michigan, and westward."

‡ *Medicago sylvestris* of . . . . Distinguished by Fries — (A. Dec.): regarded as exotic in Britain, maintained only by the continual importation of seed for cultivation (Wats., and A. Dec.).

— completed "in 1823;" he published his Flor. scan. "in 1835," and Summ. veg. scand. "in 1846," and died in his "84th year, Feb. 8th, 1878" (Boston Journal for March 9th).

"The same year" (Buns. v. 7. 1), deciphering of hieroglyphic characters by Champollion.

"1822, Jan. 27th" (Maunder, and Brewster's cycl.), the independence of Greece proclaimed by a congress assembled at Argos. "April 23d," the Greek island of Scio visited by a Turkish fleet and all the inhabitants massacred.

"Oct. 12th" (Maunder), the prince-regent of Portugal "proclaimed constitutional emperor of Brazil:" thus separating the two countries. — The measure was afterwards formally recognized by the home government.

"In this year" (Winckl., and Lenz), Pollini publishing his flora of Verona.

"In this year" (A. Dec. 635), P. F. Bernard publishing a prospectus of his "Tableau de la vegetation du Jura."

"1823 A. D." (Maunder), entrance of Bolivar, now president of Colombia, into Peru; and with his assistance, the Spaniards repelled and the independence of the country established.

In this year, Benjamin D. Greene at Tewksbury in Massachusetts, near Billerica, meeting with* *Utricularia resupinata.*

"In this year" (Winckl.), after his Herbarium flor. martinicens. "in 1822," Franz. Wilh. Sieber publishing his travels in Crete.

"In this year" (Pritzel), after his Synops. gen. gram. "in 1820," Trinius publishing his Species gram.: — the Third and last volume "in 1836."

"The same year" (Kobell iv.), *pack-fong*, a metallic alloy long known in China and consisting of nickel, copper, and zinc, first manufactured in Europe: — and under the name of "German silver" sold extensively.

"In this year" (Winckl.), Ph. Fr. von Siebold visiting Japan; † — he remained "until 1830;" and returning, published his Flor. Japon. "in 1835–44."

"1824, May" (Mason iii. 60), the first English war with Burmah. — Ending "Feb. 1826," in the capture of Pugan and the cession of the provinces of Aracan and Tenasserim.

"In this year" (Winckl.), Viviani publishing his Flor. Lyb. spec.

"In this year" (title-page), Decandolle publishing the First volume of his Prodr. syst. veg.

"In this year" (A. Dec. p. 716), after his first edition in "1814," Bigelow publishing a second edition of his Flor. Bostoniens., enumerating *Salicornia mucronata*, *Ceanothus ovalis*, *Myriophyllum tenellum*, *Spiranthes gracilis.*

In this year, after an excursion in 1823 with Wm. Oakes, diverting my attention from Entomology, my first botanical discovery,‡

In this year, Henry Little and Benjamin D. Greene visiting the White mountains, meeting with *Cinna pendula*, etc.; and on the alpine portion, § *Salix phylicifolia* (S. pumila of Nuttall), *Nabalus nanus*, *N. Bootii.*

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* *Juncus militaris* of Northeast America. A large aquatic species growing upright in water a foot or more deep, distinguished as early as this year by B. D. Greene, observed at Tewksbury and communicated to Bigelow; — by myself, in lakes around Salem; but according to A. Gray, growing also from "Plymouth, Massachusetts" to the "pine barrens of New Jersey, and southward."

† *Pinus Koraiensis* of Japan and Kamtchatka. Observed by Siebold — (Endl. conif. 143, and A. Dec.).

‡ *Sparganium eurycarpum.* Observed by myself in the extensive marsh between Ipswich river and Wenham swamp: communicated to Nuttall, and notwithstanding its different foliage, did not attract his attention, its numerous male capitula small and caducous, falling almost as soon as gathered: — the species remained unnoticed until taken up by Engelmann, but according to A. Gray is "common northward and especially westward."

Carex exilis. Previously observed in the marshes around Lake Wenham and its outlet, but I supposed it might prove a species common to Europe. Specimens were taken by Oakes to Dewey, who recognized it as a distinct species, and named it.

Hypericum ellipticum. Observed by myself in the marsh between Ipswich river and Wenham swamp, — and subsequently as far as 40° along the Atlantic: distinguished by Hooker, as found from Lake Huron to 54° on the Saskatchewan; and recently observed by myself near Quebec.

§ *Calamagrostis Pickeringi.* Observed on the alpine portion and distinguished by Little; specimens shown me, — and in the following year, observed not infrequent there by myself.

Aira triflora. Observed on the alpine portion, and the three florets pointed out to me by Little: — in the following year observed there by myself, often but not always three-flowered, but further examination is required to determine whether it is distinct from A. flexuosa.

In this year, Nuttall visiting the White mountains, meeting with "in Maine" *Subularia aquatica*,* *Panicum xanthophysum;* and on the alpine portion of the mountains, *Potentilla frigida, Gnaphalium supinum*, a diminutive and very beautiful species of *Chara*, and *Salix repens*.

"Dec. 9th" (Markh., and Maund.), the Spaniards defeated at Ayachuco, and Upper Peru detached from Buenos Ayres and rendered independent. — Bolivar visiting the country in the following year, by request of the people drew up a constitution: and the new republic received the name of Bolivia.

"1825 A. D." (Nicol.), Alexander succeeded by Nicolas, now Russian emperor.

"In this year" (J. F. Wats), David Don in London, publishing his "Prodromus Floræ Nepalensis."

"The same year" (Mann), after visiting Brazil and Chili, Macrae in the Hawaiian Islands.†

"In this year" (Winckl), Belanger and Bory de Saint-Vincent sailing to the East Indies. — They returned "in 1829."

"In this year" (Winckl., and title-page), after his Hist. rei herb. "in 1807–8," Umbellif. "in 1813," Geschichte der Botanik "in 1817–8," Kurt Sprengel publishing a Sixteenth edition of the Systema Vegetab., — "in 1828," the fourth volume; "in 1829" his comm. Diosc; and died "in 1833."

In this year, Oakes and myself visiting the White mountains, meeting with *Pyrola minor, Ribes rubrum, Glyceria elongata, Alnus crispa, Amelanchier oligocarpa, Carex scabrata, Milium glaucum* of Nuttall, *Platanthera obtusata;* and on the alpine portion *Calamagrostis stricta?, Holcus atropurpureus* (Aira of authors), *Viola palustris, Juncus filiformis, Saxifraga rivularis, Silene acaulis, Arnica mollis, Salix herbacea*, and *Veronica alpina*. — In the following year in October, after meeting with *Polygonum Careyi*, I removed to Philadelphia.

"In this year" (Pritzel), Dumont d'Urville publishing his Flor. malouin. (Falkland Islands). — He commanded the Astrolabe in her voyage in the Pacific and towards the South Pole "in 1837–40."

"1826 A. D." (Winckl), K. A. Meyer and Alexander von Bunge visiting the Altaian mountains and Soongaro-Kirghiz steppe.

"The same year" (Levchine kirgh. i. 6 note), Ledebour visiting the Kirghiz-Kazak country in the vicinity of Fort Zmeinogorskaia: and Meyer at Lake Nor-Zaiçan, the source of the Irtisch.‡

"In this year" (Winckl), A. Risso publishing his Hist. Nat. product. Nice.

"In this year" (Winckl), Gussone publishing his Plant. rar. Samn., — "in 1827–8" Flor. Sic. prodrom., and "in 1842–5" Flor. Sic. synops.

Wahlenbergia nutabunda of Sardinia and Southern Italy. Observed by Gussone frequent in Calabria as far as the Western shore, but unknown on Sicily, — known to grow on Sardinia (A. Dec. 707).

"In this year" (Winckl.), Meisner publishing his Polygon. prodr.

"In this year" (Winckl.), Cassini publishing his Opuscul. Phytol., § — completed "in 1834."

"In this year" (Winckl.), Decandolle publishing the Second volume of his Prodr. syst. veg. — He died "in 1841."

Schrankia leptocarpa of Tropical America. Described by Decandolle prodr., and known to grow on Hayti and in North and South Brazil (Benth.). Probably by European colonists, carried to Guinea (fl. Nigr., and A. Dec.).

Lay and Collie on Beechey's voyage "1825–28" meeting with in Mexico *Quercus aristata;* in California *Q. Douglasii* and *Q. densiflora* (Brendel).

"In this year" (Mann), Gaudichaud re-visiting the Hawaiian Islands, now in the Bonite.

"1827, Aug. 16th" (Maunder), treaty between Britain, France, and Russia for closing the war in

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* *Geum nudum*. Coarser and more leafy than G. Virginianum, with minute linear greenish petals: named by Nuttall, but not described; observed by him, — and myself on the flanks of the White mountains; afterwards by myself near Salem.

† *Ambrosia tenuifolia* of "South America." From transported specimens described by Sprengel — (A. Dec.). Observed by Godron for more than ten years at Cette, about a vine planted on ship's ballast.

Myrsine dependens of the mountains of Caraccas and Peru. Described by Sprengel, — known to grow on the Silla de Caraccas and the mountains of Peru, but has not been found on intervening mountains (A. Dec.).

‡ *Impatiens parviflora* of the Altaian mountains. Described by Ledebour. — Transported to Europe, became a weed in a garden at Geneva from "1831," extending into the vicinity, and reaching Dresden prior to "1851" (Burkh., and A. Dec.).

§ *Helichrysum fœtidum* of Austral Africa. Transported to Europe, described by Cassini; — and for several years observed by Lejolis naturalized in the environs of Cherbourg (A. Dec.).

Greece, presented to the Turkish government. The intervention was rejected, and the Greeks having re-commenced hostilities, the Turko-Egyptian fleet entered the Bay of Navarino "Sept. 9th;" a British fleet arrived on the "13th," and on the "22d" was joined by a French, also by a Russian fleet. Hostilities continuing notwithstanding a promise of cessation, the Turko-Egyptian fleet was attacked and destroyed.

"In this year" (Dallet 314), Third persecution of Christians in Corea.

"In this year" (Winckl.), Gius. Hiacintho Moris, professor at Turin, publishing his Stirp. Sard. elench., — the third fascic. "in 1829;" and his Flora Sardoa "in 1837–43."

"In this year" (Winckl.), Ed. Poeppig visiting South America. — He travelled in Chili, Peru, and on the Amazons "until 1832," and published his Nov. gen. Plant. "in 1835–45."

"In this year" (Pritzel), J. Velloso de Miranda publishing his Flor. fluminens. icon.

"1828 A. D" (Winckl.), Blume publishing portions of his Flor. Javæ.*

As early as this year (R. Brown prod. suppl. 1830, and Winckl. 380), Cunningham in Australia.†

"In this year" (Winckl.), after his Flor. Gallica "in 1806," Loiseleur-Deslongchamps publishing his Flore generale de la France.

Valerianella carinata of the West Mediterranean countries. Distinguished by Loiseleur, — and observed by Gussone syn. in grassy pasture-land in Sicily. In Britain has been found springing up spontaneously in some ten different counties (Wats. cyb. iii. 534, and A. Dec.).

"1829 A. D." (Maunder); the pacification of Greece finally agreed on: Greece to pay an annual tribute and enjoy "qualified independence" under Turkish sovereignty, but to be governed by a hereditary Christian prince of the family of neither of the allied powers. "July 23d," address of Capo d'Istrias, president of Greece; giving an account of his measures and the state of the country, before the fourth national assembly, called by him at Argos.

"The same year" (. . . .), the steam-engine successfully applied to land-transportation; on a *rail-road* at Liverpool, England.

As early as this year (Brendel), Schiede and Deppe in Mexico, meeting with *Quercus calophylla, polymorpha, laurifolia*, and *germana* (publ. in Linnæa for 1830).

"In this year" (Pritzel), after his Etudes cryptogam. "in 1815," Lapylaie publishing his Flor. Newf. and isles Saint-Pierre and Miclon.

"In this year" (A. Gray), Dr. Robbins examining the plants growing around Uxbridge and in other portions of New England, meeting with *Astragalus Robbinsii, Potamogeton Robbinsii, Eleocharis Robbinsii.*

"1830, March" (am. sylv.), Nuttall journeying in the Southern States as far as West Florida.

"June 14th" (Maunder), landing of French troops before Algiers. The city captured "July 5th;" — and with the country around, held to the present day.

"July" (Kobell ii.), rising of a new volcanic island out of the sea Southwest of Sicily. As in other instances, the new island after a while settled down and disappeared.

"In this year" (Winckl.), publication by Delile of the plants collected by Leon de Laborde in Arabia Petraea.

"July 30th" (Maunder), after three days fighting in the streets of Paris, Charles X. compelled to abdicate. He was succeeded by Louis Philippe, of the Orleans branch of the Bourbon family.

"In this year" (Winckl.), Lindley publishing his Orchidac., — the Seventh volume "in 1840."

Ophrys atrata of the East Mediterranean countries. From transported specimens, described by Lindley: — observed by Chaubard in the Peloponnesus.

"In this year" (Humb. cosm. v.), journey of Fuss from Lake Baikal to Pekin; where he established a magnetic and meteorological observatory, in an old monastery that from the reign of Peter the Great had been inhabited from time to time by monks of the Greek church. — Observations were continued "ten years," by Kovanko.

"In this year" (title-page), Ernst H. F. Meyer publishing his Plant. Labrador.

"1831 A. D." (Maunder), Capo d'Istria, president of Greece, assassinated.

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* *Lobelia succulenta* of Java. Described by Blume, and seen by him indigenous in Java. — Farther North, enumerated by Mason v. 433 and 785 as "exotic" in Burmah, and called by the English *Neilgherry grass:* but in Hindustan, according to Wight, "a small cespitose species much cultivated" in vases.

† *Castanospermum Australe* of Subtropical Eastern Australia. An elegant pinnate-leaved Leguminous tree, a hundred feet high, its seeds edible either crude or roasted: — observed by Cunningham at Moreton Bay (Hook. bot. misc. i. pl. 51). "About thirty years ago" according to Drury was introduced into Hindustan, its wood is used for barrel staves, and "there are several large trees in the Lalbagh at Bangalore" (Cleghorn).

"In this year" (Pritzel), George Don publishing his Hist. plant. or Gardener's Dictionary:—the Fourth and last volume "in 1838."

"In this year" (Humb. cosm. v.), Faraday's induction-currents. "The great discovery of the *development of light* by magnets."

"In this year" (Winckl.), Bunge publishing the plants observed in Northern China.

"In this year" (Mann), Meyen accompanying Wendt to the Hawaiian Islands.—After his death, descriptions of plants observed by him were published in Act. Acad. Caes. in "1843."

"1832 A. D." (Gliddon), first voyage of a British steamer on the Red Sea: initiating *ocean steam-navigation*. A change in international relations—tending to restore Egypt to her ancient position as the World's thoroughfare; the natural centre of the routes of intercourse by land and sea.

About this time also (Clot-Bey), by Ibrahim-Pacha, a *botanic garden* under European superintendence established on Rhoda Islet near Cairo: in effect, extending to Egypt the European system of procuring and introducing newly discovered plants. The history of plants known to the Egyptians properly closes here:—the botanic garden already at the time of my visit, containing many species not mentioned in these pages.

"In this year" (Winckl.), publication of the Plant. rar. collected by Bertero in Chili;—and "in 1835," of those found on Juan Fernandez.

"Aug. 30th" (Maunder), Otho, a younger son of the king of Bavaria, having signified his acceptance, proclaimed in Nauplia king of Greece

"In this year" (biogr. mem. Nutt.), N. Wyeth returning from his expedition to and beyond the Rocky mountains, and his plants placed in the hands of Nuttall for publication.

"1833 A. D." (Maunder), an English "sub-governor" sent from Australia to reside in New Zealand:—this continued until "1840," when New Zealand was "constituted a colony dependent on" Australia, a governor appointed, also a commission "to inquire into the validity of all claims to land" purchased by adventurers from the natives.

"The same year" (. . . .), arrival at Calcutta of a ship laden with ice, sent by Frederic Tudor from Boston in New England. The commencement of the *ice trade* of traffic by sea in ice.

"In this year" (Winckl.), F. E. L. von Fischer and C. A. Meyer publishing Pars prodr. flor. ross.*

"The same year" (Mann), Douglas in Northwest America, and in "the last week" arriving at the Hawaiian Islands,—where he met a violent death on the following "12th of May."

"In this year" (Pritzel), H. B. Croom and H. Loomis publishing their Catalogue of plants observed in the neighbourhood of Newbern.—Removing to Florida, Croom met with . . . . : and after his death, a Second edition of the Catalogue was published by Torrey "in 1837."

Collomia grandiflora of Northwest America. Discovered there by Douglas.—Transported to Europe, escaped from cultivation several years prior to 1850 near Erfurt, as well as near Schleiden on the Roer (A. Dec.).

Navarretia heterophylla of California. An annual, transported to Europe, described by Bentham, and observed by A. Decandolle g. b. 798 for ten or fifteen years a weed in the botanic garden at Geneva, but had not extended beyond its walls.

"1834 A. D. = 31st year of the Seventy-fifth Chinese cycle" (Pauth. 27 and 488), Tao-kouang reigning.

One hundred and eighty-fourth generation. May 1st, 1834, mostly beyond youth: the Jewish writer Steinschneider: the Greek writer A. G. Paspati: the Italian writer Ant. Targioni: the French writers, S. Munk, the archæologist Mariette: the German writers, Carolus Mueller, F. Von Kobell, Bernays, Zunz, Boeckh: the English writers, George Williams, W. S. W. Vaux, Henry Fynes Clinton, John F. W. Herschel the astronomer, Martin Joseph Routh, Edward Robinson, Talvi, Thomas Wright, J. Gardner Wilkinson, Samuel Birch, Perring, R. S. Poole: the Slavonic writers, Alexander Pushkin, Ivan Krylof, Sreznefski, Grigoryef, Khanikof, and Kasembeg: the botanists, Moritzi, Schouw, C. S. Rafinesque Schmaltz: the painter Horace Vernet b. 1789.

"In this year" (Humb. cosm. v., and Winckl.), after publishing his researches in the Crimea and Caucasus "in 1815," Parrot visiting mount Ararat, and the summit for the first time reached.

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* *Amsinckia intermedia* of Chili. Annual and Borageneous, described by Fischer and Meyer,—and known to grow wild in Chili (A. Dec.). About 1841, transported apparently with seeds of Madia, made its appearance along a canal leading into the Garonne, continued there until "1847," and transferred into a garden at Cepet has become a weed (Lagrèze-Fossat).

"In this year" (Winckl.), Friedrich Link publishing his Symbol. Flor. Graec. (Linnaea ix.).

"Sept. 3d" (biogr. mem., and am. sylv.), after leaving Independence on the Missouri "Apr. 28th," Nuttall and Townsend coming in sight of the Columbia, and at the "close of September" reaching Fort Vancouver.

"In this year" (Winckl.), Charles C. Babington publishing his Flor. Bathon.; — "in 1839," Primit. Flor. Sarn.; "in 1841," veg. Hebrid.

"1835, Jan. 5th" (biogr. mem. and am. sylv.), Nuttall from Oregon arriving at Oahu, one of the Hawaiian Islands. Leaving Townsend, he proceeded to California, and reached Monterey in "March," continued his researches as far as Santa Barbara in "about 34," — and returned by sea, arriving at Boston in the "beginning of October, 1835." He died "Sept. 10th, 1859."

At this time (. . . .) Pitcher examining the plants growing around Lake Huron and on the Arkansas, meeting with *Cirsium Pitcheri*.

"In this year" (Pritzel), E. H. F. Meyer publishing Botanical observations of J. F. Drège, who had spent "eight years" in Austral Africa. — Drège published his Catalogue of the dried plants "in 1837-40."

"1836, Jan. 12th, towards midnight" (Dallet ii. 92), Pierre-Philibert Maubant passing the Chinese custom-house at Pien-men. Continuing Eastward, he succeeded in entering Corea. The pioneer of the French missionaries.

In this year (A. Dec. g. b. 761), Bojer at the Mauritius Islands writing his Hort. Maurit., — published in "1837."

The following plants enumerated by Bojer as growing on the lofty mountains of the Comoro Islands: *Waltheria debilis*, biennial; *Plectranthus ternatus*, perennial.

And on the lofty mountains of the Mauritius Islands: *Dombeya ferruginea*, a shrub; *D. punctata*, also a shrub; *Trochetia Candolleana*, a shrub; *Toddalia angustifolia*, suffruticose; *Distephanus populifolius*, a Conyzoid shrub; *Psiadia linearifolia*; *Monarrhenus rufescens*, a shrub; *Cylindrocline Commersonii*, a shrub; *Gnaphalium cæspitosum*, *G. multicaule*, and *G. yuccæfolium*, all suffruticose; *G. arnicoides*, annual, growing also on Madagascar; *Senecio cernuus*, and *S. cacalioides?* annuals; *S. penicillatus*, suffruticose; *S. pollicaris*, perennial; *Campanula ensifolia*, perennial; *Andromeda salicifolia*, and *A. buxifolia*, shrubs; *Salaxis arborescens*, and *S. abietina*, shrubs; *S. montana*, suffruticose; *Rochelia Borbonica*, annual; *Nuxia verticillata*, a shrub; *Plectranthus Mauritianus*, perennial; *Justicia* (*Hypoestis*) *serpens*, perennial; *Sapium obtusifolium*, a bush; *Monimia ovalifolia*, a shrub; *Boehmeria urticæfolia*, a shrub; *Bulbophyllum pusillum*, an epidendric Orchideous plant; *hypoxis angustifolia*, perennial; *Piper portulacoides*, perennial, epidendric.

"In this year" (Brend.), Hartweg arriving in Mexico, meeting with *Quercus barbinervis, glabrescens, Grahami, Skinneri, Sonomensis, dysophylla, Benthami, Tlapuxahuensis, laeta* (publ. by Bentham). — He remained until "1840."

"At the same time" (Brendel), Galeotti and Ghiesbreght in Mexico, meeting with *Quercus lanigera, lutescens, Ghiesbreghtii, nitens, insignis, rugulosa, glaucoides, callosa* (publ. bull. acad. Brux. for 1843).

In this year (. . . .), Short in Kentucky,* meeting with *Brachychaeta cordata, Vesicaria Shortii, Ludwigia polycarpa, Thaspium pinnatifidum*.

"In this year" (Pritzel), after his Synops. Asterum "in 1818," Agrostolog. brasil. "in 1829," Gen. and sp. Asterearum "in 1832," C. G. Nees von Esenbeck publishing his Systema Laurinarum.

"In this year" (Pritzel), after his Gram. sicul. "in 1818," Symbol. botan. "in 1832-3," Presl publishing his Prodr. monog. Lobeliac.: — his Suppl. pteridograph. "in 1845."

"1837, in the beginning of the year" (Pauth. 472), publication in European gazettes of the proclamation of Tao-kouang: Forbidding the preaching of Christianity in China. The concluding event in Pauthier's historical description of China: — though the work itself was issued two years later at Paris.

"July" (Jap. mann. 271), sailing from Macao of Dr. Parker and Rev. Charles Gutzlaff in a missionary vessel, carrying home "some shipwrecked Japanese:" but approaching forbidden ports, were fired upon, and returned to Macao.

"The same year" (Inman), the territory of Michigan admitted into the Union as the "twenty-sixth" State.†

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* *Zygadenus leimanthoides* of the alluvial border of Northeast America. In or about this year, specimens brought "from New Jersey" found by Durand in the Philadelphia market and shown me: — afterwards, the plant was found by Knieskern growing in New Jersey, and was received by A. Gray from "Virginia, and southward."

† *Quercus corrugata* of Guatemala. Transported to Europe is described by Hooker icon. — (Brendel).

"In this year" (A. Dec. p. 716), after his first edition in "1826," Darlington publishing a second edition of his Flor. W. Chest., enumerating *Euphorbia Darlingtonii*.

In this year, Engelmann in Northeast America, meeting with *Isoetes riparia*.

"The same year" (Hale ethnogr. Expl. Exp. p. 190), at Banabe or Ascension Island, "a man who had been drifted thither in a canoe" from "Maraki" (one of the Tarawan coral-islands) informed Maigret, That "his people were accustomed to make a sweet drink called takarave, unlike any thing to be found at Ascension." This, according to Hale, "is a beverage made of the sweet juice drawn from the spathe of the *cocoa-nut* tree."

"In this year" (title-page), Blanco publishing at Manila his Flor. Filipin.

"In this year" (Winckl.), Edmond Boissier travelling in Southern Spain. — He published his Plant. Nov. "in 1838," and Voyage Botan. "in 1839-45."

"1838, June 20th" (second edit. pref. and 354), end of the chronicle of N. Harris Nicolas.

"In this year" (Pritzel), Ramon de la Sagra publishing the Botanical part of his Hist. cub.: — it was left incomplete by A. Richard "in 1842."

"In this year" (title-page and pref.), Lindley publishing his Flor. Med.

"1839 A. D." (Clot-Bey and others), Mahmood II. succeeded by Abd-el-Medjid, thirty-second Turkish sultan.

"The same year" (. . . .), the art of *photography* discovered by Daguerre. — Specimens of the art, "daguerrotypes," first seen by myself on the arrival of the Vincennes at Singapore.

"In this year" (Dallet ii. 131), Fourth persecution of Christians in Corea.

"In this year" (Winckl.), A. H. R. Grisebach publishing his monogr. Gentian., and visiting Roumelia and Bithynia as far as Broussa. — He published his Spic. flor. Rumel. "in 1843-5."

Limnanthemum Forbesianum of Mozambique. Received by Grisebach from Mozambique, and from Ceylon — (A. Dec.).

"In this year" (Pref.), Graham publishing his Plants of Bombay. He died "May 28th," and from the "two hundredth page" the publication was completed by Nimmo.

"1840 A. D." (Kobell iv.), the art of *electrotyping* discovered by Jacobi.

"In this year" (A. Dec. 800, and Winckl.), after residing at Montpelier "in 1827," Moquin-Tandon publishing his monogr. Chenopod.

"1841 A. D." (Brendel in Am. Nat. 1870), Liebmann arriving in Mexico, meeting with *Quercus Oaxacana*. — He remained until "1843."

In this year (see A. Gray man. 2d ed. 176), Sullivant at Columbus on the Ohio, meeting with *Asclepias Sullivanti*, *Eleocharis compressa*, *Carex Sullivanti*, *Arabis patens*.

"1842 A. D." (Dallet ii. 256), the Opium war carried on by the English against China. The city of Nang-king was captured, and by the treaty of "Aug. 29th" the isle of Hong-kong ceded. The Chinese for the first time undergoing humiliation before Europeans.

"In this year" (Pritzel), Loddiges and sons publishing the Orchideæ in their collection, "1654 species."

"December" (Bonom. Nin. i. 2), excavations on the site of Nineveh commenced by Botta; appointed by the French government consular agent at Mosul.*

"1843, May 19th," and "about the same time" that the site of Lake Moeris was discovered by Linant, Lepsius (eg. and sin. p. 14) encamped among the ruins of the Labyrinth. Continuing up the Nile, Lepsius 268 ascertained, that "a great part of the population of Thebes still" remains *Coptic*. Ascending beyond Philæ, he describes Korusco as "an Arabian place in the centre of the land of Nubians," and inhabited by "Ababde" (judging apparently by the language, the *Ababdeh* being an Ethiopian tribe speaking the Arabic language), p. 127. The *Nubian language* is described by him as having "no accordance" with the Egyptian, nor with Semitic languages, in the "grammatical forms" and "radical words:" having terms for "God, spirit, slave," but the numbers above twenty are borrowed from the Arabic; as also the terms for "time, year, month, day, hour, servant, friend, enemy, temple, to pray, believe, read, and every thing connected with house-building and navigation," p. 128. — In Upper Nubia, Taiba was found inhabited only by Fukara, a kind of priest, who read, write, and the chief is believed in like a prophet; they call themselves "Arakin," and are probably of "Arab race," p. 187. The *Nuba languages* (spoken by a Negro tribe) are described as "partly related to the Berber," p. 209. But the *Kongara language* of Dar Fur was "quite different from the Nubian," and presented "strong analogy with South African languages" (belongs therefore to the Negro class of languages), p. 234. Returning down the Nile and proceeding Eastward to Sinai and Palestine, Lepsius found "the pascha of Jerusalem at war with Hebron," p. 334: the *Samarians*

* *Euphorbia Bojeri* of Madagascar. An ornamental scarlet-flowered species, transported to Europe, and described by Hooker. — By European colonists also, introduced into the gardens of Burmah, where it has become frequent (Mason v. 421 and 762).

reduced to "about one hundred and fifty" persons; who hold "no communication with Jews, Christians, or Mahommedans," and continue to "annually offer up a sheep on Mount Garazim:" the "ornamental part" of the ruins at Balbeck, is pronounced by him "heavy, overloaded, and some in a very barbarous taste," p. 346.

"Sept. 15th" (Maunder), bloodless uprising in Greece: effecting the removal of foreigners from high official station.

"In this year" (A. Dec. g. plant. 672, and Winckl.), Babington publishing his Manual of British botany.*

"1844 A. D." (Dallet ii. 266), André Kim from China travelling across Mandshuria to the Northern frontier of Corea. He ascertained that the Mandshus extend very little beyond "Lat. 46°," and are bounded on the North by two small States of Ou-kin, and Tu-pi-latse or Fish-skin Tartars; on the West, by the river Soungari and the Stone barrier.

"In this year" (title-page and pref.), W. Smith publishing his Dict. Greek and Roman Biogr., — completed in "1849."

"In this year" (Winckl.), Louis Pfeiffer publishing on the plants of Hesse in Germany; † — "in 1847," his Flor. niederhess.

"1845 A. D." (Inman), by act of Congress, Texas annexed to the Union as a State: the territories of Florida and Iowa, also admitted as States. — The act was not accepted by the people of Iowa, until "1849."

"In this year" (Winckl.), C. L. Gay publishing his Hist. fisic. Chile.

"In this year" (Pritzel), after his Lasiopetal. monogr. "in 1821," and other memoirs down to "1842," Jacques Gay publishing his Holost. monogr.

"In this year" (Winckl.), F. J. Ruprecht publishing his Flores Samojed.

"Dec. 8th" (Humb. cosm. iv.), after an interval of "thirty-eight" years without planetary discoveries, a fifth asteroid found by Hencke, and named Astrea.

"1846 A. D." (Inman), through the action of the U. S. government, our first aggressive foreign war. Against Mexico; the collision between military forces taking place "May 7th" at Palo Alto, East of the Rio Grande.

"Sept. 23d" (Humb. cosm. iv.), the planet Neptune discovered by Galle, whose attention had been directed to its vicinity by the calculations of Le Verrier. — A satellite was discovered by Lassell as early as "Aug. 6th, 1847."

"Sept. 30th," in Boston, W. T. G. Morton dentist, having a refractory patient, called on Charles T. Jackson physician and chemist, and was advised to try ether — (Atlant. monthly, 1868). The incident led to the demonstration, that inhaling ether induces insensibility to pain during surgical operations. Verified shortly afterwards at the Massachusetts hospital.

"In this year" (Winckl.), after his Outlines geogr. distr. Brit. plants, H. C. Watson publishing his Cybele Britan.

"1848 A. D." (Inman), the territory of Wisconsin admitted into the Union as a State.

"In this year" (dedicat.), A. Gray publishing his flor. Northern U. States, enumerating *Nasturtium lacustre.*

"1849 A. D." (Troyon 85), by Boucher de Perthes, publication of his discovery near Abbeville in France of ancient relics; some of them belonging to the Stone period.

"1850, Aug. 26th" (Inman), passage by the U. S. congress of a fugitive slave law: and "Sept. 7th," California admitted into the Union as a State.

"1851 A. D." (title-page), Rev. Francis Mason at Tavoy publishing his flor. Burman.

"In this year" (Mann), Remy visiting the Hawaiian Islands. — He remained until "1855."

"In this year" (Winckl.), after his revis. Anemon. "in 1842," Pritzel publishing his Thesaurus lit. botan.

"1852, Feb. 12th" (Mason iii. 61), Second English war with Burmah. — Ending "June 20th, 1853" in the deposition of the reigning monarch; the East India Company virtually acquiring control of the country; though a native king remains on the throne.

"In the winter of 1853 to 1854" (Troyon pref.), on the margin of Lake Zurich, discovery by Ferd. Keller of the remains of a lacustrine village belonging to prehistoric times, to the Stone period.

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* *Cuscuta trifolii* of . . . . Observed in Britain and distinguished by Babington; — but according to Bromfield iii. 563 seems adventive, multiplying at times and becoming scarce, as though liable to disappear (A. Dec.).

† *Cuscuta Hassiaca* of Eastern Europe. A species of *dodder* observed in Hesse and distinguished by Pfeiffer. — In Britain, introduced among plants raised for cattle-feed, but continues confined to cultivated or artificial meads (A. Dec.).

— The beginning of researches which have led to similar discoveries at the bottom of most of the Swiss lakes.

"1854, Sept. 3d" (Sieb. elucid. Vries p. 69), during the Crimean war, Urup supposed to be a Russian island, taken possession of by two French frigates. The Russian ambassador Putiatine happening to be in Japan, where he had proposed the cession of Urup to Russia, the consent of the Japanese government was now obtained, — and in accordance therewith, a treaty was soon framed (see 1856).

Hardly later than this year (A. Dec. g. b. 1009), Lecoq and Lamotte publishing their Cat. plant. centr.*

"In this year" (title-page), Winckler publishing his Botanical writers.

1854-5 (Inman), act of Congress for organizing the territories of Kansas and Nebraska.

"1855 A. D." (title-page and pref.), Alphonse Decandolle publishing his Geogr. Bot.

"1856 A. D." (Sieb. p. 70, and journ. St. Petersb. 28th Apr. 1857), by treaty, the boundary between Russia and Japan to be in future between Yeterop and Urup; Urup with the Northern Kurils to belong to Russia, and the large island of Krafto (Saghalien) to be neutral ground.

"July and September" (Humb. cosm. v.), the mountain chain of the Kuen-lun, stretching East and West, reached and traversed by the brothers Hermann and Robert Schlagintweit; journeying from Ladak over the Karakorum pass "18,304 feet" in elevation.

"In this year" (Troyon pref.), publication by Wilde of his Researches, "commenced in 1836," on the crannoges or lake-dwellings of the ancient Irish.

"1859, August" (Boston Transcript for July 28th, 1871), oil having been remarked for many years floating in small patches down Oil Creek, a tributary of the Alleghany in Pennsylvania, boring undertaken by one of the inhabitants, Drake, residing there, and at the depth of "seven hundred feet" the source of supply reached. The commencement of traffic in *petroleum*.

"In this year" (title-page), A. Gray publishing a revised edition of his Flor. North. U. States.

"1860, Oct. 13th" (Dallet ii. 463), Pekin captured by the combined forces of the English and French. A panic prevailed in consequence throughout Corea, but gradually subsided, — and after about a year the persecutions against Christians recommenced.

"November" (Dallet hist. Cor. p. ii.), territory in Mandshuria, extending along the Pacific as far South as the Corean frontier and the mouth of the Tou-man-kang in 41° 50′, ceded by China to Russia.

"In this year" (title-page, and pref.), Chapman publishing his Flor. South. U. States.

"1861, March 20th, a quarter to eight p.m." (letter in Boston Journal of May 6th), severe *earthquake* felt throughout Chili; and East of the Andes, in "about six seconds" levelling the city of Mendoza containing "more than twelve thousand" inhabitants, leaving "not a house" standing.

"April 12th" (Bemis in Boston Advertiser of May 3d, 1865), Fort Sumter in Charleston harbour assailed by the populace; and on the "14th," captured.

"April 15th," letter from Lyons, British minister at Washington, announcing the intention of President Lincoln "to adopt coercive measures against the South." The letter was "received in London, April 30th" (parliam. blue b. i. p. 19, and Bemis).

Aroused from bed at "two a.m." and informed of the call for troops, Capt. Dyke of Stoneham reported at "half past nine" at Boston, with his company full and "fully equipped." At "half past five" in the evening, the Sixth regiment left Boston: and April 19th, not "forty-eight" hours from his midnight summons, Capt. Dyke was lying wounded in Baltimore, more than four hundred miles from home (Boston Journal of April 24th).

"April 19th," proclamation by President Lincoln, announcing the intention of blockading the ports of seven States, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, and Texas. "April 27th," a second proclamation; including with the above North Carolina and Virginia, they having in the interval joined the insurrection. The blockade was actually established "April 30th" in the Chesapeake; off Charleston, "May 13th;" off Mobile, "May 27th;" and off the mouths of the Mississippi, "May 28th" (Bemis).

"April 20th" (Boston Traveller of May 8th, and other newspapers), *balloon-voyage* of T. S. C. Lowe from Cincinnati to Pea Ridge district in South Carolina, more than a thousand miles, in "nine hours."

"April 22d," letter from minister Lyons at Washington, communicating the blockade proclamation. The letter was received in London "May 10th" (parliam. blue b. i. 23, London Times of March 22d, 1865, and Bemis).

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* *Arenaria ligericina* of France. Observed by Lecoq and Lamotte 104 on the mountains of Central France — (A. Dec.; see A. ciliata).

"May 6th" (Hansard, and Bemis), by the British government, announcement in parliament of the intention of recognizing the slaveholding insurgents as a belligerent power. "May 13th," the proclamation to that effect issued, declaring that "hostilities have unhappily commenced," and enjoining neutrality. "In the evening," after the issuing of the proclamation, minister Adams of the new administration at Washington, landed in England (Bemis). Representations were made through the British minister at Paris, that the insurgents should be "invested with all the rights and prerogatives of a belligerent;" and at the end of "a month," the French proclamation was issued (parliam. blue b. iii. p. 1, and Bemis).

In this year's Report on the Harvard Library, John L. Sibley states: "The demand for materials to be converted into *paper* has increased enormously within a few years. Junk dealers and tinmen penetrate every part of New England in search of rags, and latterly they have commenced purchasing books and pamphlets, for this purpose. Ninety-eight tons of books and pamphlets were ground up in only one of the paper mills in Massachusetts in one year."

"June 25th" (Boston newspaper), Abd-el-Medjid succeeded by Abd-el Aziz Khan, thirty-third Turkish sultan.

"July 13th" (opin. judges Nelson and others, Bemis), hostilities at length resolved upon by the American government, and civil war recognized by act of Congress.

"1862, March 10th" (Boston Journal of March 15th), *revolution in naval warfare* initiated by a combat between iron-clads: the ram Merrimac defeated on the Lower Chesapeake by the Monitor; a revolving sea-turret invented and constructed by Ericsson.

"1863, Jan. 1st," proclamation by president Lincoln, Freeing the slaves in the revolted States.

A New Englander according to governor Andrew (Boston Journal of Jan. 9th) is "not unfrequently an expert in divers callings. In the winter he cuts ice" for "Calcutta, and he goes fishing in the summer on the Banks of Newfoundland. He carries on his father's homestead in the growing season, and makes boots for Boston market in the intervals of farming." He "goes to college for his own education, and teaches school himself in the college vacation." He "scours the Pacific in a New Bedford whaler while he is young and fond of adventure, and settles down at last the keeper of a country store:" manufactures "plows and reapers in Massachusetts, and puts his earnings into railroads in Michigan, Iowa, and Wisconsin."

About the beginning of this year (Lond. Times quoted in Boston Journ. Feb. 10th), Egypt, after furnishing troops in Eastern wars for more than five thousand years, first sending soldiers to America. The French transport Seine, having landed "a body of troops for Cochin China," received on board through the connivance of the viceroy "four or five hundred" of his Negro soldiers to be employed in the war in Mexico. — Four years later, arrival home "of the Egyptian battalion which has been fighting" in Mexico, "reduced in numbers from seven hundred to three hundred and fifty, all the men remaining decorated with "French and Mexican orders" (Bost. Transcr. July 12th, 1867).

Before the close of the year (Dicey in Nineteenth Cent. mag. for 1877), Said Pasha succeeded by Ismail Pasha as viceroy of Egypt. — He continues ruling in the present year 1878, and is called "the Khedive."

"The same year" (Boston Journal of May 4th), in return for a patent medicine "largely sold in Egypt," arrival in Boston of a cargo of rags; consisting in great part of mummy-rags, now used "for paper stock."

"In this year" (title-page), Prior publishing his Popular names of British plants.

"1864, May 5th" (Grant's report), Bermuda Hundred and City Point, at the junction of the Appomattox and James rivers, occupied by an army under Gen. B. F. Butler.

The same year (journ. Bost. soc nat. hist.), *emery* discovered in America by C. T. Jackson; in an extensive vein or bed, at Chester in Western Massachusetts.

"1865, Feb. 1st" (Grant's report), Gen. W. T. Sherman with an army, having traversed Georgia from Atlanta to Savannah, now turned Northeast, continuing by land through the Carolinas.

"April 9th" (Grant's report), surrender to Gen. U. S. Grant of the insurgent army driven from Richmond: followed by the surrender of the insurgent forces everywhere, virtually closing the war.

April 14th, Friday, about 10 p.m. (Stanton offic. account), assassination of president Lincoln.

"1866, Jan. 30th at 3½ p.m.," full moon at New York; the succeeding full moon to take place "March 1st about 7 a.m.," leaving the intervening month of February without a full moon (N. Y. Evening Post of Feb. 24th).

"In this year" (Dallet hist. Cor. p. lxii to cv), severe persecution of Christians in Corea, Pourthié and other French missionaries put to death; and their manuscript writings, including a Corean-Chinese-Latin dictionary by Pourthié, a Chinese-Corean-French dictionary by Daveluy, and a Latin-Corean dictionary by Petitnicolas, seized and burned. — A Corean grammar and dictionary, compiled subsequently by Ridel assisted by native Christians, was ready for publication in 1874.

"Before the close of the year" (Dallet p. cxcii), French intervention to punish the murder and

prevent a repetition, but the Expedition failed, the cause was ruined, and thousands of Christians were put to death.

"1867, Sept. 3d" (Bost. Advert. for Sept.), at Carmathen, opening of "the Eisteddfod or national festival of Wales; a procession marching to a field where a Druidical circle is formed, a huge stone in the centre. A proclamation in Welsh is then made," announcing to the assembled bards that "judgment will be pronounced upon all works of genius submitted for adjudication."

"1869, Nov. 16th" (letter from Port Said in Bost. Adv.), opening of the Suez canal. For the passage of large ships.

1870, Sept. 20th (Atlant. telegr. to Boston gazettes), the Prussian army having arrived before Paris, the Italian forces of king Victor Emmanuel enter Rome and the political or temporal power of the Papacy brought to an end.

"1872, Nov. 27th" (Bost. journ. for Feb. 1st, 1873), Capt. O. Owen of the British barque Samuel, in Lat. 20° 57′ 5″ Long. 1° 14′ W., remarked "innumerable *meteors* of various magnitude and brilliancy shooting with great rapidity to the South-East and South-Sou'-West; three or four would start nearly together from the same spot, making their first appearance generally in the zenith and after leaving a tail of about 15° or 20° in length would disappear. Their motion was so swift that the exact point or constellation in the heavens where they first appeared and where they disappeared could not be ascertained with precision. An attempt was made to count them, but as they appeared in different quarters at the same moment, this was found impossible, but by a rough estimate there were from seventy to eighty per minute: continued from a little after 8 p.m. until midnight. Few were seen after that hour."

INDEXES.

INDEX TO FOREIGN WORDS.

αβροτονον, 358, 453.
abtykhym, אבטרחים, 72.
acer, in Latin (German), 157.
αχεροις, 96.
αχιλλειος, 488.
αχρας, 109, 121.
adonium, 507.
a'ds el-ma, 478.
αειζωον, 205, 293.
אהלות, aelwd, 189.
αγαλλιδας, 200.
αγαλλοχον (Pali), 189.
αγαρικον (geograph.), 440, 496.
αγχουσα, or γχουσα, 108, 1105, 1190.
αγηρατον, 488.
αγρωστις, 184, 397, 494.
agwz, אגוז, 188.
αιγειροιο μακεδνης, 133.
αιγειρος, 109.
αιγιλον, 379.
αιγιλωψ, 349.
αιγιπυρος, 283.
αιμοδωρον, 363.
αισχυνομενη, 303.
ακακαλις, 280, 417.
ακακια, 487.
ακανος, 359.
ακανθαι, 270, 360, 489.
ακανθη, 270, 386.
ακανθιον, 489.
ακευθις, 170, 230, 502.
ακανθος, 239, 302.
ακινος, 446.
ακονιτον, 160, 292, 484.
ακορνα, 359.
ακυλος (German), 100, 174.
αλαβανδηνον, 573.
alaternus, 184.
αλεκτοροποφος, 501.
αλικακαβος, 314.
αλισμα, 493.
αλκεα, 486.
allium, 145, 512.
almgym, אלמגים, 180.
αλοη (Hindustanee), 391, 469, 573.
αλωπεκουρος, 349.
αλθαια, 308.
alum, 347.
αλυπον, 490.
αλυσσον, 316, 485, 503.
αμαμηλιδες, 285.
αμανιτας, 407.
αμαρακος, 248.
αμαραντος, 205, 468, 475, 537.
amba, 237.
αμβλεγ, 408.
αμβροσια, 206, 406, 630.
αμμι, 307.
αμμωνιακον, 152.
αμωμον, 323.
amomon herba, 458.
αμοργιδος, 154.
ampelodesmon, 397.
αμπελος αγρια, 210.
anacardi, 567.
αναγαλλις, 200.
αναγαλλις ενυδρος, 501, 504.
αναγυρον, or ονογυρον, 286.
ανακαμψερος, 303.
ανδραχνη, 244, 487.
ανδραφαξις, 249, 343.
ανδροσαιμον, 468.
ανεμοχορτον, 734.
ανεμωνη, 245, 351, 382.
ανισον, 248.
αννητω, 232.
ανωνις, 283.
ανθεμις, 294, 326.
ανθερικος, 269, 273.
ανθρακα, 573.
anthriscum, 272, 506.
ανθυλλις, 435, 491.
αντιρρινον, 257.
απαργια, 361.
απαρινη, 147, 309.
απαπη, 361.
αφακη, 280.
αφαρκη, 362.
απιος, 197.
apium, 175.
αψινθιω, 99, 358, 470, 557.
αραχιδνα, 355.
αραχος, or αρακος, 89, 345, 355.
argemonia, 432, 440.
αρια, 174.
αριστολοχια, 307, 432, 447, 455, 512.
αρκευθις, 170, 230, 502.
αρκου σταφυλη, 529.
arn, ארך, 239.
αρναβω, 519.
αρνογλωσσον (transl. from Arabic), 156, 454.
αρον, 308, 346.
αρτεμισια, 82, 280, 488, 508.
αρτυτικη, 586.
arz, ארז, 69.
ασαρον, 264, 433.
ασχυ (Baschkir), 275.
ashl, אשל, 107.
ασκυρον, 486.
ασπαλαθος, 243, 268.
ασπαραγος, 165, 396, 468, 525.
ασφοδελος, 106, 269.
asperugo, 509.
αστηρ, 286, 508.
αστραγαλος, 435.
αστριον, 346.
astrobolos, 503.
αθανασια, 448.
αθραγενη, 127.
ατρακτυλις, 231, 245, 324.
atth, אטד, 161.
avena, 398.
ayakbouh, 177.
azwb, אזוב, 139.

βακχαρις, 219.
bala (Burman), 321, 691.
bale, or ball (Bengali), 370.
βαλλωτη, 206.
bamia, 274.
bark (from a kind of tree), 134.
batis, 473.
βατος, 134, 171.
βατραχιον, 293, 296, 434, 503, 531.
bdlh, בדלח, βδελλιον, 1.
βηχιον, 259.
βελιλεγ, 408.
bellis, 507.
βερικοκκια, 469.
bersym, 124.
besilleh, 89.
beta, 109.
bkr, בכר, 14.

blatta, 482.
βλιτον, 282.
βολβινη, 351.
βολβοκασταvον, 585.
βολβος, 273, 350, 494.
booza, 93.
βουγλωσσον, 263, 509.
βουμελια, 362.
βουνιας, 320.
βουφθαλμον, 310.
βουπλευρον, 342.
βουτομον, 163.
br, בר, or burr, 78.
βραβυλον, 345.
bras (Malay), 79, 323.
βραθυς, 454.
britannica, 470.
βρυον, 162, 296, 504.
bryt, ברית, 230.
bshm, בשמ, 115.
btnym, בתנים, 93.
btzlym, בצלים, 104.
bul, or bwl, בול, 186.

callitriche, 504.
canaria, 510.
cantabrica (geographical), 463, 509.
carice, 458.
casia, 459, 464.
centunculum, 468.
cerasus, 445.
cerinthe, 460.
chaenopadas, 431.
χαλβανη, 143, 156.
χαλκειος, 359.
χαμαιβατος, 357.
χαμαιδρυς, 364.
χαμαικεφασος, 398.
χαμαικισσος, 491.
χαμαιλεων, 315.
χαμαιμηλον, 295, 516.
χαμαιπευκη, 489.
χαμαιπιτυς, 339, 405.
χαμαισυκη, 436.
χαρισιον, 288.
χαμελαια, 406.
χελιδονιον, 242, 378, 476.
χονδριλλη, 281.
chrusanthus, 550.
χυμενιον, 566.
χρυσανθεμον, 295, 310.
χρυσογονον, 484.
χρυσοκομη, 197.
χρυσοξυλον, 232.
cichorium, 256.
cicuta, 247, 633.
cimex, 286.
cnicon, 161.
combretum, 572.
condurdum, 504.
conferva, 514.
consiligo, 472.
corylus, 317.
cow, or ngau (Chinese), 14.
cracca, 505.
dactylon, 512.
δαφνη, 328.
δαυκος, 342, 471, 472.
δελφινιον, 178, 297, 484, 536.
δικταμνος, 290, 317.
διοσανθος, 353, 403.
διοσπυρος, 350.
dkhn, דכן, 79.
δολιχος, 312.
δορυκνιον, 161, 324.
dourra, or dhorra, 475.
δραβη, 485.
dracunculus, 499, 511.
δρακοντιον, 308, 314, 344.
drdr, הרדר, 2.
δροσιβοτανον, 734.
δρυπις, 353.
δρυοπτερις, 367.
thwthym, דודאים, 116.

εβενος, 306, 348.
echinopode, 508.
εχις, 368.
ηδυοσμος, 190.
ηδυσαρον, 341.
ελενιον, 295, 433.
ελαια, 73.
ηλακατη, 231.
ελαφοβοσκον, 205.
ελατη, 123, 367.
ελατηριον, 249.
ελατινη, 491.
ελειοχρυσος, 352.
ηλεκτρον, 270, 305.
ελελισφακον, 287, 290, 436, 510.
ελιχρυσω, 223.
ελικη, 366.
ηλιοτροπιον, 340, 363.
ελλεβορινη, 366.
ελλεβορος, 153, 235, 574.
ελυμος, 79.
ελξινη, 206, 491.
ημεροκαλλει, 273, 365.
ημιονιτις, 176, 551.
εμπετρον, 492.
ενθρυσκον, 272.
επιμηδιον, 485.
επιπετρον, 315, 506.
επιθυμον, 313.
ηρανθεμον, 294.
ερεβινθος, 183, 202.
ερεικη, 258, 379.
ηριγερων, 152.
ερινος, 337.
ερμοδακτυλος, 551.
ερπυλλος, 272.
eruca, 281.
ηρυγγιον, 199, 507, 574.
ερυσιβη, 119.
ερυσιμον, 124, 288, 340.
ερυθρόδανον, 275, 307, 488.
esculus, 126.
eshel, 107.
εσπερις, 352.
ευωνυμον, 259.
ευπατωριον, 440.
ευφορβιον, 467.
ευζωμον, 281, 486.

fabula, 78.
far (Hebrew), 176.
farrago, 456.
fdn, פתן, 179.
ferula, 518.
festuca, 395.
filix, 480.
frasium, 316.
fumaria, 500.

γαλιοψις, 206.
γαλλιον, 482.
garna, or jarna, 196.
garyophyllon, 514.
gauze (geographical), 129.
γελλιδιον, 196.
genista, 86, 168, 541.
gentiana, 399.
γερανιον, 196, 500.
γηθυον, 68.
geum, 506.
ghobbeyreh (Egyptian), 97, 211.
gios, 188.
γλαυκιον, 472.
γλαυξ, 399.
γληχων, 199.
glirarium, 320.
γλυκυρριζα, 305, 309.
gml, גמל, 105.
γναφαλιον, 468.
γογγας (geograph., from Ganges?), 373.
γογγιδιον, 196.
γογγυλις, 276, 485.
γοριλλας (Mandingo), 267.
gromphæna, 511.
gum (Egyptian), 203.
gutteh, 72.

hadak, 181.
hal, in Arabic (Burman), (see bala,) 321.
halus, 409.
harmal, 138.
hawthorn (Greek), 121.
hbni (hieroglyphic), 91.
helbeh, 74.
hlbnĕ, חלבנה, 143.
horreyg, 563.
hour, 86.
hrwl, חרול, 181.
htĕ, חטה, 72.
hwh, חוח, 178.
hyssopum, 633.
hzr, חזיר, 104.

ιασιωνης, 362.
ιωσκιν, 573.

ιβηρις, 477.
ιδαια ριζα, 495.
indicum, 260, 344.
inula, 461.
ιρις, 255, 290.
ιον (Egyptian), 131, 308, 353, 584.
ιφυον, 262.
ιππελαφος, 323.
ιπποφαες, 313, 489.
ιπτομανες, 187.
ιπτομαραθρον, 294.
ιππουρις, 297, 436, 496.
ισατις, 313.
ισχαιμον, 260.
ισκο (botanical), 187.
ισσπυρον, 485.
ιτεα, 153, 171.
ιξινην, 310.
ιξος, 186.

jambo, or schambu (Malay), 238.
jawars (Mahratta), 106.
juncus, 209, 255, 400, 472.

καχρυς, 272.
καδυτας, 193.
καγκαμον, 496.
κακαλια, 264.
κακτος, 261.
καλακανθου, 538.
καλαμαγρωστις, 495.
καλαμιθη, 263, 493.
καλαμος, 88, 151, 304, 369, 379.
καλχαν, 223.
καμμαρον, 292.
κανναβις (Celtic), 77, 486.
καφουρας βοτανης, 733.
καπνος, 205, 500, 503.
καππαρις, 139, 485.
καψικον, 764.
καρδαμον, 94, 426.
καρδαμωμον, 321.
καρδιοβοτανον, 733.
καρναβαδιον, 242.
καρον, 474.
καρπησιον, 518.
καρυον (geograph.), 116, 299, 304, 317.
καρυοφυλλον, 574.
κασσιτερος (Sanscrit), 80, 182.
καστανεια (geograph.), 77.
katira, 118.
καυκαλις, 296.
kauun, 229.
kdh, קדה, 142.
κεανωνος, 360.
κεδρος, 128, 287.
κεγχρος, 79.
κενταυριον, 236, 290, 360.
κεφαλωτον, 144.
κερασος, 250, 356, 445.
κηρινθον, 363.
κεστρον, 608.
κητη, 323, 330.
κικι, 225.
κιναρα, 72.
κινναμωμον (Tamil), 143.
κινψαν, 495.
κιρκαια, 339.
κιρσιον, 391.
κισσος, 218.
κισθον, 282.
κιθαρα, 322.
κιτριον, 311.
κληματις, 477, 483.
κλεψυδρα, 269.
κληθρη, 175.
κλυμενον (personal), 160.
kmn, כמן, 211.
knĕ bshm, קנה בשם, 142.
κνηκου, 295, 359
κνεωρον, 207, 364, 365, 464.
knmwn, קנמון (Tamil), 143.
κνυζα, 379.
kohl, 108.
κοκαλιδα του στου, 733.
κοκαλος, 541.
κοκκυμηλον, 219, 345.
κολχικον, 164.
kolgas, 373.
κολοιτια, 355.
κολοκασια, 373.
κολοκυντη, 137.
κόλοκυνθις, or κολοκυνθα αλεξανδρινη, 253.
κολουτεα, 355.
κομαρος, 102, 378.
κωνειον, 291, 358.
κωνιλη, 318.
κονυζη, 211, 254, 343, 464, 525.
κοριαννον, 141.
κορις, 286, 308.
κορκορος, 200.
κορωνοπους (trans. fr. Arabic), 352.
κοσμοσανδαλον, 178, 273.
κοστος, 329, 549.
κοτινος, 191.
κοτυληδων, 341, 488.
kpr, כפר, 189.
κραμβη, 434, 490.
κρανεια, 134, 171.
κρατεγος, 247.
κραταιογονον, 342.
κρηπις, 361.
κρινος, 99, 129, 173, 178, 273, 274.
κρινθον, 363.
κριθμος, 294, 510.
krkm, כרכם, 189.
κροκοδειλιον, 433, 530.
κροκος, 115, 351, 393, 512.
κρομμυα, 104.
krps, כרפס, or karpas (Bengalee), 215.
kthe, קדה, 142.
ktzyowt, קציעות, 193.
κυαμος, 89, 111, 183.
κυανος, 434.
κυκλαμινος, 163, 379.
κυμινον, 211, 307, 463.
κυναρα, 382.
κυνογλωσσος, 404.
κυνωπος, 365.
κυνοσβατος, 148.
κυπαρισσος, 128.
κυπειρος, 173, 209, 224, 472.
κυπρος, 189.
kusa (Sanscrit), 238.
κυτισος, 217.
kwtz, קוץ, 2.
kykywn, קרקירון, 229.
kymwsh, and kmsn, קמוש, קרמוש, and קמשנים, 182.

lactuca (transl. Arabic), 563.
λαγωπυρος, 315.
lamium, 509.
λαμψανη, 455.
λαπαθον, 262, 365, 377, 447, 470.
lappa, 147, 453.
larix (German), 424.
λαθυρις, 471.
λαθυρος, 220.
lbnh, לבנה, 110, 116.
lebakh, 115.
ληδανον, 118.
λειχην, 436, 514.
λειμωνια, 258, 359.
λειριον, 120, 350, 376.
λεμνα, 351.
λεοντικη, 264.
λεοντοπεταλον, 265.
λεπιδιον, 473.
leucographis, 508.
λευκακανθα, 359.
λευκη, 96.
λευκοιον, 308, 350.
λιβανος, 110.
λιβανωτος, 346.
lien-hoa (Chinese), 111.
λιγυστικον (geographical), 474, 530.
ligustrum, 474, 530.
lilium, 130, 558.
λινον (Celtic), 44, 100, 501.
λινοζωστις, 139.
lipa (Slavonic), 214, 227.
λογχιτις, 494, 496.
lonh, לענה, 203.
λωτος, 111, 172, 214, 274, 338, 442.
λυχνις, 215, 232, 257.
luffah, 553.
λυγος, 144.
λυκαψον, 404.
λυκιον, 393, 446.
λυκοπερσιον, 539.
λυκοφονας, 203.
λυσιμαχιον (personal), 372.
lutum, 457.
lwph, לוף, 553.
lwz, לוז, 116.

μαγνητις, 279, 302.
μακερ, 394.
malabathrum, 444.
μαλαχη, 105, 187, 348, 353.
μελαγκραινας, 201.
malundrum, 504.
μαμηρα, 586
μανδραγορου, 247.
μαραθρον, 261.
mariscon, 255.

μαρον, 364, 477.
marrubium, 463.
mausoleum (personal), 312.
μαζα, 188.
μηδικη, 258.
μηδιον, 490.
μηκων, 182, 196.
μελαμπυρον, 353.
μελεαγρις, 270, 475.
μελια, 169.
melica, 475.
μελιλωτος, 146, 174, 213, 221, 271.
μελινη, 79.
μελισσοφυλλον, 363.
μελιζωρος, 405.
μηλον, 177.
μηλον μηδικον, 311.
μηνανθος, 362.
μηον, 396.
μεσπιλον, 201, 219, 356.
μινθη, 190, 227, 242.
mlwh, מַלּוּחַ, 236.
μωλυ, 138.
μορον, 258.
mou-tan (Chinese), 544.
mr, מֹר, and מוֹר, 142.
mrrym, מְרָרִים 140.
μυια, 181.
μυκητος, 155, 279.
mucor, 475.
μυωψ, 337.
μυος ωτα, 479.
μυουρον, 551.
μυρικη, 74, 318.
μυριοφυλλον, 409.
μυρολοτος, 338.
μυρρις, 357, 366.
murva (Sanscrit), 95.

ναιρον, 348.
naphri (Egyptian), 534.
ναπυ, 246.
nardjis, 166.
ναρδος (Persian), 150, 220, 264, 321, 471, 496.
ναρκισσος, 166, 271, 350, 470.
ναρτη. 336.
ναρθηκια, 357.
ναρθηξ, 127, 156, 358, 498.
νασκαφθον, 497.
nasturtium, 94, 479.
nautea, 439.
ndr, נֵתֶר, νιτρον, 181.
νεπενθες, 176.
nepeta, 475, 520.
notzwtz, נְעָצוּץ, 211.
nrd, נֵרְד, 150.

ωχος, 311.
odontitis, 519.
odsh, or ithsh, עֵדֶשׁ (Egyptian), 46.
οινανθη, 241, 351, 357.
οινοθηρα, 357.
οισυα, 153.
οκιμοειδες, 490.
ωκιμον, 292.

ολοσχοινος, 297.
ολοστεον, 486.
ονηις, 406.
ονοπυξος, 360.
οφιοσκοροδον, 145.
ophrys, 512.
οπιτιων, 350.
οποπαναξ, 158.
opulus, 456.
ορχις, 502.
ορεοσελινον, 205, 358.
οριγανον, 262, 318, 364, 406.
ορμινον, 162.
ορνιθος γαλα, 685.
οροβαγχη, 355, 435.
οροβος, 193, 355.
oror, עֲרֹעֵר, or arar, 230.
ορυζα (Malay), 79, 323.
oschar, 330.
οστρεα, 335.
οστρυς, 214.
οθονναι, 434.
οξαλις, 365.
οξυα, 168.
οξυακανθα, 148, 356, 500.
οξυμυρσινη, 316.
οξυφοινικον, 516.
οξυσχοινος, 255.

παγκρατιον, 494.
παιδερως, 302.
παιωνια, 81.
pala, or pila (Tamul), 336.
παλιουρος, 276, 426.
πανακες ασκληπιον, 156.
πανακες χειρωνιον, 162.
πανακες ηρακλειφν, 158.
πανταδουσα, 360.
παρδαλιαγχες, 292.
παρονυχια, 486.
παρθενιον, 276, 295, 336.
pastinaca, 471, 474.
πηγανον, 246, 271, 525, 526.
πελεκινον, 341.
πενταφυλλου, 289, 315.
πεπερι (Malay), 306, 344.
πεπεροκυμινον, 683.
πεπλιον, 306.
πεπλις, 306.
πεπλος, 319.
περδικιον, 276, 361.
περικλυμενον, 160.
περιπλοκαδα, 206.
περιστερεωνα, 225, 253, 433.
περκη, 503.
περσεα, 115.
περσικα, 327.
petilio, 159.
petroselinum, 466.
πευκη, 168, 367.
πευκεδανον, 294.
πεζις, 368.
φακοειδες, 520.
φακος, 46, 163.
φαλαγγιον, 494.
φαλαρις, 496.

φασηλος, or φασιολον, 89, 202.
φασιανος, 286.
φασκον, 290, 367.
φηγος, 126.
φελλος, 256.
φιλαδελφον, 411.
φιλυρη, 227.
phkowd, פְּקֹעָה, 194.
φλεως, 287.
φλομος, 272, 284.
φλοξ, 353.
φοινιξ, 207, 262, 264, 304, 330, 427.
φου, 440, 530.
φυκος, 173, 236, 319, 335, 368, 496.
φυλιη, or φιλυρεα, 184, 354.
φυλλον, 354, 357, 407.
πικρις, 324, 501.
πισον, 282.
πιστακι (Persian), 327.
πλατανιστος, 157.
πλατανος, 157.
πολεμωνιον, 439.
πολιον, 169.
πολυακανθος, 239, 360.
πολυγαλον, 487.
πολυγονατον, 495.
πολυγονον, 393.
πολυκαρπον, 158, 342.
πολυκνημον, 343.
πολυποδιον, 344.
portulaca, 244.
potamogeton, 472.
ποτηριον, 302.
πουθος, 352.
πρασιον, 316.
πρασομολοχα, 683.
πρασον, 144.
ψευδοβυνιον, 435.
ψευδοδικταμνος, 317.
ψευδοκασια, 431.
ψιαθος, 68.
ψορσχορτον, 379.
psyllion, 197.
πταρμικη, 488.
πτελεα, 171, 366.
πτερις, 123.
πυρεθρον, 390.
πυρος (Hebrew), 78.
πυξος, 171.
pwl, פּוֹל, 78.
pyrus (Celtic), 109.

radix, 473.
ραμνος, 161, 363, 491.
ramus, 47.
ραφανις, 207.
ραφανος, 242, 352.
rapum, 276.
rash and rwsh, רֹאשׁ and רוּשׁ, 203.
rododaphne, 336.
ρηον, 389, 530, 550.
reseda, 504.
ricinus, 225.
rmwn, רִמּוֹן (Egyptian), 41.
ροδια, 487.
ροδοκισσος, 378.

ροδον, 150, 304, 324.
ρους (Egyptian), 290.
rtm, רתם, 178, 236.
ruscum, 316.
ρυτρος, 360.

sabina (geographical), 454.
sadj (Mahratta), 244.
σαγαπηνου, 342.
σακχαρον, or sugar (Tamil), 267.
saliunca (Celtic), 459.
σαμακι, 259.
σαμαναιοι, 541.
samolus, 508.
σανταλον (Hindustanee), 386.
sapo, 503.
σαρδανιον, 183.
σαρκοκολλα, 480.
σασαμω, 223.
satureia, 470.
σατυριον, 351, 483.
σαξιφραγον, 599.
scandulacia, 547.
secale (Celtic), 513.
σχεδιας, 343.
σχινος, 275.
σχοινος, 204, 284, 297.
scirpus, 388.
scordotin, 440, 510.
σελληνοανηθων, 779.
σελινον, 155, 172, 484.
σημιδα, 354.
sena, 139.
senega (aborig. American), 768.
σεριδα, 256, 257, 281.
σηρικα, 195
σησαμινα ξυλα, 573.
σησαμοειδες, 234, 486.
σεσελι, 296, 307, 321, 342, 371, 488.
sesuvium, 439.
σευτλον, 109.
shhld, שחלת, 144.
shmyr, שמיר, 230.
shyh, שיח, 1.
σιδηριτις, 158, 339, 487.
σικυος, 229.
silaus, 507.
siler, 460.
σιλλικυπριων, 225.
σιλφιον, 228, 326.
σιλυβδυ, 448.
sinapi, 246, 432, 501, 504.
σιον, 175, 248.
σισαρον, 261.
σισον, 320.
σισυμβριον, 242, 317, 376.
σισυρυγχιον, 350.
σιτος, 78.
σιττακος, 504.
σκανδιξ, 265.
σκιλλα, 233, 243, 494.
σκολυμος, 187.
σκορδιον, 317.
σκοροδα, 145.
σκορπιοειδες, 403.
σκορπιον, 292, 355, 358, 507.
σμαραγδον, 573.
σμιλαξ, 101, 129, 148, 174.
σμυρνα, 142.
σμυρνιον, 250, 397.
snh, סנה, 139.
σογχος, 165, 266, 490.
sont (Egyptian), 48.
sorba, 505.
σπαλαξ, 361.
σπαργανιον, 495.
σπαρτον, 168, 465.
σπειραια, 362.
sphæri, 352.
σφακελος, 364.
σφακον, 272, 287.
σφενδαμνος, 271, 354.
σφονδυλιον, 480.
σπογγος, 182.
σταχυς, 324, 510, 530.
σταφις αγρια, 293.
σταφυλινος, 190, 358.
statice, 510.
στοιβη, 202.
στοιχας (geographical), 466.
στρατιωτικη, 488.
στροβιλον, 652.
στρυχνος, 184, 504.
στρυθιον, 288, 353, 504.
στυρακα, 117.
συκαμινος, 106, 258.
συκη, 2, 366.
sumarus, or seamar (Celtic), 557.
συμφυτον, 346.
סרמפנירה, συμφωνια (Chaldaic), 199.
סרף, swph, 130.

ταλα (Sanscrit), 347, 369.
tanĕ, תאנה, 2.
tao (Chinese), 192.
tarum, 515.
ταυρελεφας, 277, 564.
ταυρος, 14.
teda, 455.
teil, 203.
τηλεφιον, 341.
τετραγγουρον, 533.
τερεβινθος, 93.
θερμος, 202, 301, 355.
τετραγωνια, 250.
τετραλιξ, 359.
τευκριον, 176, 364.
τευτλον, 366.
θαλικτρον, 484.
θαψια (geographical), 283.
tharkhun, 283.
θειον, 182.
θηλυφονον, 160, 292.
θησειον, 166.
θλασπι, 293, 432, 530.
thought (Egyptian), 13.
θριδακα, 222, 361.
θρυαλλις, 287.
θυμβρα, 279.
θυμελαια, 208.
θυμον, 280, 574.
θυον, 155.
thwr, תור, 14.
τιθυμαλος, 89, 273, 311, 313, 354, 493.
tinus, 328.
tippula, 394.
τορδυλιον, 404.
toxicum (Greek), 161.
tpwkh, תפוח, 181.
τραγακανθα, 325, 327.
τραγιον, 196, 434.
τραγοπωγον, 361.
τραγος, 218.
τριβολος, 133, 286, 294.
τριορχις, 574.
τριφυλλον, 270, 473, 479.
τσαῦδαναν (Sanscrit), 573.
τριχομανες, 251.
τριπολιον, 492.
τρωγες, 292.
τρυπανον, 306.
τυφη, 349.
twkyym, תכרים, and תוכרים (Tamil), 147.
τζαγγα, 576.
tzphtzph, צפצפה, 236.
tzry, צרי, 118.

uard (Egyptian), 150.
υακινθος, 177, 460.
υδνον, 260.
υδραργυρος (trans. fr. Chinese), 291.
υδροπεπερι, 492.
ulva, 461.
υοσκυαμος, 159, 480, 491.
υπερικον, 288, 394.
υπεχοιριε, 361.
υποκιστις, 436.
urus, or *ouros* (French), 135, 454.
υσσωπος, 343.

vaccinium, 459.
velam (French), 409.
veratrum, 234.
verbascum, 463.
verbena, 225, 371.
verrucaria, 340.
viburnum, 459.
vicia, 89,
virtue (Egyptian), 142.

ξανθιον, 147.
ξιφιω, 200.
ξυρις, 351.

yansoun, 248.
yeou (Chinese), 216.

zakkum, 410.
ζεα, or ζειa, 176.
zingiber, 260.
zizyphus, 104.
ζωστηρα, 319.
ζυγια, 354, 388.
ζυγις, 376.
zyt, זית, 73.

INDEX TO NAMES OF PERSONS.

AAHMES, or Amasis, king of Egypt, 103.
Aahmes II., or Amasis, king of Egypt, 237, 249.
Aahotep, mother of king Amasis, 106.
Aaron, Jewish high-priest, 130, 149.
Aaron ben Elia of Nicomedia, Karaite Jewish writer, 782.
Aaron of Britain, Christian martyr, 545.
Abas, king of Argos, 151, 153.
Abbo, astronomer, 655.
Abbot, John, naturalist in Carolina, 1050.
Abd, joint ruler of Oman, 600.
Abd-al Cuvvy Ben Shedad, Persian medical writer, 791.
Abd-alkader, Arab writer, 897.
Abd-allatif, Arab writer, 446, 723.
Abdas, bishop of Suza in Persia, 562.
Abdastratus, Phœnician king, 185.
Abd-el Aziz Khan, thirty-third Turkish sultan, 1071.
Abd-el-Hamid, twenty-eighth Turkish sultan, 1034, 1043.
Abd-el-Medjid, thirty-second Turkish sultan, 1068, 1071.
Abd-el-Melek, fifth Ommiad khalif, 612–14.
Abdemon of Tyre, 180.
Abd-er-Razzak, Khorassun envoy, 817.
Abdhaa, tobba of Yemen, 542.
Abd-Kelal, Christian tobba of Yemen, 542.
Abdulmelik, fifth Samani king of Bactria, 655.
Abeba, Egyptian military officer, 74.
Abel, son of Adam, 3.
Abelard, Petrus, of Brittany, theologian, 687.
Abe-no Omi, Japanese admiral, 607.
Abha-tissa, king of Ceylon, 536, 538.
Abhijit, Hindu king, 651.
Abhimanya, Tartar king of Cashmere, 411.
Abiasa, chief of the Hindu colony on Java, 570–72.
Abiasaph, or Ebiasaph, son of Korah, 146.
Abibal, Phœnician king, 179.
Abijah, or Abijam, king of Judah, 188, 191.
Abimeleck, son of Jerubbaal, 169.
Abishua, Jewish high-priest, 152.
Ablai, Calmuck prince, 792.
Aboo-Du-ad, Arab poet, 576.
Abraha, second Abyssinian governor of Yemen, 577, 588.
Abraham, the patriarch, 103.
Abraham Abulafia ben Samuel, or Raziel, Jewish kabbalistic writer, 752.
Abraham ben Aun, Arab writer, 629.
Abraham ben Chijja of Spain, Jewish astronomer, 684.
Abraham ben David of Spain, Jewish writer, 703.
Abraham de Kaslar, of Catalonia, Jewish medical writer, 782.
Abraham Ibn Sahl, Arab writer, 723.
Abu Abdallah ben Khalif, 651.
Abubekr, first khalif, 601.
Abubekr, Memluk sultan of Egypt, 785.
Abu Hafsa, Jezid, Jewish physician, 691.
Abu Hanifa, Arab botanist, 644.
Abu'l Abbas, first Abbassid khalif, 629.
Abulafia, Meir, Jewish grammarian, 723.
Abu'l Barakat, Muslim missionary, 786.
Abu'l [illegible]edri, Arab writer, 831.
Abu'lbaka Be[illegible]i, Muslim ruler of Multan, 665.
Abul Fatteh Lodi, [illegible]nor of Egypt, 656.
Abu'l Fawaris, gove[illegible]pher, 775.
Abulfeda, Arab geograp[illegible]ni, 676–77.
Abul Hasan, sultan of Ghaz[illegible] medi[illegible]
Abu'lkasem, or Abulcasis, Ara[illegible]ical writer, 684.
Abu'lkasim of Balkh, Arab writer on Hindustan, 646.
Abul Rashid, sultan of Ghazni, 677.
Abul-Ryhan, or Albiruni of Byrun, 669.
Abu'l Salt Omaya, Arab medical writer, 703.
Abu Obeidah, Muslim general, 601–2.
Abu Obeydeh, Arab grammarian, 624.
Abu Saher, Arab botanist, 619.
Abu Sa'id, translator of the Bible, 684.
Abu Yazid Muhammed ben Yazid, Arab traveller, 647.
Abuzeid, Arab geographer, 586, 642.
Abu Zeyd, Arab grammarian, 624.
Abyan, Cahtan ruler of Yemen, 259.
Acacius, bishop of Cæsarea in Palestine, 548, 552.
Acacius, bishop of Constantinople, 568.
Acamapitzin, first Mexican emperor, 790, 797.
Acastus, second archon of Athens, 191.
Accursius, jurist, 718.
Acestor, Greek tragic poet, 281.
Achaeus, leader of a Greek colony, 120.
Achaeus, Greek tragic poet, 268.
Achan, or Achar, 149.
Acharius, Erich, Swedish botanist, 1054.
Aches, king of Egypt, 66.
Achillas, seventeenth bishop of Alexandria, 546.
Achilles, Greek warrior, 170.
Achilleus, insurgent chief in Egypt, 544.
Achmed Abu'l Fetah, Memluk sultan of Egypt, 825.
Achmed, or Achmet, sixteenth Turkish sultan, 923, 935.
Achmed II., twenty-second Turkish sultan, 989, 991.

Achmed III., twenty-fourth Turkish sultan, 997, 1010.
Achthoes, or Ahthoes, king of Egypt, 76.
Ackbar, emperor of Northern Hindustan, 891.
Acosta, Christopha, botanist, 902.
Acosta, Joseph, naturalist in Spanish America, 909.
Acrazanes, or Anacyndaraxes, Assyrian emperor, 198.
Acrisius, king of Argos, 153, 155.
Acropolites, scholastic Greek writer, 752.
Actaeus, king of Attica, 126.
Actor, Placidus, pharmacologist, 629.
Aculfe, traveller and bishop, 571.
Acunna, Ruy Nunez de, 861.
Acusilaus, Greek historian, 244.
Aczopil, first Toltec king of Guatemala, 649.
Adaeus, Greek writer, 396.
Adah, wife of Lamech, 3.
Adam, 2, 755.
Adam, Michael, of Germany, translator of Hebrew, 885.
Adams, Charles Francis, American ambassador to England, 1071.
Adams, John, American statesman and president, 1039, 1050.
Adams, Samuel, American statesman, 1032.
Adamus Bremensis, theologian, 680.
Adanson, Michael, botanist in Senegal, 1020, 1026.
Addison, Joseph, English poet and critic, 997.
Adelard or Athelard, of Bath, mathematician, 708.
Adelmannus of Brixen, theologian, 675.
Adeodatus, twelfth Roman archbishop, 610–11.
Adeser, Sassanid king of Persia, 600.
Adetya, king in Burmah, 517.
Adhed, Fatimite sultan of Egypt, 709–713.
Adjatasatru, Hindu king, 240, 251.
Adnan, Ishmaelite ancestor of Mohammed, 407.
Ado Viennensis, historian, 642.
Ado of Treves, theologian, 680.
Adolphus of Nassau, eighteenth emperor of Germany and Italy, 762.
Adrastus, king of Argos and Sicyon, 164.
Adrianus of Tyre, Greek rhetor, 533.
Adrianus, see Hadrianus.
Aeantides, Greek tragic poet, 370.
Aechmis, king of Arcadia, 212.
Aedesius, Neo-Platonist philosopher, 547.
Aedilfrid, king of Northumbria in Britain, 597.
Aeetes, king of Colchis, 160.
Aegeus, king of Attica, 164.
Aegialeus, first king of Sicyon, 107.
Aegidius, 609.
Aegidius Romanus, scholastic theologian, 752.
Aeizanas, Abyssinian king, 548.
Aelfric, Anglo-Saxon writer, 665.
Aelianus, Roman naturalist, 527.
Aelianus Tacticus, Greek military writer, 519.
Aelius Lanuvinus, Roman grammarian, 434.
Aemilianus, Quintus, 814.
Aemilianus, Roman general, 533.
Aemilianus, Roman general in Egypt, 540.
Aemilianus, Roman emperor, 539.
Aemilius Paulus, L., Roman general and consul, 400.
Aeneas, Sylvius, see Pius II.
Aeneas, Trojan warrior, 174.
Aepytus, seventh king of Arcadia, 151.
Aepytus II., king of Arcadia, 180.
Aeschines, Greek orator, 312, 321.
Aeschines, Greek philosopher, 299.
Aeschines of Miletus, Greek rhetor, 446.
Aeschrion, Greek poet, 337.
Aeschylus, Athenian archon, 207, 212.
Aeschylus, Greek tragic poet, 258.
Aeschylus of Cnidus, Greek rhetor, 434.
Æscwine, first king of Essex, 590.
Aesimides, Athenian archon, 212.
Aeson, Aeolian chief, 162.
Aesop, Greek fabulist, 237.
Æthelbryht, king of Kent, 592, 599.
Aetheldryth, queen and abbess in Britain, 610–11.
Aethra, mother of Theseus, 169.
Aetion, Greek painter, 370.
Aetius, early Christian writer, 551.
Aetius, Greek medical writer, 574.
Aetius, Roman general, 565–66.
Africanus, Julius, of Palestine, early Christian chronographer, 536.
Afzelius, Adam, Swedish botanist, 1054.
Agamede, Greek pharmacologist, 157.
Agamemnon, leader at Troy and Argive king, 167, 176.
Agamestor, Athenian archon, 204, 207.
Agapetus, Greek writer, 571.
Agapetus, fifty-fifth bishop of Rome, 576.
Agapetus II., sixty-fifth Roman archbishop, 652, 655.
Agapius, Greek philosopher, 571.
Agapius of Crete, modern Greek writer, 948.
Agardh, C. A., cryptogamic botanist, 1061.
Agastya, Sanscrit poet, 592, 616.
Agatharchides of Cnidos, Greek geographer, 424, 426.
Agathias, Greek historian, 584, 585.
Agatho, fourteenth Roman archbishop, 611–12.
Agathocles, Greek king of Sicily, 346.
Agathon, Greek tragic poet, 231, 377.
Agelius, early Christian writer, 552.
Agenor, son of Triopas, 127.
Agesander, Greek sculptor, 325.
Agesilaus, sixth king of Sparta in the Agid line, 198, 202.
Agesilaus II., Proclid king of Sparta, 301, 302, 312.
Agesilaus III., Proclid king of Sparta, 318.
Aghastier, Hindu medical writer, 566.
Agis, king of Sparta, 191.
Aglaophon, Greek painter, 281.
Agnivahu, Hindu king, 639.
Agricola, Georgius, 872.
Agricola, Pelagian Christian, 553, 565.
Agricola, Roman governor of Britain, 515–17.
Agricola, Rudolphus, restorer of learning in Germany, 831.
Agrippa Castor, early Christian writer, 526.
Agrippa, Cornelius, of Cologne, 858.
Agrippa, M. Vipsanius, Roman general and consul, 461.
Agrippa, tetrarch of Galilee, 478, 479.
Agrippa the younger, governor of Judæa, 481, 482.
Agrippina, mother of Nero, 482–83.
Agron, first king of Lydia, 148.
Ahab, seventh king of Israel, 193.
Ahala, Q. Servilius, Roman dictator, 318.
Ahaz, king of Judah, 213.
Ahaziah, king of Israel, 194.
Ahaziah, king of Judah, 195.
Ahijah, Jewish prophet, 180.
Ahmed el Mozaffer, Memluk sultan of Egypt, 811.
Ahmed, ninth Bahmani king of the Deccan, 811.
Ahmed Shah, second Muslim king of Guzerat, 802, 813, 817.

Ahnaf ben Kais, Muslim general, 604.
Aholiab, Jewish artisan, 136.
Ahrun, Syrian medical writer, 586, 603.
Ahudi Maymon, African chief, 819.
Ahuitzotl, eighth Mexican emperor, 842, 845, 859.
Ai, king of Egypt, 120.
Aidan, bishop of the Scots, 605.
Aimon of Fleury, historian, 664.
Ainslie, writer on Hindu materia medica, 1059.
Aione, Lombard chief, 553.
Aisin Gioro, founder of the Mandchou kingdom, 759.
Aistulph, Lombard king, 620.
Aiton, William, English botanist, 1043.
Aiton, Wm. T., English botanist, 1058.
Ajax, Greek warrior, 177.
Aji Jaya Baya, king of Java, 628.
Aji Saka, leader of a colony to Java, 543.
Akbar, emperor of Northern Hindustan, 897, 924.
Alaadin, sultan of Delhi, 765.
Alaparus, king of Babylon, 76.
Alanus, scholastic theologian, 765.
Alaric, king of the Goths, 554, 558, 561, 613.
Alaric II., king of the Goths, 569, 572.
Ala-u-din Ghori, sultan of Ghor and Ghazni, 708.
Ala-u-din Masaud, seventh sultan of Delhi, 736.
Ala-u-din, twelfth sultan of Delhi, 762, 764, 766, 774.
Alban, first Christian martyr in Britain, 545.
Albategni, Arab mathematician, 642–43.
Albertet, Provençal poet and mathematician, 752.
Albertini, J. B. von, botanist, 1055.
Albertus de Saxonia, botanist, 765.
Albertus Krantzius, 858.
Albertus Magnus, naturalist, 741, 751–52, 756.
Albertus of Austria, nineteenth emperor of Germany and Italy, 765, 767.
Albertus II. of Austria, twenty-sixth emperor of Germany and Italy, 815.
Albinovanus, Pedo, Roman poet, 467.
Albinus, A. Posthumius, Roman consul and historian, 400.
Albinus, Clodius, Roman general, 533.
Albirunius, Arab geographer, 664.
Alboin, king of the Lombards, 586.
Albucasis, Arab alcoholic distiller, 703.
Albumasar, Arab astronomer, 629.
Albuquerque, Alfonso de, Portuguese admiral, 861–62.
Alcaeus, Argive king, 163.
Alcaeus, Greek poet, 234.
Alcaeus, Greek comic poet, 303.
Alcaeus of Messene, Greek poet, 389.
Alcamenes, ninth Agid king of Sparta, 207, 213.
Alciatus, Andr., jurist, 872.
Alcibiades, Greek general and statesman, 288, 291.
Alcidamidas, leader of a Greek colony, 214.
Alcimus, Roman rhetor, 548.
Alcmaeon, Athenian archon, 212.
Alcman, Greek poet, 222.
Alcuinus, or Albinus, of England, theologian, 621.
Alcyone, priestess of Juno at Argos, 154.
Aldhelm, or Ealdhelm, Saxon bishop of Sherborn, 614.
Aldini, Tobias, Italian botanist, 943.
Aldrovandus, Ulysses, naturalist, 890.
Aldus Manutius of Venice, printer, 858.
Aletes, king of Corinth, 186.
Alexander, king of Epirus, 325, 328.
Alexander, king of Macedonia, 256, 266.
Alexander III. Magnus, king of Macedonia, 322. 337.
Alexander IV., Macedonian prince, 337.
Alexander Aegus, Macedonian prince, 345.
Alexander of Aetolia, Greek tragic poet, 370.
Alexander Bala, Greek king of Syria, 401–2.
Alexander of Cotiaeum, Greek grammarian, 526.
Alexander of Damascus, peripatetic philosopher, 529.
Alexander of Paphlagonia, founder of an oracle, 529.
Alexander of Cilicia, Greek rhetor, 529.
Alexander of Aphrodisias, Greek commentator, 534.
Alexander Severus, see Severus.
Alexander Trallianus, Greek medical writer, 585.
Alexander, thirty-first bishop of Jerusalem, 535, 539.
Alexander, eighteenth bishop of Alexandria, 546–47.
Alexander, bishop of Byzantium, 546.
Alexander, fifth bishop of Rome, 518.
Alexander II., ninety-first Roman archbishop, 678, 680.
Alexander III., fourteenth pope, 709, 715.
Alexander IV., twenty-fifth pope, 743, 751.
Alexander V., fiftieth pope, 801.
Alexander VI., sixtieth pope, 847, 854, 859.
Alexander, king of Scotland, 687.
Alexander II., king of Scotland, 720.
Alexander III., king of Scotland, 743.
Alexander de Ales, of England, scholastic theologian, 723.
Alexander ab Alexandro, jurist, 858.
Alexander, Russian emperor, 1053, 1059–60, 1064.
Alexander, Sir William, British colonizer, 940, 942.
Alexis, Greek comic poet, 321.
Alexis Comnena, fifty-first Byzantine emperor, 681, 683, 685, 687.
Alexis II. Comnena, fifty-fourth Byzantine emperor, 715, 719.
Alexis III. Angelo, fifty-seventh Byzantine emperor, 717.
Alfarabi, Arab astronomer, 650.
Alfraganus, Arab astronomer, 639.
Alfred, Anglo-Saxon king of England, 640, 643–44–45.
Alfredus, naturalist, 655; botanist, 753.
Algerus, theologian, 684.
Alhazen, Arab writer on optics, 675.
Ali, fourth khalif, 607.
Ali Ben Hussen, Persian medical writer, 791.
Ali Bey, Memluk governor of Egypt, 1028.
Ali el Mansur, Memluk sultan of Egypt, 795.
Ali of Yezd, Persian biographer, 803.
Ali Shir Beg, Turkish poet, 845.
Alimentus, see Cincius.
Allectus, king of South Britain, 544.
Allen, Colonel Ethan, colonial officer in the American Revolution, 1035.
Allioni, C., Italian botanist, 1022, 1025, 1040.
Allitrochades, Hindu king, 373, 383.
Almagro, James de, patron and companion of Pizarro, 867, 875.
Almainus, Jacobus, scholastic theologian, 858.
Almeida, Francisco de, Portuguese viceroy of India, 860.
Almelon, or Amelon, king of Babylon, 76.
Al Mulck, ruler of the Deccan, 1020.
Alorus, first king of Babylon, 76.
Alp Arslan, chief of the Seljuk Tartans, 677.
Alphonso, Peter, of Spain, Jewish writer, 684.
Alphonso VI., king of Castile and Leon, 683.
Alphonso IX, king of Castile and Leon, 743.
Alphonso, first king of Portugal, 704.

Alphonso IV., king of Portugal, 785.
Alphonso V., king of Portugal, 824–25, 830–31, 842.
Alphonsus Tonstatus, theologian, 814.
Alpinus, botanist in Egypt, 615, 903, 905, 930.
Alptegin, founder of Ghazni, 655, 657.
Alrazi, Muhammed ben Zakarya, Arab traveller, 743.
Alsted, J. H., chronographer, 943.
Alston, Car., botanist, 1013.
Alstrœmer, botanist, 1025.
Altadas, Assyrian Emperor, 107.
Altamsch, sultan of Delhi, 717, 719, 721–22, 724.
Al Tiflisi, Karaite Jewish writer, 629.
Alvarado, L. Moscoso de, companion of De Soto, 881.
Alvarado, Pedro de, Spanish general, 866, 876.
Alvaro Martens Homem, Portuguese navigator, 829.
Alyattes, king of Lydia, 228, 237.
Amadas, Philip, English navigator, 908.
Amalarius, liturgical writer, 629.
Amalek, grandson of Esau, 120.
Amasis, see Aahmes.
Amatus Lusitanus, Jewish medical writer, 878, 886.
A-ma-van, regent of the Chinese empire, 956, 958.
Amaziah, king of Judah, 199, 203.
Ambaharanasala, king of Ceylon, 577.
Ambiorix, leader of the Gauls, 454.
Ambron, leader of a Greek colony, 207.
Ambrosinius, Bartholomæus, Italian botanist, 948.
Ambrosinius, Hyacinthus, Italian botanist, 964.
Ambrosius of Alexandria, early Christian writer, 552.
Ambrosius, bishop of Milan, 553, 555.
Ambrosius Ansbertus, theologian, 639.
Ambrosius Camaldulensis, theologian, 831.
Amegalarus, king of Babylon, 78.
Amelesagoras, Greek historian, 244.
Amelius of Tuscany, Neo-platonist, 539.
Amemphsinus, king of Babylon, 81.
Amenatep, Aminadab, or Amenophis, king of Egypt, 107.
Amenatep II., king of Egypt, 117.
Amenatep III., king of Egypt, 118, 120.
Amenatep IV., king of Egypt, 120.
Amenemha, or Ammeneme, king of Egypt, 83.
Amenemha II., king of Egypt, 85.
Amenemha III., Moeris, king of Egypt, 90.
Amenemha IV., Timaus, 91.
Amenophis, Egyptian prophet, 130.
Amenophis, see Amenatep.
Amenophthis, queen of Egypt, 108.
Amenophthis II., queen of Egypt, 179–80.
Amera Sinha, Hindu lexicographer, 681.
Americus Vespucius, early voyager along the American coast, 857.
Aminocles, Greek ship-builder, 219.
Amman, Jo., Russian botanist, 981, 1017.
Ammenon, king of Babylon, 76.
Ammeris, see Amnerith.
Ammianus Marcellinus, Roman historian, 550.
Ammihud, 130.
Amminadab, 130, 140.
Ammonius, Greek poet, 565.
Ammonius, inventor of lithotrity, 471.
Ammonius of Alexandria, Greek grammarian, 400.
Ammonius of Lamprae, Greek philosopher, 498.
Ammonius Saccas, Greek philosopher, 534.
Ammonius the younger, Greek grammarian, 555.
Amnerith, or Ammeris, queen of Egypt, 221.
Amometus, Greek writer, 370.
Amon, eighteenth king of Judah, 226.
Amphiaraius, father of Tiburtus, 164, 174.
Amphictyon, fourth Attic king, 137.
Amphilochius, bishop of Iconium, 553–54.
Amphion, Greek poet-musician, 154.
Amphis, Greek comic poet, 312.
Amphitryon, son of Alcaeus, 163–64.
Amram, father of Moses, 129.
Amramithes, Assyrian emperor, 100.
Amran, Ishak ben, Arab writer, 612.
Amriolkais, see Imra-el-Keys.
Amrou, Muslim general, 602–3.
Amru, Arab poet, 597.
Amulius, Roman painter, 477.
Amunmessu, king of Egypt, 131.
Amurath, see Murad.
Amurtaeus, king of Egypt, 291–92.
Amyntas, Assyrian emperor, 125.
Amyntas, ninth king of Macedonia, 252, 256.
Amyntas II., king of Macedonia, 306.
Amyntianus, Greek historian, 529.
Amythaon, father of Melampus, 150, 152.
Ana, see Sisires.
Anacharsis, ancient Scythian philosopher, 234.
Anacreon, Greek poet, 250.
Anah, 110.
Anan ben David, founder of Karaite literature, 620.
Ananda, pupil of Buddha, 238, 241.
Anang Bhim Deo, king of Orissa, 714.
Anang-pal, or Mahendra-pala, tributary Hindu king, 665, 667.
Ananias, Greek writer, 242.
Ananta, king of Cashmere, 677, 684.
Anastasius, biographer, 629.
Anastasius, forty-eighth bishop of Rome, 570.
Anastasius, Greek patriarch, 618.
Anastasius of Nice, theologian, 609.
Anastasius, seventh Byzantine emperor, 570–72.
Anastasius Sinaites, Greek writer, 597.
Anastasius, thirty-seventh bishop of Rome, 560.
Anastasius II., twenty-first Byzantine emperor, 615–16.
Anastasius III., fifty-sixth Roman archbishop, 647.
Anastasius IV., twelfth pope, 708.
Anatolius, bishop of Constantinople, 566, 568.
Anatolius, bishop of Laodicea, 543.
Anaxagoras, Greek philosopher, 268–69.
Anaxarchus, Greek philosopher, 325.
Anaxilaus, Greek comic poet, 312.
Anaxilaus of Larissa, Greek philosopher, 458.
Anaximander, Greek philosopher, 241.
Anaximander the younger, Greek historian, 299.
Anaximenes, Greek philosopher, 237.
Anaximenes of Lampsacus, Greek historian, 325.
Anaxippus, Greek comic poet, 325.
Ancus Marcius, fourth king of Rome, 227.
Anderson, G., English botanist, 1060.
Andocides, Greek orator, 281.
Andrade, Fernan Perez de, Portuguese navigator, 863.
Andreas, Greek medical writer, 391.
Andreas, last bishop of Greenland, 801.
Andreas of Crete, Greek writer, 613.
Andreas Troilus, modern Greek versifier, 948.
Andrew, Greenland bishop, 801.
Andrew, John A., governor of Massachusetts, 1071.
Andrews, Henry, English botanist, 1050.

Andromachus, Greek medical writer, 482.
Andromachus of Syria, Greek rhetor, 537.
Andromachus the younger, Greek medical writer, 498.
Andron, Greek medical writer, 446.
Andronicus, fifty-fifth Byzantine emperor, 715.
Andronicus of Rhodes, Greek philosopher, 446.
Andronicus II., Palaeologus, sixty-second Byzantine emperor, 757, 764, 779.
Andronicus III., sixty-third Byzantine emperor, 779, 784.
Andronicus IV., sixty-fifth Byzantine emperor, 796.
Andros, Edmund, governor of New England, 981–82, 985.
Androsthenes, Greek navigator, 334.
Androtion, Greek orator, 312.
Anebus, third king of Assyria, 92.
Anegkletus, second bishop of Rome, 518.
Angelis, P. Hieronymus de, Catholic missionary in Japan, 936–37.
Angelo, Michael, Italian painter and sculptor, 858, 860.
Angelomus of France, theologian, 629.
Angelus Clavasius, theologian, 831.
Angiras, Sanscrit writer, 370.
Ang'gling Derma, king of Java, 623.
Angka Wijaya, king of Java, 796, 815.
Ango, Jean, 860.
Anguillara, Italian botanist, 888, 890, 892.
Anhaya, Peter de, 860.
Anicetus, tenth bishop of Rome, 528–29.
An-kan, twenty-eighth dairo of Japan, 576.
An-ko, twenty-first dairo of Japan, 567.
Anna, or Onna, king of the East Angles, 610.
Anna Comnena, Greek historian, 703.
Annaniah, or Annianus, first bishop at Babylon in Egypt, 483.
Anne, British queen, 997, 1004.
Anne, Russian empress, 1010.
Annianus, Greek chronographer, 560.
Annius of Viterbo, or Giovanni Nanni, forger of ancient writings, 831.
Anouschavan, Armenian prince, 96
Anselm, archbishop of Canterbury and scholastic theologian, 680, 683.
Anselm of Lugo, theologian, 680.
Ansgarius Corbeiensis, theologian, 624.
Antagoras of Rhodes, Greek poet, 370.
Antalcidas, Spartan general, 363.
Antar, Arab warrior and poet, 597, 599.
Anteros, seventeenth bishop of Rome, 537.
Anthelmus of Scotland, theologian, 613.
Anthemius, architect, 576.
Anthemius, Roman emperor over the West, 568, 584.
Antias, Valerius, Roman historian, 434.
Anticlides of Athens, Greek historian, 370.
Antidotus, Greek comic poet, 312.
Antidotus, Greek painter, 389.
Antigonus Doson, king of Macedonia, 389.
Antigonus Gonatas, king of Macedonia, 378.
Antigonus, Greek historian, 328.
Antigonus, Macedonian general, 340, 348.
Antigonus of Carystus, Greek biographer, 389.
Antimachus of Claros, Greek poet, 281.
Antimachus of Teos, Greek poet, 210.
Antimenidas, Greek traveller, 234.
Antiochus, Heraclid chief, 175.
Antiochus of Aegae, Greek rhetor, 534.
Antiochus of Syracuse, Greek historian, 281.
Antiochus Eusebes, son of Antiochus VII., 438, 444.
Antiochus Sidetes, regent over Syria, 403, 407.
Antiochus Soter, Greek king of Syria, 377, 382.
Antiochus II. Theus, Greek king of Syria, 382, 386.
Antiochus III. Magnus, Greek king of Syria, 390–91, 394, 396, 397.
Antiochus IV. Epiphanes, Greek king of Syria, 399.
Antiochus V. Eupator, Greek king of Syria, 400.
Antiochus VI. Grypus, Greek king of Syria, 408, 424, 438.
Antiochus VII. Cyzicenus, Greek king of Syria, 424, 438.
Antiochus VIII. Asiaticus, last Greek, or Seleucid king of Syria, 444, 446.
Antiopa, daughter of Nycteus, 152.
Antipater, Coelius, Roman historian, 407.
Antipater, Greek medical writer, 463.
Antipater, Macedonian general, 337.
Antipater of Hierapolis, Greek rhetor, 534.
Antipater of Sidon, Greek poet, 400, 434.
Antipater of Tarsus, Greek philosopher, 400.
Antipater of Tyre, Greek philosopher, 446.
Antiphon, Greek orator and statesman, 291.
Antiphon, Greek tragic poet, 281.
Antisteus Labeo, Roman painter, 477.
Antisthenes, Greek philosopher, 301.
Antoku, dairo of Japan, 715.
Anton Guainerius, 814.
Antoninus, Marcus Aurelius, Roman emperor, 529, 531.
Antoninus Florentinus, theologian, 814
Antoninus Pius, Roman emperor, 527, 529.
Antonio, Cermisone, medical writer, 814.
Antonius, M., Roman orator, 407, 434.
Antonius, M., Roman triumvir, 455, 457.
Antonius Andreæ, scholastic theologian, 765.
Antonius Melissa, theologian, 619.
Antonius of Cos, Greek medical writer, 503.
Antonius of Egypt, early Christian hermit, 544.
Antonius of Padua, theologian, 718.
Antonius Rhetor, 629.
Antonius Rosellus, jurist, 831.
Antyllus, Greek medical writer, 535.
Anu, Hindu prince, 99.
Anurudde, Hindu king, 254.
Anyte of Tegea, Greek poetess, 370.
Apachnas, or Apahnas, Hyksos king of Egypt, 97.
Apelles of Cos, Greek painter, 325.
Apellicon of Teos, Greek collector of books, 442.
Aphareus, Greek tragic poet, 312.
Aphophis, Hyksos king of Egypt, 103.
Apicius, Roman culinary writer, 520.
Apion, early Christian writer, 534.
Apion of Alexandria, grammarian, 478.
Apis, king of Argos, 113, 117.
Apollinaris, Aurelius, Greek poet, 541.
Apollinaris, bishop of Hierapolis, 529.
Apollinaris, bishop of Laodicea in Syria, 552.
Apollodorus, follower of Democritus, 303.
Apollodorus, Greek medical writer, 339.
Apollodorus, Greek painter, 299.
Apollodorus of Artemita, Greek historian, 411, 433.
Apollodorus of Carystus, Greek comic poet, 382.
Apollodorus of Damascus, Greek architect, 519.
Apollodorus of Gela, Greek comic poet, 325.
Apollodorus of Pergamus, Greek rhetor, 446.

Apollodorus the Epicurean, 400, 407.
Apollodotus Soter, Greek king of Bactria, 396.
Apollonides of Nicaea, Greek writer, 467.
Apollonius, son of Sotades, Greek writer, 382.
Apollonius Molon, Greek rhetor, 434.
Apollonius Mus, Greek medical writer, 464.
Apollonius of Alabanda, Greek rhetor, 434.
Apollonius of Athens, Greek rhetor, 529.
Apollonius of Chalcis, Greek philosopher, 526.
Apollonius of Myndus, Greek astronomer, 325.
Apollonius of Perga, Greek geometer, 389.
Apollonius of Rhodes, Greek poet, 396.
Apollonius of Tyanea, Greek traveller in Hindustan, 483.
Apollonius the martyr, early Christian writer, 534–35.
Apollophanes, Greek comic poet, 299.
Apono, Petrus, medical writer, 765.
Apophis, Hyksos king of Egypt, 98.
Apospolon, chief of Aculan in Central America, 867.
Appianus, Greek historian, 526.
Appius Claudius, adopted Roman patrician, 254, 270.
Appius Claudius Caecus, Roman censor and writer, 345.
Apries, see Hophra.
Aprigius, ecclesiastical writer, 576.
Apronadius, king of Babylon, 219.
Apsander, Athenian archon, 219.
Apseudes, Athenian archon, 281.
Apsines of Gadara, Greek rhetor, 534.
Apsyrtus, Greek veterinary physician, 546.
Apthorp, George Henry, American voyager to Surinam, 1045.
Apuleius Barbarus, Carthaginian botanist, 563.
Apuleius Celsus, medical writer, 476.
Arabianus, early Christian writer, 529, 534.
Arahatec, aboriginal American chief, 926.
Aralius, or Amyrus, Assyrian emperor, 99.
Aram, second sultan of Delhi, 719.
Araros, Greek comic poet, 312.
Aratus, Greek astronomical poet, 370, 378.
Aratus of Sicyon, Greek statesman and historian, 388.
Arbaces, or Varbaces, Median general, 203.
Arbelus, fourth Assyrian king, 92.
Arbelus II., sixth Assyrian king, 92.
Arbuthnot, John, English humorist and critic, 997.
Arcadius, first Byzantine emperor, 558–561.
Arcas, fourth king of Arcadia, 137.
Arcesilaus, Greek Academic philosopher, 377.
Arcesilaus, Greek comic poet, 299.
Arcesilaus III., Greek king of Cyrenè, 250.
Archedicus, Greek comic poet, 325.
Archelaus, Greek philosopher, 268.
Archelaus, king at Jerusalem, 466, 468.
Archelaus, or Echelaus, leader of Aeolian colonists, 179.
Archelaus, seventh Agid king of Sparta, 204.
Archelaus, Syriac Christian writer, 543.
Archelaus, twelfth king of Macedonia, 291.
Archestratus, Greek culinary writer, 325.
Archianus, king of Babylon, 218.
Archias, leader of a Greek colony, 213.
Archias, Licinius, poet, 433.
Archias of Megara, leader of a Greek colony, 222.
Archigenes, Greek medical writer, 518.
Archilochus, Greek iambic poet, 218.
Archimedes, Greek physicist, 391, 393.
Archimelus, Greek poet, 389.
Archinus, Greek orator, 299.
Archippus, Greek comic poet, 281.
Arctinus, Greek epic poet, 209.
Arculf of France, bishop and traveller, 613.
Ardern, John, English botanist, 791.
Arduinus, Petr., Italian botanist, 1023.
Ardys, Greek rhetor, 498.
Ardys, king of Lydia, 222, 227.
Aredius, Burgundian jurist, 571.
Arellius, Roman painter, 457.
Aretaeus, Greek medical writer, 541.
Aretas, king of Petra and the Nabathæan Arabs, 461.
Aretas III., king of Petra, 478.
Arethas of Cæsarea, ecclesiastical writer, 645.
Aretin, Leonard, historian, 814.
Aretin, Peter, 872.
Aretinus, inventor of musical notes, 668.
Aretius, Benedictus, botanist, 888.
Argaeus, fifth king of Macedonia, 221, 226.
Argia, wife of Aristodemus, 186.
Argoll, Samuel, British colonial admiral, 929, 932, 935–36.
Argus, fourth king of Argos, 117.
Argyropulus, Joannes, of Constantinople, 831.
Aria Damar, Javan chief on Sumatra, 814–15.
Ariaeus, Arab chief, 93.
Ariarathes VI., king of Cappadocia, 439.
Ariobarzanes, king of Cappadocia, 439.
Ariobarzanes II., king of Pontus, 318.
Arion, Greek poet, 228.
Ariosto, Italian poet, 858.
Ariovistus, leader of the Germans, 453.
Ariphron, Athenian archon, 202, 204.
Aristarchus, Greek grammarian, 393.
Aristarchus, Greek tragic poet, 268.
Aristarchus of Samos, Greek astronomer, 377.
Aristeas, Greek traveller and poet, 202.
Aristeas, Greek tragic poet, 268.
Aristenus, scholastic Greek writer, 703.
Aristides, Aelius, Greek rhetor, 526.
Aristides of Athens, statesman, 261.
Aristides of Athens, philosopher and early Christian, 525.
Aristion, ruler of Athens, 442.
Aristippus, Greek philosopher, 301.
Aristobulus, companion of Alexander, 328.
Aristocles of Pergamus, Greek rhetor, 526.
Aristodemus, eighth king of Corinth, 204.
Aristodemus, Heraclid chief, 180.
Aristodemus, king of Messenia in Greece, 214.
Aristodemus of Elis, Greek grammarian, 400.
Aristodemus of Nysa, Greek grammarian, 446.
Aristolaus, Greek painter, 370.
Aristomachus, Heraclid chief, 179.
Aristomenes, Greek comic poet, 281, 285.
Ariston, Greek traveller in Arabia, 410.
Ariston of Ceos, Greek philosopher, 389.
Aristophanes, Greek comic poet, 285, 287, 292.
Aristophanes of Byzantium, Greek grammarian, 389.
Aristophon, Greek comic poet, 312.
Aristophon of Azenia, Greek orator, 312.
Aristophon of Colyttus, Greek orator, 312.
Aristoteles, Greek philosopher and naturalist, 323, 719, 722.
Aristoxenus, Greek musician, 325.
Aristoxenus of Selinus, Greek poet, 227.

Aristyllus of Alexandria, Greek astronomer, 372.
Arius, founder of the Arian sect of Christians, 546.
Arius, or Areius, Assyrian emperor, 98.
Armenopulus, scholastic Greek writer, 782.
Arminius, German chieftain, 469.
Armoin, historian, 655.
Arnobius, early Christian writer, 541.
Arnold, bishop of Greenland, 689.
Arnoldus Brixiensis, theologian, 703.
Arnoldus Carnotensis, 711.
Arnoldus de Villanova, astrologer and medical writer, 765.
Arnulph, patriarch of Jerusalem, 686.
Arrianus of Nicomedia, Greek geographer, 527.
Arsaces, Parthian king, 383, 391, 439.
Arsacius, Greek ecclesiastical writer, 560.
Arsenius of Corinth, scholastic Greek writer, 723.
Arsenius of Monembasia, scholastic Greek writer, 872.
Arses, Persian emperor, 322–23.
Arslan, sultan of Ghazni, 686–87.
Artabanus, last Parthian king, 535.
Artabanus, Persian emperor, 268.
Artavasdes, king of Armenia, 456.
Artaxerxes, Persian emperor, 268, 285.
Artaxerxes II., Persian emperor, 298, 311, 318.
Artaxerxes III. Ochus, Persian emperor, 318, 320, 322.
Artaxerxes IV., or Ardisheer, first Sasanid king of Persia, 536, 538.
Artaxerxes V., Sasanid king of Persia, 553–54.
Artedi, Petrus, Swedish naturalist, 1012.
Artefius, Arab alchemist, 703.
Artemidorus Capito, Greek editor, 519.
Artemidorus, Greek geographer, 431.
Artemisia, queen of Caria, 319.
Artemisia, queen of Halicarnassus, 263.
Artemon, Greek painter, 382.
Artemones, inventor of engines of war, 278.
Arthmail, king of Wales, 663.
Arthur, British warrior-king, 573, 580.
Artaun, Sebastian de, bishop of Cuzco, 898.
Aru Bandan, Javan prince, 597.
Arvalayana, Hindu writer, 401.
Arviel, Henri, botanist, 753.
Aryat, first Abyssinian governor of Yemen, 574, 577.
Arzachel, Spanish mathematician, 680.
Asa, king of Judah, 191.
Asaph, Hebrew poet, 179
Asaridinus, king of Babylon, see Esarhaddon.
Ascatades, Assyrian emperor, 122.
Ascatades, king of Sicyon, 116.
Ascha, Arab poet, 597, 600.
Asclepiades, ninth bishop of Antioch, 534.
Asclepiades of Myrlea, Greek grammarian, 398.
Asclepiades of Prusa, Greek medical writer, 446.
Asclepiades of Samos, Greek poet, 370.
Asclepiades Pharmacion, Greek medical writer, 518.
Asclepiades the younger, Greek grammarian, 446.
Asconius Pedianus, Roman commentator, 477.
Asellio, P. Sempronius, Roman historian, 407.
Aserymus, Phoenician king, 191.
Asesa, see Tancheres.
Asius, Greek poet, 217.
Asmai, Arab writer, 624.
Asoka, Hindu king, 383, 386, 391.
Aspasius of Ravenna, Greek rhetor, 534.
Assaracus, son of Tros, 152.
Asser, Welsh monk, 643.
Assir, son of Korah, 146.
Assis, or Asseth, Hyksos king of Egypt, 102.
Astartus, Phoenician king, 191.
Asterion, father of Minos, 146–47.
Asterius of Amasia, ecclesiastical writer, 559.
Asterius of Cappadocia, early Christian writer, 547.
Astesanes Astensis, 782.
Astyages, fourth Median emperor, 233, 239.
Astydamas, Greek tragic poet, 299.
Astydamas the younger, Greek tragic poet, 299.
Atahualpa, king of Quito and son of the twelfth Inca, 868, 871.
Atauchi Duchicala, thirteenth scyri of Quito, 791, 813.
Ataulfus, or Athaulfus, king of the Goths, 561–62.
Ateius, Greek grammarian, 446.
Athai, or Othoes, king of Egypt, 73.
Athalaric, third Gothic king of Italy, 574.
Athaliah, Jewish queen, 195.
Athanagild, Gothic king of Spain, 586.
Athanaric, king of the Goths, 554.
Athanasius, nineteenth bishop of Alexandria, 547, 550, 552.
Athanasius, patriarch of Constantinople, 764.
Athanis, Greek historian, 370.
Athelstan, Anglo-Saxon king of England, 649, 651.
Athenaeus, Greek archaeologist, 533.
Athenaeus, Greek rhetor, 434.
Athenaeus of Seleucus, Greek philosopher, 456.
Athenagoras, early Christian writer, 529.
Athenion, Greek painter, 396.
Athenodorus Cordylio, Greek writer, 434.
Athenodorus, Greek rhetor, 529.
Athenodorus, Greek sculptor, 325.
Athenodorus of Tarsus, Greek physicist, 456.
Athothis, king of Egypt, 63.
Atkins, Henry, American voyager to Labrador, 1009.
Atlas, king of Arcadia, 127. (See also Tlas).
Atossa, aunt of Cyrus, 236.
Atratinus, Roman orator, 457.
Atreus, Argive king, 165.
Atri, early Hindu chief, 84.
Atta, Quinctius, Roman comic poet, 434.
Attalus, Greek physician, 525.
Attalus, third king of Pergamus, 389.
Attalus II., fifth king of Pergamus, 401, 403.
Attalus III., sixth and last king of Pergamus, 403, 407.
Atticus, Academic philosopher, 529.
Atticus, bishop, 560.
Atticus, Pomponius, Roman writer, 446.
Attila, king of the Huns, 565–6–7.
Attilius Titianus, claimant of the Roman empire, 529.
Attius, L., Roman tragic poet, 407.
Aubert, Captain Thomas, 866.
Aublet, Fus., botanist in Guiana, 1025.
Aubry, first explorer of the St. Lawrence river, 866.
Audaeus of Syria, founder of the sect of Anthropomorphites, 547.
Augeas, Greek comic poet, 312.
Augeias, or Augeas, king of the Epeians at Elis, 157.
Augias of Troezen, Greek poet, 213.
Augurellus, 858.
Augustinus, Carthaginian ecclesiastical writer, 562–63.
Augustinus de Ancona, scholastic theologian, 765.
Augustinus the monk, 592.
Augustinus de Roma, scholastic theologian, 799.

Augustulus, see Romulus Augustus.
Augustus, or Octavius, Roman emperor, 456, 467, 471.
Aulaiv O'Hivair, Irish chief, 631.
Aumaric, or Almaric, theologian, 719.
Aurelianus, Caelius, Roman medical writer, 558.
Aurelianus, Roman general and emperor, 539, 541, 542.
Aurelius Ambrosius, British king, 569.
Aurelius Claudius, see Claudius.
Aurelius, M., see Antoninus.
Aureolus, Roman general in Illyricum, 540.
Aurungzebe, emperor of Northern Hindustan, 960, 1001.
Ausonius, Roman poet, 553
Autesion, Cadmean chief, 179.
Autocrates, Greek comic poet, 299.
Automenes, king of Corinth, 212.
Auxentius, bishop of Milan, 553.
Aveiro, Alonso, Portuguese navigator, 844.
Aventinus, Johannes, Bohemian annalist, 814.
Avenzoar, or Ibn Zuhr, Arab medical writer, 725.
Averrhoes, or Ibn Roshd, Arab medical writer, 718.
Avicenna, or Ibn Sina, Arab medical writer, 612, 669.
Avila, Francisco de, on Peruvian legends, 927.
Avila, Pedrarias de, founder of Panama, 864.
Avitus, Roman emperor of the West, 567.
Avitus of Vienna, ecclesiastical writer, 571.
Aviyar, Tamul female philosopher, 632.
Axajacatl, sixth Mexican emperor, 829, 842.
Axionicus, Greek comic poet, 320.
Ayllon, L. Vazquez de, Spanish navigator, 864.
A-y, king of the Loo Choo Islands, 788.
Ayu, Hindu king, 92.
Azara, Felix de, Paraguayan naturalist, 1037.
Azariah, see Uzziah.
Azim Khan, governor of Orissa, &c., 948.
Aziz, Fatimite sultan of Egypt, 656, 664.
Azophi, Arab astronomer, 650.
Azurara, Portuguese writer on Guinea, 821.

BAAL-HANAN, king of Edom or Petra, 146, 150.
Baasha, king of Israel, 191.
Babington, Charles C., English botanist, 1067, 1069.
Babius, second king of Assyria, 91.
Babylas, twelfth bishop of Antioch, 539.
Bacchylides, Greek lyric poet, 268.
Bacchylus, bishop of Corinth, 533.
Baclé, botanist in Senegal and Buenos Ayres, 1062.
Bacon, Francis, restorer of learning in Britain, 921.
Bacon, Roger, English physicist, 756.
Bacone, Joannes de, scholastic theologian, 782.
Badezor, Phœnician king, 194.
Bæringda, Burmese king, 479.
Baffin, William, British navigator, 932–33.
Bahader Shah, emperor of Northern Hindustan, 1001, 1003.
Bajazet, fourth Turkish sultan, 796–98, 800.
Bajazet II., tenth Turkish sultan, 843, 854, 857, 862.
Balaam, 149.
Bala-deva, 686.
Balaeus, Assyrian emperor, 105.
Balas, or Palash, Sasanid king of Persia, 569.
Balatores, Assyrian emperor, 131.
Balbillus, Roman prefect in Egypt, 482.
Balbinus, D. Caelius, colleague of Pupienus Maximus, 538.
Balboa, M. C., on the ancient Peruvians, 898.
Baldaya, Affonso Gonsalves, Portuguese navigator, 814.
Baldwin, Godfrey, leader of the first Crusade, 684, 686.
Baldwin, Henri, Frankish king of Constantinople, 719.
Baldwin, William, American botanist, 1059, 1061.
Baleazar, Phœnician king, 185.
Balhara, Hindu king of Guzerat, 658.
Balsamon, scholastic Greek writer, 718.
Balzac, who first wrote French prose with elegance, 948.
Banister, Io., botanist in Virginia, 961.
Banks, Joseph, British voyager and naturalist, 1029.
Baptista Trovamala, theologian, 831.
Barak, 155.
Barakah Khan, Memluk sultan of Egypt, 756.
Bararuchi, Sanscrit writer, 681.
Barbaro, Josafa, Italian traveller, 815, 834.
Barbas, Arian bishop of Constantinople, 565.
Barbosa, Duarte, Portuguese voyager on Indian Ocean, 862, 865.
Barchu-Arte-Tieghin, chief of the Ouigours, 719.
Barcia, botanist, 1006.
Barckhausen, Theoph., botanist, 1027.
Barclay, John, English critic, 921.
Bardas, Byzantine general, 656.
Bardesanes the Syrian, early heretical Christian, 531.
Bardylis, king of the Illyrians, 318.
Barents, Willem, Dutch navigator, 916, 918.
Barkook, Memluk sultan of Egypt, 795–96, 798.
Barlaam of Calabria, 782.
Barlow, Arthur, British navigator, 908.
Barnabas, companion of Paul, 478, 480.
Barnard, Rev. Dr., 1034.
Baronius, Cæsar, ecclesiastical historian, 921.
Barrelier, Iac., botanist, 971.
Barrere, Petrus, botanist in Guiana, 1017.
Barrow, Isaac, English theologian and mathematician, 965.
Barsebay el Aschraf, Memluk sultan of Egypt, 811, 815.
Barthelemi de Salignac, 858.
Barthius, Caspar, critic, 948.
Bartholin, Thomas, Danish critic and physician, 965.
Bartholomew, the apostle, 482.
Barton, B. S., N. American naturalist, 1054, 1057.
Barton, W. P. C., N. American botanist, 1060.
Bartram, John, N. American naturalist, 1009, 1020.
Bartram, William, N. American naturalist, 1033.
Barzouyeh, Persian translator of Sanscrit, 576.
Bashemath, wife of Esau, 115.
Basileides, gnostic Christian, 525–26.
Basiliscus, claimant of the Byzantine empire, 569.
Basilius, bishop of Ancyra, 548–49.
Basilius, bishop of Cæsarea in Cappadocia, 552.
Basilius, Fl., last Roman consul, 580.
Basilius Macedo, thirty-fourth Byzantine emperor, 639–40, 643.
Basilius of Cilicia, ecclesiastical writer, 571.
Basilius II., associate Byzantine emperor, 656.
Basrawi, Shems-eddin, Arab writer, 897.
Bassi, F., Italian botanist, 1027.
Bassolius, Joannes, scholastic theologian, 814.
Bassus, Cassianus, compiler of the Geoponica, 652.
Batard, F., French botanist, 1057.
Bathon, Greek comic poet, 370.
Bathurst, Rad., one of the discoverers of oxygen gas, 959.

Bathyllus, Roman actor, 457.
Batou-khan, Tartar general, 725, 733.
Batsch, A. J. G. C., cryptogamic botanist, 1027.
Battara, Ant., botanist, 1027.
Battus, leader of a Greek colony, 226.
Baudin, French navigator, 1053.
Bauer, Ferd., artist and botanist, 1040.
Bauhin, Caspar, botanist, 918, 937, 940–41
Bauhin, John, botanist, 892, 919, 930.
Baumgarten, J. C. G., German botanist, 1060.
Baumgarten, Martin A., traveller in Egypt, 326, 860.
Bausch, Io. Laur., founder of the Academia Curiosorum in Germany, 958.
Bavius, Roman poet, 446.
Beauvois, Palisot de, French botanist, 1054–55, 1059.
Bechaji, Hebrew poet, 684.
Becket, Thomas, archbishop of Canterbury, 710, 714.
Beda, historian and ecclesiastical writer, 619.
Beechey, British navigator, 1050, 1064.
Behaim, Martin, of Nuremberg, 842.
Behram, sixth sultan of Delhi, 687, 708.
Bela, king of Edom or Petra, 120, 124.
Beladsor, Arab historian, 639.
Belalcazar, Sebastian, 874.
Belanger, traveller and botanist, 1064.
Belbay, Memluk sultan of Egypt, 831.
Belesis, in alliance with Arbaces, 203.
Belibus, or Elibus, king of Babylon, 219
Belidor, Bernard de, French engineer, 1012.
Belisarius, Byzantine general, 576, 577, 579, 580, 583.
Bellarminus, Robertus, chronographer, 930.
Bellerophon, Aeolic chief, 156.
Belleval, Petr. Richerio de, founder of the Montpelier garden, 919.
Bellus, Honorius, botanist in Crete, 916.
Belochus, Assyrian emperor, 102–3.
Belochus II., Assyrian emperor, 128.
Belon, P., naturalist in Egypt, 886.
Belus, first king of the Assyrians, 91.
Bembo, secretary to Pope Leo X., 872.
Benedict of Poland, traveller in Tartary, 736.
Benedictus, opposition pope, 798, 801–2.
Benedictus, sixtieth bishop of Rome, 589.
Benedictus II., sixteenth Roman archbishop, 612.
Benedictus III., fortieth Roman archbishop, 633.
Benedictus IV., fifty-second Roman archbishop, 647.
Benedictus V., sixty-eighth Roman archbishop, 655.
Benedictus VI., seventy-first Roman archbishop, 656.
Benedictus VII., seventy-second Roman archbishop, 656, 662.
Benedictus VIII., eighty-first Roman archbishop, 667, 669.
Benedictus IX., eighty-third Roman archbishop, 675–76.
Benedictus X., thirty-eighth pope, 765.
Benedictus XI., forty-first pope, 782, 786.
Benjamin ben Jehuda of Rome, Jewish writer, 765.
Benjamin ben Serach, Jewish liturgical poet, 675.
Benjamin of Tudela, Jewish traveller, 688, 711.
Ben Masah, Isa, see Ebn Masah.
Ben Masawia, Iahia, Arab doctor, 628.
Bentivoglio of Ferrara, historian, 948.
Bentley, Richard, of England, critic, 997.
Benzoni, Girolamo, early traveller in America, 882.
Bercta, wife of the king of Kent, 592.
Berenger of Angiers, theologian, 676.
Berengosius, theologian, 684.
Berenice, wife of Ptolemy Soter, 348.
Berenice, wife of Ptolemy III, 391.
Bergen, C. A., botanist, 1018.
Bergius, P. J, Swedish botanist, 1027, 1036.
Bering, Russian navigator, 1008.
Berkeley, colonial governor of Virginia, 951, 961.
Berkhey, F. Van, botanist, 1027.
Bermudez, John, navigator, 866.
Bernard, British colonial governor, 1028.
Bernard Cluniacensis, theologian and satirist, 684.
Bernard de Gordon, medical writer, 765.
Bernard of Bretagne, traveller, 639.
Bernard of Clairvaux, theologian, 705.
Bernard, P. F., Swiss botanist, 1063.
Bernays, German writer, 1066.
Bernhardus Senensis, 814.
Berno Augiensis, theologian, 664.
Berosus, Babylonian historian, 373.
Bertero, botanist in Chili and on Taheiti, 1066.
Bertholdus Constantiensis, chronographer, 684.
Bertoloni, Italian botanist, 1053.
Bertonio, Ludevico P. Aymaran, grammarian, 665.
Bertramus, theologian, 629.
Bertrandus, Petrus, writer on ecclesiastical jurisdiction, 782.
Beryllus, bishop of Bostra in Arabia, 536.
Besler, Basil, German botanist, 932.
Bessarion, reviver of Platonic philosophy in Italy, 831.
Betalabhatta, Sanscrit writer, 681.
Bethencourt, John, conqueror of the Canary Islands, 764, 800.
Beth-Ucham, Paulus, Jacobite patriarch of Antioch, 589.
Bethuel, 106.
Beybars, Memluk sultan of Egypt, 688, 751, 756.
Beydarah, Memluk sultan of Egypt, 760.
Beza, Theodore, scholar and successor of Calvin at Geneva, 897.
Bezaleel, Jewish artisan, 136.
Bharadwaja, Hindu king, 107.
Bhaskara, 686.
Bhatia-tissa, king of Ceylon, 527, 529.
Bhattiya, Hindu king, 236
Bhavabhuti, Sanscrit dramatist, 598, 616.
Bhoja, Hindu king, 703.
Bhrigu, grandfather of the Hindu princess Devayani, 99, 592, 616.
Bhupala, Hindu king, 669.
Bhuren-Narapadi, king of Ava, 818, 822.
Bhurisena, Hindu king, 226.
Bhutagetu, Hindu king, 180.
Bianco, Andrea, geographer, 815.
Biard, Pierre, first Jesuit missionary in N. Am., 930.
Bias, one of the "Seven sages" of Greece, 233.
Bibaculus, Furius, Roman satirist, 446.
Bicheres, king of Egypt, 69.
Bieberstein, botanist in the Caucasian countries, 1049.
Biel, Gabriel, scholastic theologian, 831.
Biela, astronomer, 1061.
Bielke, S. C., botanist, 1025.
Bieneches, king of Egypt, 64.
Bigelow, Jacob, N. American botanist, 1063.
Billardière, J. J. La, botanist among Pacific isl., 1046.
Bimbisara, Hindu king, 236.
Bimsara, Hindu king, 231.

Bin-dats, thirty-first dairo of Japan, 588, 590.
Binothris, or Biophis, king of Egypt, 65.
Bion, Greek pastoral poet, 382.
Birch, Samuel, English archæologist, 1066.
Bisura Champaca, king of Java, 623.
Bitchourin, Hyacinth, Russian missionary, 1052.
Bivona Bernardi, Anton., Sicilian botanist, 1056.
Bjarnius, Scandinavian navigator, 662; 664.
Black, a founder of Pneumatic Chemistry, 1027.
Blackstone, Io., botanist, 1012.
Blackwell, Elizabeth, English botanist, 1015.
Blair, John, English chronographer, 1028.
Blair, Patrick, English botanist, 997.
Blanco, Manuel, botanist in the Philippines, 1068.
Blasius, Ermengaud, of Montpelier, medical writer, 765.
Blastaris, Matthaeus, scholastic Greek writer, 782.
Blume, botanist in the East Indies, 1065.
Bnon, second Hyksos king of Egypt, 96.
Boaz, 156.
Bobadilla, Francesco de, Spanish navigator, 858.
Bobart, English botanist, 957.
Boccaccio, Italian poet, 787, 791.
Boccalini of Rome, humorist and satirist, 921.
Boccanegra, Spanish admiral, 792.
Bocchoris, or Bonhoris, king of Egypt, 69.
Bocchoris II., king of Egypt, 211.
Boccone, Italian botanist, 972, 993.
Bochart of Rouen, critic, 948.
Bodinus, John, of Angiers, jurist, 897.
Boeckh, archæologist, 1066.
Boeo, Greek poetess, 154.
Boerebistas, king of the Dacians, 449.
Boerhaave, Herman, botanist and medical writer, 1003, 1006.
Boethius, the "last Roman," 573.
Boethos, king of Egypt, 64.
Boethus of Sidon, Greek philosopher, 456.
Boetius, Hector, 858.
Bogra Khan, Tartar general, 663.
Bogus, king of Mauritania, 441.
Boha-eddin, 718.
Böhmer, G. R., German botanist, 1020.
Bohorizh of Laibach, author of a Vindish grammar, 897.
Boileau, Despreaux, French poet, 997.
Boileau, Stephen, first regulator of the Paris police, 753.
Boissier, Edmond, botanist in Spain, 1068.
Bojer, botanist in Mauritius, 1067.
Boleyn, Ann, wife of Henry VIII. of England, 876.
Bolivar, S. American general and statesman, 1061–62, 1064.
Bolton, James, cryptogamic botanist, 1027.
Bonaparte, Joseph, brother of Napoleon, 1057.
Bonaparte, Napoleon, French conqueror, 1048, 1050–51, 1053, 1055–57, 1059–60.
Bonaventura of Tuscany, scholastic theologian, 753.
Bond, American astronomer, 960.
Bonferrus, missionary in Pegu, 891.
Bonfiglioli, Joseph, Sicilian botanist, 948.
Bonifacius, fortieth bishop of Rome, 564.
Bonifacius, fifty-third bishop of Rome, 576.
Bonifacius III., first Roman archbishop, 597.
Bonifacius IV., second Roman archbishop, 597, 598.
Bonifacius V., fourth Roman archbishop, 599, 600.
Bonifacius VI., forty-eighth Roman archbishop, 645.
Bonifacius VIII., thirty-seventh pope, 762, 764–65.
Bonifacius IX., forty-seventh pope, 797, 801.
Bonifacius of Mayence, theologian, 613.
Bonnet, Carolus, French naturalist, 1027.
Bonneuil, Estienne de, French architect, 759.
Bonpland, Amand., botanist in S. A. 1051, 1054, 1061.
Bontier, traveller in the Canary Islands, 800.
Bontius, J., botanist in the East Indies, 952.
Boone, Daniel, first settler in Kentucky, 1033.
Borckhausen, Mor Balth., German botanist, 1047.
Borri, Christopher, Jesuit missionary in Cochinchina, 939.
Bory de St. Vincent, traveller and botanist, 1053, 1064.
Borzevog, duke of Bohemia, 630.
Bos, abbe du, critic, 1012.
Bosc, L. A. G., botanist in North America, 1050.
Bosmann, traveller in Guinea, 999.
Bossu, traveller in Louisiana, 1021.
Bossuet of Burgundy, 965.
Botetourt, colonial governor, 1029.
Botta, archæologist, 1068.
Boudicea, queen of South Britain, 483.
Bougainville, L. Ant., French navigator, 1026, 1028.
Boughton, Gabriel, English surgeon in Hindustan, 949, 952.
Bouguer, Pierre, traveller in Equatorial America, 1015.
Bouhours, Dominique, of Paris, critic, 965.
Bouka-khan, chief of the Ouigour Tartars, 538.
Bou-rets, twenty-sixth dairo of Japan, 571–72.
Boxhorn, Marc. Zuer., on the Welsh language, 942.
Boyle, Robert, English physicist, 965.
Boylston, Zabdiel, physician of Boston, 1006.
Boym, Michael, botanist in China, 949.
Braad, botanist, 1025.
Bracciolini, Poggio, papal secretary, 818.
Bradbury, John, 1057.
Braddock, British general in N. America, 1022.
Bradford, William, governor of Plymouth colony, 960.
Bradhna, Hindu king, 629.
Bradley, James, 1012.
Bradley, Ricardus, botanist, 1004.
Brahe Tycho, 905.
Brahma Gupta, Hindu astronomer, 575.
Bramante, Italian architect and painter, 858, 860.
Brandt, Swedish chemist, 1012.
Brassavolus, Antonius Musa, of Venice, botanist, 876.
Bray, John, English botanist, 791.
Brenning, 921.
Brennus, leader of the Gauls, 303.
Bretigny, M. French colonizer, 948.
Breynius, Jacob, Dutch botanist, 975, 977.
Breynius, Jo. Phil., Dutch botanist, 977, 1012.
Brian O'Neill, Irish chief, 631.
Brickell, John, American botanist, 1015, 1052.
Brigita, or St. Brigit, abbess in Ireland, 573.
Brithric, British admiral, 656.
Brocardi, Pellegrino, 872.
Brocquière, Bertrandon de la, traveller in the East, 610, 756, 812, 814.
Brogan, Irish ecclesiastical poet, 573.
Bromelius, Olaus, Swedish botanist, 991.
Brorsen, astronomer, 1061.
Broteas, brother of Niobe, 153.
Brotero, F. Avell., Portuguese botanist, 1054.
Browal, Io., botanist, 1013.
Brower, or Brauer, Flemish painter, 948.
Brown, Robert, English botanist, 1058.
Brown, Thomas, English botanist, 948.

Browne, Patrick, botanist in Jamaica, 1023.
Browne, W. G., traveller in Darfoor, 965, 1048.
Bruce, James, traveller in Abyssinia, 1029.
Bruern, earl of Northumberland, 639.
Brun, Charles le, French painter, 965.
Brunetto Latini, of Florence, astronomer, 753.
Brunfels, Otho, German botanist, 870.
Bruno, archbishop of Treves, 684.
Bruno de Lungobardo, medical writer, 723.
Bruno, founder of the Carthusian Order of monks, 681.
Brunyer, Abel, French botanist, 959.
Brutus, D. Junius, founder of gladiatorial exhibitions, 382.
Brutus, Marcus, Roman general, 456.
Bruyere, author of Characteres du Tems, 965.
Bryennius, scholastic Greek writer, 703.
Bucca-raya, Hindu king, 791.
Bucca-raya II., Hindu king, 801.
Bucer of Alsace, protestant reformer, 872.
Buchanan, George, English poet and historian, 897.
Buchanan-Hamilton, botanist in Hindustan, 1050.
Buc'hoz, P. Ios, French botanist, 1031.
Buddha, or Guadama, founder of Buddhism, 234, 237, 241, 588, 630, 735, 767.
Buddhadasa, king of Ceylon, 548, 552.
Buddhaghosha, Buddhist missionary, 559, 676.
Budeus of Paris, jurist and critic, 872.
Bukki, Jewish high-priest, 156.
Bulbun, Gheias-u-din, ninth sultan of Delhi, 751, 758.
Bumaldi, Io. Ant., Italian botanist, 948.
Bunge, A. v., botanist in Eastern Tartary and China, 1064, 1066.
Burchardus of Worms, theologian, 664.
Burchell, naturalist in Austral Africa, 1052.
Burgoyne, British general in N. America, 1036.
Burkhard, Io. Henr., botanist, 997.
Burmann, Ioan., Dutch botanist, 1015, 1025
Burmann, Nic. Laur., Dutch botanist, 1029.
Burnet, Gilbert, historian, 997.
Burrough, Stephen, British navigator, 891.
Burserus, botanist, 941
Busbecke, botanist at Constantinople, 891.
Butes, priest of Neptune at Athens, 152.
Butler, Benjamin F, American general, lawyer, and statesman, 1071.
Butler, Samuel, author of Hudibras, 965.
Buttner, botanist, 1027.
Button, Thomas, British navigator, 930.
Buwana, Sri Turi, leader of a Malay colony, 709.
Buxbaum, J. C., botanist in Asia Minor, 1006–7, 1009.
Bylot, Robert, British navigator, 933.
Byron, British navigator, 1027.

Cabeza de Vaca, captive among the aboriginals of Texas and Northern Mexico, 869.
Cabot, Sebastian, Venetian navigator in British employ, 857, 862, 868, 887.
Cabot, Zuan or John, Venetian navigator in British employ, 856.
Caboudi, Arab writer, 655.
Cabral, Peter Alvarez, Portuguese navigator, 819, 858.
Cabreira, Xeixas de, Portuguese chief captain in East Africa, 949.
Cabrillo, John Rodriguez, Spanish navigator, 880.
Cacha, fifteenth and last scyri of Quito, 829, 845.
Cadamosto Vicente, voyager to Equatorial Africa, 823.
Cadmus, leader of a Phœnician colony into Greece, 150.
Cadmus of Miletus, Greek historian, 237.
Caecilianus, bishop of Carthage, 546.
Caecilius, Greek rhetor, 456.
Caecilius Epirota, Roman grammarian, 457.
Caecilius Statius, Roman comic poet, 396.
Caecina, Albinus, Roman satirist, 552.
Caedmon, earliest English poet and monk, 612.
Caesalpinus, Andreas, botanist, 907.
Caesar, Caius, grandson of Augustus, 467, 468.
Caesar, Julius, Roman general and writer, 446, 448, 450, 455.
Caesarius Lirinensis, theologian, 609.
Caesius, Fridericus, founder of the Academia Lynceorum, 923.
Cafur, Malik, general of sultan Ala-u-din, of Delhi, 766, 773.
Cahlan, Cahtan Arab, 226.
Caille, N. Louis de la, 1012.
Cain, son of Adam, 3.
Cainan, 12.
Caius, early Christian writer, 534.
Caius, see Caligula.
Caius, twenty-sixth bishop of Rome, 543–44.
Cajetanus, Thomas de Vejo, scholastic theologian, 858.
Calamis, Greek sculptor, 255.
Calasoka, Hindu king, 270, 285.
Calceolarius, Franc., of Verona, botanist, 890.
Caleb, son of Hezron, 125.
Caleb, son of Jephunneh, 136, 145, 149.
Calidius, M., Roman orator, 446.
Caligula, Caius, Roman emperor, 478.
Calixtus II., sixth pope, 687–88.
Calixtus III., fifty-fifth pope, 823, 825.
Calliades, Greek comic poet, 312.
Callias, Greek comic poet, 281, 296.
Callias of Syracuse, Greek historian, 370.
Callicrates, Greek comic poet, 312.
Callicrates of Tyre, Greek historian, 541.
Callimachus, Greek sculptor and architect, 302.
Callimachus, Greek poet, 382.
Callinicus, Greek historian, 537.
Callinicus, inventor of Greek fire, 610.
Callinus, Greek poet, 213.
Callisthenes, companion of Alexander, 323, 325.
Callisto, daughter of Lycaon, 132.
Callistratus, Greek orator, 312.
Callistratus, Greek grammarian, 400.
Callixenus, Greek historian, 375.
Callona, king of Ceylon, 433.
Calpurnius, Roman poet, 541.
Calvert, Cecilius, son of Lord Baltimore, 947.
Calvert, George, founder of the State of Maryland, 947.
Calvin, John, Orthodox theologian, 877.
Calvinus, C. Sextius, Roman general in France, 409, 411.
Calvus Macer, Roman orator and poet, 446.
Cam, James, see Caon.
Camaldolese, Fra Mauro, Italian geographer, 766.
Cambyses, father of Cyrus, 236.
Cambyses, Persian emperor, 249–50.
Camden, William, archæologist and historian, 921.
Camerarius, J., botanist, 909.
Camerarius, Rud. Iac., botanist, 991.
Camerinus, C. Cestius Gallus, Roman consul, 477.

Camillus, M. Furius, Roman dictator, 301–3, 312.
Camoens, Portuguese poet, 897.
Campanus of Lombardy, astronomer, 718.
Campanus of Novarro, astronomer, 675.
Campius, Balthas. and Mich., Italian botanists, 948.
Cananus, Joannes, modern Greek writer, 799.
Candace, queen of the Ethiopians, 463, 477.
Candaules, king of Lydia, 214, 217.
Candidus, early Christian writer, 529.
Candidus, Greek historian, 568.
Candish, Thomas, English navigator, 913.
Canishca, Tartar king of Cashmere, 408.
Cano, John Sebastian, Spanish navigator, 865.
Cantharus, Greek comic poet, 281.
Cantor, Petrus, reforming monk, 711.
Canute II., king of England, Denmark, Norway, and Sweden, 667, 669, 675.
Caon, Diogo, or James Cam, Portuguese navigator, 843.
Capac Yupanqui, fifth Inca of Peru, 709, 711, 717.
Capac Yupanqui, Peruvian general, 795.
Capet, Hugh, king of France, 663.
Capo d'Istrias, president of Greece, 1065.
Capreolus, Joannes, scholastic theologian, 799.
Capys, father of Anchises, 156.
Car, son of Phoroneus, 113.
Caracalla, Roman emperor, 534–35.
Caracci, Annibale, Italian painter, 921.
Caracci, Ludovico, Italian painter, 921.
Caracticus, British chief, 481.
Caran, eleventh scyri of Quito, 765.
Caranas, Sanscrit poet, 711.
Caranus, founder of the Macedonian monarchy, 212.
Carausius, king of South Britain, 543–44.
Caravaggio, Italian painter, 872.
Carcinus, Greek tragic poet, 281.
Cardanus, Hieron, of Milan, physicist, 892.
Carinus, Roman emperor, 543.
Carloman, king of France, 642.
Carmichael, English botanist, 1052.
Carneades, Greek philosopher, 401.
Caro, Annibal, of Istria, Italian poet, 872.
Caron, Françoys, Dutch superintendent in Japan, 952.
Carpocrates, Gnostic Christian, 534.
Carrera, Petrus, Sicilian botanist, 948
Carteret, British navigator, 1027.
Cartier, Jaques, French navigator, 872, 875, 881–82, 884.
Carus, Roman emperor, 543.
Carver, John, British colonial governor, 939.
Carvilius, Spurius, divorced Roman, 389.
Casaubon, Isaac, critic, 921.
Cassander, Macedonian general, 340, 345–46.
Cassianus, bishop, 560.
Cassini, Henr., botanist, 1064.
Cassini of Nice, astronomer, 960, 971, 981.
Cassiodorus, Roman consul and historian, 573.
Cassius, Andreas, discoverer of gold-purple, 981.
Cassius, Avidius, Roman general, 531.
Cassius, Caius, Roman general, 456.
Cassius, early bishop of Tyre, 533.
Castellus, Petr., Sicilian botanist, 948.
Castelvetro of Modena, critic, 897.
Castiglione, Ludw., botanist in North America, 1045.
Castor, Antonius, Roman botanist, 472.
Castor, Greek chronographer, 446.
Castor Durantes, Italian botanist, 919.
Catacuzenus, scholastic Greek writer, 791.
Catesby, Mark., botanist in Carolina, 1003, 1005.
Catharine, empress of Russia, 1007.
Catharine II., empress of Russia, 1024, 1049.
Cato, M. Porcius, Roman censor and writer, 297.
Cato, Valerius, Roman grammarian, 446.
Catullus, Roman poet, 446, 455.
Causica, Hindu king, 137.
Cavallini, F. Phil., Italian botanist, 986.
Cavanilles, Ant. Jos., Spanish botanist, 1046.
Cavendish, a founder of Pneumatic Chemistry, 1027.
Cecrops, first king of Athens, 128, 137.
Cecrops II., seventh king of Athens, 153.
Cedrenus, Georgius, Greek historian, 675.
Celestinus, forty-first bishop of Rome, 565.
Celestinus II., ninth pope, 704–5.
Celestinus III., nineteenth pope, 716, 718.
Celestinus IV., twenty-third pope, 734.
Celestinus V., thirty-sixth pope, 762.
Celsius, Olaus, Swedish botanist, 1010.
Celsus, Roman medical writer, 471.
Cenobarba, John, medical writer, 782.
Censorinus, Roman writer on calendars, 537.
Cephalion, Greek historian, 519.
Cephalus, Greek orator, 299.
Cephisodorus, Greek painter, 281.
Cephisodorus, Greek comic poet, 298.
Cephisodorus, Greek historian, 312.
Cercops of Miletus, Greek poet, 210.
Cerdic, Saxon king in England, 573.
Cerdo, heretical Christian, 527.
Cermisone, see Antonio.
Cerularius, Michael, patriarch of Constantinople, 675.
Cervantes, botanist in Mexico, 1052.
Cervantez of Seville, author of Don Quixote, 921.
Cespedes, P. Gregorio de, jesuit visiting Corea, 916.
Cestius of Smyrna, Roman rhetor, 457.
Chaalus, fifth king of Assyria, 92.
Chabré, French botanist, 964.
Chaeremon, Greek tragic poet, 299.
Chaeremon, Greek writer, 15.
Chaires, king of Egypt, 65.
Chaitra-pala, or Jeipal, Hindu king at Lahore, 658, 664–65.
Chajjim, Beneviste, Jewish writer, 948.
Chakra Nagara, Javan chief on Borneo, 814.
Chalchiutlanetzin, first Toltec king of Mexico, 669.
Chalcol, or Calcol, 179.
Cha-li-yi-kin-na, king of Cambodia, 600.
Chameleon, Greek writer, 325.
Chamisso, botanist among the Pacific islands, 1061.
Chammir, sixth Cahtan ruler of Yemen, 235.
Champlain, Samuel, French navigator, 919, 923, 927, 930, 933, 939, 944.
Champollion, French archæologist, 1063.
Champollion-Figeac, French archæologist, 652.
Chanacca, bramin, 337.
Chanan, head of a Jewish school, 591.
Chancellor, Richard, British navigator, 888.
Chand, Hindustanee poet and historian, 716.
Chandra-deva, Hindu king, 546.
Changkian, Chinese traveller in Bactriana, 411.
Chang-liang, Chinese general and engineer, 395.
Chang-ti, of the Han, Chinese emperor, 519.
Chao-hao, early Chinese emperor, 81.
Chao-kang, of the Hia, Chinese emperor, 87.
Chapman, A. W., N. American botanist, 1070.

Charaka, Hindu medical writer, 408.
Chares, Greek historian, 389.
Chariberht, king of the Franks, 592.
Charilaus, sixth Proclid king of Sparta, 198, 202, 204.
Charisi, Jewish writer, 718.
Chariton, medical writer, see Charaka.
Charlemagne, emperor of the West, 621–26, 644.
Charles, British king, 933, 942–43, 947, 950, 952, 957.
Charles II., British king, 958, 960, 963, 973, 975–76, 978, 981.
Charles d'Anjou, appointed king of Sicily, 751.
Charles le Gros, emperor of France and Germany, 643.
Charles Martel, 619.
Charles the Bold, duke of Burgundy, 834.
Charles II. le Chauve, king of France, 630, 641.
Charles III. le Simple, king of France, 643, 645.
Charles V. le Sage, king of France, 791, 797, 801.
Charles VII., king of France, 813.
Charles VIII., king of France, 843.
Charles IX., king of France, 896, 898, 900.
Charles X., king of France, 1065.
Charles IV., king of Spain, 1057.
Charles IV., twenty-second emperor of Germany and Italy, 789, 795.
Charles V., king of Spain and thirtieth emperor of Germany and Italy, 863–65, 868–71, 876, 885–86, 889, 891–92.
Charles VI., thirty-eighth emperor of Germany and Italy, 1019.
Charles VII., thirty-ninth emperor of Germany and Italy, 1019.
Charles XII., king of Sweden, 994.
Charlevoix, P. F. X., historian in N. America, 1018.
Charmidas, Greek philosopher, 424.
Charon of Lampsacus, Greek historian, 255.
Charops, Athenian archon, 212.
Charuman Perumal, king in Southern Hindustan, 627, 632.
Chaucer, English poet, 716, 796.
Chauvin, French navigator, 920.
Chédotel, French colonizer, 914.
Cheires, king of Egypt, 71.
Chemnitz, Io., German botanist, 948.
Cheneres, king of Egypt, 65.
Cheops, see Suphis.
Cheou-sin, of the Chang, Chinese emperor, 154–55, 159.
Chephren, see Shafra.
Chersias of Orchomenus, Greek poet, 231.
Chersicrates, 213.
Chesne, Andrew du, archæologist and historian, 921.
Chico, first kolano of Ternate, 747.
Chi-hoang-ti, of the Thsin, Chinese emperor, 386, 393.
Childebert II., king of the French, 589, 592.
Childeric, king of France, 569.
Childeric III., last Merovingian king of France, 620.
Chillingworth, English controversial theologian, 948.
Chilon, one of the "seven sages" of Greece, 233, 240.
Chimalpopoka, third Mexican emperor, 802, 811.
Chimu-chanchu, Yunca chief in Western Peru, 796.
Chinaladanus, king of Babylon, 226.
Chinchiruca, Peruvian general, 811.
Chinghiz Khan, see Jenghiz.
Chin-kio, persecutor of Christians in China, 933.
Chin-noung, second Chinese emperor, 78.
Chin-tho-lo-pi-li, 615.
Chin-tseng-wang, of the Tcheou, Chinese emperor, 338.
Chin tsoung, of the Soung, Chinese emperor, 680, 682.
Chin-tsoung II., of the Ming, Chinese emperor, 900, 916, 918.
Chinzirus and Porus, king of Babylon, 213.
Chiong Wanara, usurping king of Java, 762, 775.
Chionides, Greek comic poet, 259
Chiron, called the centaur, 162.
Chi-tsoung, of the later Tcheou, Chinese emperor, 653.
Chi-tsoung of the Kin, ruler of Northern China, 710.
Chi-tsoung II., of the Ming, Chinese emperor, 865.
Chiwi al Balki, or Belki, Karaite Jewish writer, 645.
Chlothaire, king of the French, 584, 585.
Chlothaire II., or Chlotaire II., king of the French, 598.
Choerilus Greek tragic poet, 244.
Choerilus of Samos, Greek poet, 281.
Chomasbelus, king of Babylon, 84.
Chonuphis of Egypt, preceptor of Eudoxus, 312.
Chorganga, king of Orissa, 702, 708.
Chortatzes, Georgius, modern Greek dramatist, 965.
Chosroes, Sasanid king of Persia, 576, 589.
Chosroes II., Sasanid king of Persia, 591, 599, 600.
Chrestus of Byzantium, Greek rhetor, 529.
Christian, king of Denmark, 821.
Christian II. king of Denmark, 834.
Christian III., first protestant king of Denmark, 877.
Christian IV., king of Denmark, 924, 936.
Christianus Druthmarus of France, theologian, 629.
Christodorus, Greek poet, 571.
Christophorus, fifty-fourth Roman archbishop, 647.
Chrysanthus, Novatian bishop, 560.
Chryseros, Greek historian, 529.
Chryses, priest of Apollo at Chryse, 171.
Chrysippus, Greek philosopher, 389.
Chrysoloras, Manuel, scholastic Greek writer, 799.
Chrysostomus, Joannes, ecclesiastical orator and writer, 555.
Chufu II., or Cheops, see Suphis.
Chun, early Chinese emperor, 82.
Chun-tchi, of the Tai-thsing, Chinese emperor, 956, 958, 961.
Chun-ti, of the Han, Chinese emperor, 525.
Chun-ti II., of the Northern Soung, Chinese emperor, 569.
Chun-ti III., of the Youan, Chinese emperor, 782, 789.
Chun-tsoung, of the Thang, Chinese emperor, 645.
Churchill, Awnsham and John, publishers of coll. Voyages, 997.
Chusan-rishathaim, or Chusarthus, king of Mesopotamia, 151.
Chuz, see Alkanzi.
Ciaconius, Peter, assistant in arranging the Gregorian "New Style," 897.
Cicero, Roman orator, 447, 453.
Cieza, Petrus, Spanish traveller in Peru, 668.
Cignani, Carlo, Italian painter, 997.
Cimabué of Florence, painter, 753.
Cinaedh, Scandinavian chief, 631.
Cinæthon, Greek poet, 210.
Cinaethus, Greek rhapsodist and poet, 254.
Cincinnatus, L. Quinctius, Roman dictator, 268, 279.
Cincius Alimentus, Roman historian, 391.
Cineas, Greek orator, 370.
Clarke, Samuel, critic and metaphysician, 997.
Clarus, bishop of Ptolemais, 533.
Claude of Lorraine, landscape painter, 965.
Claudianus, Roman poet, 560.

Claudius, bishop of Turin, 626.
Claudius, Roman emperor, 479-80.
Claudius II., or Aurelius Claudius, Roman emperor, 541.
Claudius, Servius, Roman grammarian, 434.
Claudius Caecus, see Appius Claudius.
Claudius Iolaus, see Iolaus.
Claudius Scotus, theologian, 624.
Clavijo, ambassador from Spain to Timour, 800.
Clavius, C., author of the Gregorian "New Style," 905.
Clayton, John, American botanist, 1016.
Cleander, Greek architect, 532.
Cleanthes, Greek philosopher, 382.
Clearchus of Soli, Greek philosopher and educational writer, 325, 345.
Cleaver, Isaac, American botanist, 1061.
Cleemporus, Greek medical writer, 256.
Cleitarchus, Greek historian, 325.
Cleitomachus, Greek philosopher, 407.
Cleitophon, Greek historian and geographer, 400.
Cleitor, sixth king of Arcadia, 151.
Clemangis, Nicolaus, religious reformer, 803.
Clemens Alexandrinus, early Christian writer, 533.
Clemens Antisiodorensis, theologian, 619.
Clemens Romanus, early Christian writer, 518.
Clemens II, eighty-fifth Roman archbishop, 676.
Clemens III., claimant in opposition to Hildebrand, 681.
Clemens III., eighteenth pope, 716.
Clemens IV., twenty-seventh pope, 751, 753.
Clemens V., thirty-ninth pope, 765, 767.
Clemens VI., forty-second pope, 786, 789.
Clemens VII., sixty-fifth pope, 867, 869-70.
Cleobuline, Greek poetess, 255.
Cleobulus, one of the "seven sages" of Greece, 233.
Cleodaeus, Heraclid chief, 178.
Cleomachus, Greek tragic poet, 268.
Cleomenes, Greek sculptor, 442.
Cleomenes III., last Agid king of Sparta, 391.
Cleopatra, daughter of Ptolemy V., 398, 402.
Cleopatra, daughter of Ptolemy VI., 402, 427.
Cleopatra, queen of Egypt, 443, 454, 457.
Cleopatra, wife of Ptolemy V.; 397.
Cleophon, Greek tragic poet, 299.
Cleostratus of Tenedos, Greek astronomer, 268.
Clerc, John le, critic, 997.
Clessides, Greek painter, 382.
Cleues, leader of a Greek colony, 179.
Cleyer, botanist in Japan, 976.
Clidemus, Greek historian, 298.
Clidicus, Athenian archon, 213.
Clifford, botanist, 1025.
Clinton, H. F., British chronographer, 1066.
Clitonymus, Greek writer, 322.
Clive, British general in Hindustan, 1020, 1026.
Clodius, P., Roman aedile and tribune, 454.
Clotaire, see Chlothaire.
Clovis, or Chlodovechus, first Christian king of France, 569, 572.
Cluni, Eudes de, 650.
Clusius, botanist, 901, 907, 921, 924, 927.
Clutius Augerius, botanist in Morocco, 926.
Clymenus, king of Orchomenus, 160.
Clytus of Miletus, Greek historian, 325.
Cobo, Barnabas, botanist in America, 918.
Cochebas, leader of a Jewish revolt, 526.
Codinus, Georgius, scholastic Greek writer, 814.
Codrus, king of Athens, 186.
Coelestius, ecclesiastical writer, 560.
Cohen, Bongodas, Jewish medical writer, 782.
Cohen, Tobias, Jewish encyclopedic writer, 1001.
Colaeus of Samos, Greek navigator, 226.
Colarbas, heretical Christian, 528.
Colden, Cadwallader, American botanist, 1018, 1025.
Colebrooke, H. F., botanist in Hindustan, 1052.
Coleman, Peter, builder of London bridge, 714.
Colet, John, dean of St. Paul's in London, 861.
Collenutius, Pandolphus, botanist, 859.
Collie, botanist, on Beechey's voyage, 1064.
Collins, Zaccheus, American botanist, 1060, 1062.
Collinson, botanist in N. America, 1025.
Colmaster, botanist in Labrador, 1059.
Colotes, Greek philosopher, 370.
Columbanus, ecclesiastic, 598.
Columbus, Christopher, discoverer of America, 841, 843, 852, 854-55, 857, 859.
Columbus, Ferdinand, son of Christopher, 859.
Columella, Roman agricultural writer, 472.
Columna, Fabius, Italian botanist, 915, 934.
Comas, Greek patriarch, 705.
Commandin, Frederick, mathematician, 897.
Commelyn, Caspar, Dutch botanist, 998, 1001.
Commelyn, Jo., Dutch botanist, 980, 993.
Commerson, Philib., botanist in the Pacific, 1028.
Commodus, Roman emperor, 529, 533.
Conant, Roger, Puritan colonist, 942.
Concylus, Greek poet, 239.
Condamine, C. M. de la, traveller in Equatorial America, 1015, 1018.
Confucius, see Khoung-tseu.
Conilus, Greek herbalist, 318.
Conon, eighteenth Roman archbishop, 613.
Conon, Greek grammarian, 456.
Conon of Athens, Greek admiral, 302.
Conon of Samos, Greek astronomer, 389.
Conos, Arab chief, 457.
Conrad of Meygenberg, encyclopædic writer, 787, 791.
Conradus Celtes, 831.
Conradus II. Salicus, fifth emperor of Germany and Italy, 669, 675.
Conradus III., tenth emperor of Germany and Italy, 704.
Conradus Urspergensis, theologian, 718.
Constans, associate Roman emperor, 548-49.
Constans, seventeenth Byzant. emperor, 603, 607, 610.
Constantinus Afer, medical writer, 682.
Constantinus, British king, 580.
Constantinus, claimant of the empire, 561.
Constantinus, modern Greek writer, 831.
Constantinus, Robertus, botanist in Crete, 892.
Constantinus, Roman emperor, 545.
Constantinus the younger, associate Roman emperor, 548.
Constantinus, twenty-third Roman archb., 615-16.
Constantinus III., fifteenth Byzantine emperor, 603.
Constantinus IV. Pogonatus, eighteenth Byzantine emperor, 610-11, 613.
Constantinus VI. Copronymus, twenty-fourth Byzantine emperor, 619, 621-22.
Constantinus VII., twenty-sixth Byzantine emperor, 623, 652, 655.
Constantinus VIII., thirty-sixth Byzant. emperor, 647.

Constantinus IX., fortieth Byzantine emperor, 656, 669.
Constantinus X., Monomachus, forty-fourth Byzantine emperor, 676–77.
Constantinus XI., Ducas, forty-eighth Byzantine emperor, 678, 680.
Constantinus XII., sixty-ninth and last Byzantine emperor, 818.
Constantius, Roman emperor, 544–45.
Constantius II., Roman emperor, 548–50.
Constantius, Roman general in Gaul, 562.
Conti, Nicolo, traveller in the East Indies, 816, 818.
Cook, James, British navigator, 1029, 1032, 1034.
Copernicus, Nic., astronomer, 880.
Corbichon, naturalist, 791.
Corbulo, Roman general, 481, 483.
Cordo, Simon de, Januensis (of Genoa), botanist in Greece, 759.
Cordova, Francisco Hernandez de, Spanish navigator, 862.
Cordus, Euricius, botanist, 874.
Cordus, Valerius, botanist, 884, 892.
Coriolanus, Roman general, 267.
Corippus, Latin writer, 576.
Cornado, Francis V. de, traveller, 880.
Cornarus, Vitzentzus, modern Greek poet, 1012.
Corneille, Peter, French dramatist, 965.
Cornelia, Vestal virgin at Rome, 517.
Cornelius, nineteenth bishop of Rome, 539.
Cornelius, Roman centurion in Palestine, 478.
Cornelius, see Lentulus.
Cornificius, Q., Roman orator, 446.
Cornuti, I. Ph., French botanist, 948.
Cornwallis, Lord, British general, 1037.
Coroebus, Olympic victor, 208.
Correa de Serra, Portuguese botanist, 1052.
Corregio, Antonio da, Italian painter, 858.
Cortereal, Gasper de, Portuguese navigator, 858.
Cortereal, John Vaz Costa, Portuguese navigator, 829.
Cortes, Ferdinand, Spanish conqueror of Mexico, 864–65, 867.
Corti, Bonavent., naturalist, 1027.
Coruncanius, Tib., plebeian pontifex maximus, 383.
Corvinus, see Matthias.
Cory, Giles, a victim of the witchcraft delusion in New England, 990.
Cosmas Indicopleustes, Greek traveller, 527, 564, 573.
Cosmas of Jerusalem, Greek theologian, 619.
Cosroes, see Chosroes.
Cossay, Coraysh chief, 566.
Cossutius, Roman architect, 526.
Costæus, Io., Italian botanist, 859.
Cotiso, king of the Dacians, 456.
Cotta, Roman poet, 467.
Cotton, Robert, archæologist, 921.
Covilham, Pedro de, Portuguese traveller, 845.
Cranach, Lucas, painter, 858.
Cranaus, second king of Athens, 137.
Cranmer, Thomas, archbishop of Canterbury, 872.
Crantor, Greek philosopher, 325.
Crantz, H. I. N., German botanist, 1025.
Cranz, Davides, botanist in Greenland, 1030.
Crassus, L. Licinius, Roman orator, 424.
Crassus, M. Licinius, Roman general and triumvir, 431, 448, 454.
Crates of Mallus, Greek grammarian, 401.
Crates of Tarsus, Greek philosopher, 325.
Crates the Cynic, Greek philosopher, 325.
Cratevas, Greek botanist, 432.
Cratinus, Greek comic poet, 271, 286.
Cratinus the younger, Greek comic poet, 312.
Cratippus, Greek historian, 281.
Cratippus, Greek philosopher, 446.
Cremutius Cordus, Roman historian, 476.
Creon, Athenian archon, 221.
Creophylus, Greek poet, 210.
Crescens the Cynic, 526.
Crescenzio, Pier, Italian botanist, 756.
Cresphontes, Heraclid chief, 180.
Cretus, see Kretos.
Criasus, king of Argos, 121, 124.
Cripa, Hindu king, 150.
Crispus, son of Constantine, 546.
Critolaus, Greek philosopher, 401.
Croesus, king of Lydia, 237.
Cromwell, Oliver, ruler of Britain, 951, 957, 959–60.
Cromwell, Richard, son of Oliver, 960.
Cronstedt, Swedish chemist, 1022.
Croom, H. B., American botanist, 1066.
Crotopus, king of Argos, 132, 136.
Cshapanaca, Sanscrit writer, 681.
Ctesias, Greek traveller and historian, 304.
Ctesibius, Greek historian, 370.
Ctesibius of Alexandria, mechanician, 386.
Ctesilochus, Greek painter, 370.
Cube, Io. van, botanist, 822.
Cudananga, king of Ceylon, 532.
Cudworth, Ralph, English metaphysician, 965.
Cuitlahuatzin, tenth Mexican emperor, 864.
Cujas, James, of Toulouse, jurist, 897.
Cunningham, botanist in Australia, 1065.
Cunningham, Jacob, botanist in China, 994.
Cupani, R. P. Franc., Sicilian botanist, 992, 1003.
Curio, C. Scribonius, Roman general and orator, 446.
Curius Dentatus, Roman general, 378.
Cursor, L. Papirius, Roman consul, 372.
Curtis, William, English botanist, 1036, 1042, 1046.
Curtius, Quintus, Roman historian, 529.
Curtius Nicia, Roman grammarian, 446.
Cushman, Mary, Puritan colonist, 994.
Cushman, Robert, Puritan colonist, 939.
Cutler, Manasseh, American botanist, 1038.
Cuttub Shaw, or Kutb-u-din Eibuk, sult. of Delhi, 719.
Cuysmancu, ruler in Western Peru, 789.
Cyaxares, king of Media, 227, 230.
Cydias, Greek orator, 312.
Cydias, Greek painter, 389.
Cyllen, builder of a temple to Mercury, 151.
Cynifrid, or Cyneferth, early British surgeon, 611.
Cyprianus, bishop of Carthage, 538.
Cypselus, king of Arcadia, 180.
Cypselus, king of Corinth, 226.
Cyril, missionary among the Slavonians, 639.
Cyril of Kief, Russian theological writer, 752.
Cyrillus, bishop of Jerusalem, 549, 554.
Cyrillus, eighteenth bishop of Antioch, 543, 545.
Cyrillus of Alexandria, ecclesiastical writer, 562, 565.
Cyrsilus, Greek historian, 325.
Cyrus, founder of the Persian empire, 239, 249.
Cyrus of Panopolis, Greek poet, 565.
Cyrus the younger, Persian general, 293, 299.

Dabreu, Antonio, 861.
Dabshelim, first balhara or king of Guzerat, 517.
Dacier, Andrew, critic, 997.
Dacier, madame, critic, 997.
Dacsha, Hindu king, 95.
Dado of Rouen, theologian, 601.
Daedalus, Greek sculptor, 164.
Dagara, king of Karagué, 730.
Dagobert, king of the Franks, 599, 602.
Dagobert II., king of the Franks, 615–16.
Daguerre of Paris, discoverer of photography, 1068.
Daher, Fatimite sultan of Egypt, 667, 675.
Dahir, Hindu king of Sind, 615.
Daigo, dairo of Japan, 645, 650.
Daigo II., dairo of Japan, 774, 781–82.
Daimachus, Greek traveller, 370.
Dai-sco-kouotei, dairo of Japan, 930.
Dalberg, C. G., botanist in Surinam, 1027.
Dale, Samuel, pharmacologist, 997.
Dale, Thomas, third governor of Virginia, 933.
Dalechamp, J., French botanist, 912.
Dalibard, F., French botanist, 1020, 1025.
Dalmatius, Flavius, Roman consul and viceroy, 548.
Dalnaad, Abyssinian king, 680.
Damascius, Greek philosopher, 576.
Damasias, Athenian archon, 234.
Damastes of Sigeum, Greek historian, 268.
Damasus, thirty-fifth bishop of Rome, 552, 554.
Damasus II., eighty-sixth Roman archbishop, 676.
Damianus, Greek rhetor, 534.
Damiri, see El-Demiri.
Damis, companion of Apollonius of Tyana, 483.
Damocrates, Servilius, Greek medical writer, 477.
Damodara, Sanscrit poet, 682.
Damogeron, Greek agricultural writer, 549.
Damon, Greek orator, 323.
Damoxenus, Greek comic poet, 231, 270.
Dampier, British navigator, 960, 981, 985, 994.
Danaus, or Armais, 136, 147.
Dandolo, Henri, doge of Venice, 717.
Danforth, Samuel, missionary in N. England, 803, 994.
Daniel, Jewish prophet, 236.
Danielle da Volterra, Italian painter, 872.
Danilof, Kirsha, Kozak poet, 997.
Dante, Italian poet, 765.
Danu, Hindu king, 96.
Dara Wati, wife of a king of Java, 798.
Darda, or Dara, 179.
Dardanus, leader of a Greek migration, 145.
Dare, Virginia, first Anglo-American, 913.
Darius, Persian emperor, 251, 259.
Darius II., Persian emperor, 285, 296.
Darius III., Persian emperor, 323, 326.
Darlington, William, N. American botanist, 1061, 1068.
D'Arrest, astronomer, 1061.
Dasa Bahu, chief of the Hindu colony on Java, 554.
Dasaratha, Hindu king, 395, 399.
Datis, Persian general, 258.
Dattatissa, king of Ceylon, 547–48.
Daud Shah, king of Guzerat, 825.
Daveluy, French missionary in Corea, 1071.
David, Jewish king, 178.
David, king of Scotland, 696.
David II., king of Scotland, 792.
David, traditional Welsh saint, 573.
David Comnenus, last Greek emperor, 825.
Davies, Hugh, Welsh botanist, 1059.
Davies, John, Welsh botanist, 942.
Davila, Giles Gonzalez, Spanish navigator, 865.
Davila, Henrico Catharino, 921.
Davis, John, British navigator, 909.
Davonus, king of Babylon, 80.
Deane, Silas, American commissioner in France, 1036.
Deborah, Hebrew poetess, 155.
Decandolle, Alphonse, botanist, 1070.
Decandolle of Geneva, botanist, 1053, 1058, 1063–64.
Decebalus, king of the Dacians, 517.
Decius, twenty-ninth Roman emperor, 538–39.
Dedu, French botanist, 965.
Deering, Carol., English botanist, 1012.
D'Entrecasteaux, botanist, 1046.
De Grasse, French admiral, 1037–38.
De Guignes, French orientalist, 1030.
De Guignes the younger, French orientalist, 1059.
Deimachus, Greek traveller in India, 373.
Deioces, founder of the Median empire, 218, 221.
Deiochus of Proconessus, Greek historian, 244.
De la Barre, Febure, gov. of French Guayana, 963.
De Laet, Joan., Belgian geographer, 948, 950.
Delaiastartus, of Tyre, 191.
De la Loubere, naturalist in Siam, 1004.
De la Pierria, Albert, French colonizer, 893.
De la Roque, Jean-François, Lieut.-general of Canada, 881–82.
De la Vega, Garcilasso, Spanish writer on America, 871, 887, 891–92.
Del Barco, Martinus, Spanish writer on America, 900.
De Leon, Cieza, 753.
Delessert, Benj., French botanist, 1052.
Delile, A. R., botanist, in Egypt, 1065.
Della Cella, P., 1062.
Delphidius, Roman rhetor, 548.
Demaratus, father of Tarquinius Priscus, 228.
Demetrianus, fourteenth bishop of Antioch, 540.
Demetrius, eleventh bishop of Alexandria, 532, 536.
Demetrius, Greek comic poet, 325.
Demetrius, king of Dalmatia, 681.
Demetrius, Jewish historian, 395.
Demetrius of Adramyttium, Greek grammarian, 456.
Demetrius of Byzantium, Greek historian, 386.
Demetrius of Erythrae, Greek grammarian, 446.
Demetrius of Magnesia, Greek grammarian, 446.
Demetrius of Phalerus, Greek orator and statesman, 340, 348.
Demetrius of Scepsis, Greek grammarian, 396.
Demetrius Poliorcetes, Macedonian general, 345, 348, 368.
Demetrius Soter, Greek king of Syria, 400.
Demetrius II. Nicator, Greek king of Syria, 402–3, 407–8.
Demetrius the Cynic, Greek philosopher, 477.
Demidoff, botanist, 1025.
Demochares, Greek orator, 370.
Demodes, Greek historian, 244.
Democritus, Greek philosopher and traveller, 296.
Democritus, Platonic philosopher, 538.
Demodocus, Greek poet, 175.
Demophilus, Greek historian, 325.
Demophon, king of Athens, 174, 178.
Demosthenes, Greek orator, 323.
Demostratus, Greek rhetor, 529.
Denis, king of Portugal, 774.

Denys, first colonist at Miramichi, 948.
Deodatus, third archbishop of Rome, 598–99.
Deppe, botanist in Mexico, 1065.
Dequen, Jean, Jesuit missionary, 958.
Dercylus, Greek writer, 337.
Dermot, king of Leinster in Ireland, 713.
Dershavin, Gabriel, Russian poet, 1052.
De Sacy, Silvestre, French orientalist, 1052.
Descartes, author of a new system of philosophy, 948.
Descourtilz, botanist in the West Indies, 1062.
Descurain, botanist, 1027.
Desfontaines, R. L., botanist in Barbary, 1050.
Desiderius, thirtieth and last king of the Lombards, 622.
Desfongchamps, Loiseleur, French botanist, 1065.
Desportes, J. B. R. P., botanist in Hayti, 1013, 1030.
De Soto, Spanish traveller in Florida, 877–78, 881.
De Sousa, Jao, see Sousa.
Dessalines, first king of Hayti, 1054.
D'Estaing, French admiral, 1036.
Desvaux, N. A., French botanist, 1052.
Dette-tissa, king of Ceylon, 541–42.
Deucalion, 132.
Devaban, Hindu king, 537.
Devanampriya Tishya, king of Ceylon, 386.
Devanica, Hindu king, 440.
Devasreshtha, Hindu king, 543.
Devayani, wife of the Hindu king Yayati, 99.
De Vico, astronomer, 1061.
Dewa Kasuma, king of Java, 648.
Dexippus, Greek historian, 541.
Dexter, Roman ecclesiastical writer, 560.
Dhafer, Fatimite sultan of Egypt, 707–8.
Dhanvantari, Hindu medical writer, 411, 690–91.
Dhatusena, or Dasen Kelliya, king of Ceylon, 568.
Dhruvasena, or Dhruvabatta, Hindu king of Guzerat, 601.
Dhou-Chenatir, tobba of Yemen, 570.
Dhou-Nowas, last tobba of Yemen, 570, 573–74.
Dhou-Sadad, Cahtan ruler of Yemen, 407.
Dhoyin, Sanscrit poet, 711.
Diagoras of Melos, Greek philosopher, 268.
Dias, Vicente, Portuguese navigator, 823.
Diaz, Bartholomew, Portuguese navigator, 766, 844.
Diaz de Solis, John, Spanish navigator, 860.
Dicaearchus, Greek physicist and historian, 2, 347.
Dicaeogenes, Greek tragic poet, 299.
Dickson, J., cryptogamic botanist, 1052.
Dicuil, Irish geographer, 624.
Didius Julianus, Roman emperor by purchase, 533.
Dido, or Elissa, founder of Carthage, 196.
Didymus, Greek grammarian, 456.
Didymus of Alexandria, early Christian writer, 547.
Diego d'Azambuxa, governor of Mina, 842.
Dièreville, botanist in Nova Scotia, 994.
Dieuches, Greek medical writer, 325, 345.
Digby, Kenelm, English botanist, 948.
Dillenius, J. Jac., botanist, 1010, 1017.
Dillwyn, L. W., cryptogamic botanist, 1052.
Dinarchus, Greek orator, 325.
Dinis Dias, Portuguese navigator, 819.
Dinocrates, Greek mathematician, 325.
Dinolochus, Greek comic poet, 255.
Dinon, Greek historian, 322.
Diocles, Greek comic poet, 299.
Diocles of Carystus, Greek medical writer, 337.
Diocletianus, Roman emperor, 543, 545.
Diodorus, bishop of Tarsus, 554.
Diodorus, Valerius, Greek philosopher, 526.
Diodorus of Erythrae, Greek poet, 213.
Diodorus Siculus, Greek historian, 448.
Diodorus of Sinope, Greek comic poet, 312.
Diodorus of Tyre, Greek philosopher, 400.
Diogenes, Greek tragic poet, 299.
Diogenes of Apollonia, Greek philosopher, 268.
Diogenes of Babylon, Greek philosopher, 401.
Diogenes of Phœnicia, Greek philosopher, 576.
Diogenes the Cynic, Greek philosopher, 312.
Diomedes, son of Tydeus, 167.
Dion, king of Syracuse, 319.
Dion Cassius, Greek historian, 533.
Dion Chrysostomus, Greek rhetor, 517.
Dionysides, Greek tragic poet, 370.
Dionysius, bishop of Corinth, 529.
Dionysius, first bishop of Paris, 539.
Dionysius, Greek botanist, 432.
Dionysius, Greek musician, 519.
Dionysius, Greek traveller in India, 378.
Dionysius, king of Syracuse, 296, 303, 312.
Dionysius II, king of Syracuse, 312, 319–21.
Dionysius, thirteenth bishop of Alexandria, 538, 540.
Dionysius, twenty-third bishop of Rome, 539–41.
Dionysius Carthusianus of Belgium, scholastic theologian, 831.
Dionysius Exiguus, ecclesiastical writer, 574.
Dionysius Iambus, Greek poet, 382.
Dionysius of Alexandria, Greek astronomer, 375.
Dionysius of Colophon, Greek painter, 281.
Dionysius of Halicarnassus, Greek historian, 456.
Dionysius of Heraclea, Greek philosopher, 370.
Dionysius of Magnesia, Greek rhetor, 434.
Dionysius of Miletus, Greek historian, 255.
Dionysius of Miletus, Greek rhetor, 519.
Dionysius of Pergamus, Greek rhetor, 456.
Dionysius of Sinope, Greek comic poet, 325.
Dionysius of Telmahre, author of a Syrian chronicle, 624.
Dionysius Periegetes, Greek geographer, 529.
Dionysius Scytobrachion, Greek historian, 407.
Dionysius Thrax, Greek grammarian, 434.
Diophanes, Greek rhetor, 537.
Diophantes, Greek rhetor, 547.
Dioscorides, Greek poet, 389.
Dioscorides of Anazarba, Greek botanist, 483, 885.
Dioscorides Phacas, Greek medical writer, 446.
Dioscorides the younger, Greek editor, 519.
Diotimus, Greek orator, 323.
Diotimus the Stoic, Greek philosopher, 433.
Diotisalvi, 708.
Diotrephes, early Christian, 517.
Diphilus of Siphnus, Greek medical writer, 375.
Dipticetu, Hindu king, 186.
Diptiman, Hindu king, 146.
Diyllus, Greek historian, 370.
Dizaboul, or Ti-theou-pou-li, khan of the Turks, 586.
Djakmak, see Jakmak.
Djauhar Kaïd, see Jauhar.
Djemaleddin Yusuf, see Jemaleddin.
Djenghiz-Khan, see Jenghiz-Khan.
Djewhari, Arab writer, 600.
Dmitrief, Ivan, Russian poet, 1052.
Dobrovsky, Joseph, Slavonian scholar, 1052.

Dodart, Dionys., French botanist, 973.
Dodechinus, chronographer, 718.
Dodoens, or Dodonæus, R., botanist, 897, 905.
Dodwell, Henry, chronographer and critic, 997.
Dolabella, L. Cornelius, Roman general, 434.
Dombey, Jos., botanist in Peru, 1037.
Domenichino, Italian painter, 948.
Dominicus a Soto, last scholastic theologian, 858.
Domitianus, L. D., claimant of the Roman empire, 542.
Domitianus, Roman emperor, 516.
Domitilla, Flavia, of Rome, early Christian, 518.
Domitius Afer, Roman orator, 477
Domnus, or Donus, thirteenth Roman archbishop, 611.
Domnus II., seventieth Roman archbishop, 656.
Domnus, sixteenth bishop of Antioch, 542.
Don, David, English botanist, 1064.
Don, George, English botanist, 1066.
Don John of Austria, admiral, 900.
Donati, Anton., Italian botanist, 921.
Donati, Vitalian, botanist in Egypt, 1026.
Donatus, founder of the Christian sect of Donatists, 546.
Donatus, Roman rhetor, 548.
Donchio, Corean priest, 591.
Dondis, Jacobus de, Italian botanist, 789.
Dondis, Joannes de, Italian botanist, 796.
Donn, James, English botanist, 1049.
Doria, Andreas, Genoese naval officer, 863–64.
Doryssus, fifth Agid king of Sparta, 195.
Douglas, David, botanist in Northwest America and the Hawaiian Islands, 1066.
Douglas, Gawin, poet, 858.
Dousa, Janus, first rector of the Leyden university, 901.
Dracon, lawgiver at Athens, 228.
Drake, founder of the petroleum traffic, 1070.
Drake, Francis, English navigator, 900, 902–3, 909, 913.
Draparnaud, J. P. R., French botanist, 1052.
Drège, botanist in Austral Africa, 1067.
Drogo, son of Charlemagne, 630.
Dromo, Greek comic poet, 312.
Druhya, Hindu prince, 99.
Drusus, Nero Claudius, Roman general, 463.
Dryander, Jon., English botanist, 1052.
Dryden, John, English poet, 965.
Dsito, empress or dairo of Japan, 613.
Dubourg, B., French botanist, 1027.
Du Cange of Amiens, lexicographer, 965.
Ducas nepos, Michael, scholastic Greek writer, 814.
Duchicala, twelfth scyri of Quito, 765, 791.
Dudley, Joseph, first president of New England, 981.
Dudley, Tho., first deputy-gov. of Massachusetts, 958.
Dufour, Leo, French naturalist, 1052.
Duhamel du Monceau, H. L., French botanist, 1022.
Duilius, C, Roman consul and admiral, 382.
Dun, Anglo-Saxon physician, 633.
Dunal, Mich. Fel., French botanist, 1059.
Dunbar, Scotch poet, 859.
Duncan, king of Scotland, 675–76.
Dundonald, first experimenter on gas-lighting, 1042.
Duns Scotus, Joannes, 765.
Dunstan, bishop of Worcester, 655.
Durandus, Gulielmus, jurist, 752.
Durandus a S. Portiano, scholastic theologian, 765.
Durer, Albert, German engraver, 858.
Duris of Samos, Greek historian, 370.
Duroi, Io. P., botanist, 1031.
D'Urville, French navigator and botanist, 1062, 1064.
Dwattaboung, king in Burmah, 233, 278.
Dwattayan, Burmese king, 370.
Dyer, Mary, Quaker martyr in New England, 960.
Dyke, Captain, American military officer, 1070.
Dyutimah, Hindu king, 191.

Eadbald, king of Kent, 599, 603.
Eadfrith, Anglo-Saxon bishop, 613.
Eannes, Gil, Portuguese navigator, 814.
Eanswith, English abbess, 603.
Eber, 96.
Ebn abi-Osaibia, Arab writer, 724.
Ebn al Djezzar, Arab medical writer, 645.
Ebn al Talmidh, Arab writer, 703.
Ebn Alvam, Arab agricultural writer, 711.
Ebn Alwardi, Arab geographer, 750.
Ebn-Arabschah, historian, 758.
Ebn Ayyas, Arab writer, 858.
Ebn Baitar, Arab botanist, 612, 723–24.
Ebn Batrik, Arab medical writer, 645.
Ebn Batuta, Arab traveller, 688, 779, 782, 786, 789.
Ebn Damreh, Arab poet, 576.
Ebn El-Abras, Arab poet, 576.
Ebn El-Ala, Arab grammarian, 619.
Ebn Guefith, see Ebn Wafid.
Ebn Haukal, Arab geographer, 657.
Ebn Jezla, Arab medical writer, 680.
Ebn Joljol, Arab writer, 659.
Ebn Jounis of Cairo, Arab astronomer, 664.
Ebn Kamee-ah, Arab poet, 576.
Ebn Kemunat, Saad ben Manssur, Arab writer, 752.
Ebn Khaldun, Arab writer, 782.
Ebn Khallikan, Arab biographer, 752.
Ebn Khordadbah, Arab geographer, 643.
Ebn Kotaiba, Arab writer, 639.
Ebn Kureya, Arab poet, 576.
Ebn Masawia, Arab medical writer, 631, 669.
Ebn Muhalhil, see Musir ben Muhalhil.
Ebn Said, Arab medical writer, 650.
Ebn Samhun, Arab writer, 655.
Ebn Seiyar, El-Khurasanee, Arab grammarian, 621.
Ebn Shoné, Arab historian, 831.
Ebn Shumeyl, Arab grammarian, 624.
Ebn Ssaid of Spain, astronomer, 680.
Ebn Wafid, or Aben Guefit, Arab medical writer, 612, 675.
Ebn Wahab, Arab voyager, 629–30, 640.
Ebn Wahshiyyeh, Arab translator of Nabathean, 645.
Echemus, Arcadian chief, 166.
Echestratus, third Agid king of Sparta, 192.
Ecphantides, Greek comic poet, 268.
Edelinck, Gerard, Flemish engraver, 997.
Edgar, Anglo-Saxon king of England, 655–56.
Edmund, Anglo-Saxon king of England, 651–52.
Edmund II. Ironsides, Anglo-Saxon king of England, 667.
Edoranchus, king of Babylon, 80.
Edred, Anglo-Saxon king of England, 652–53.
Edrisi, Arab geographer, 612, 708.
Edward, Anglo-Saxon king of England, 645, 649.
Edward II, Anglo-Saxon king of England, 656, 658, 676.
Edward III. Confessor, nineteenth king of England, 676, 679.

Edward, king of Portugal, 814.
Edward, twenty-ninth king of England, 755, 760, 762, 764.
Edward II., thirtieth king of England, 774, 779.
Edward III., thirty-first king of England, 779, 787, 791, 795.
Edward IV., thirty-sixth king of England, 829.
Edward VI., fortieth king of England, 888.
Edward, the Black prince, 789.
Edwy, or Edwyn, Anglo-Saxon king of England, 653, 655.
Egbert, first king of England, 628–29.
Egede, Hans, resident in Greenland, 1010.
Eginhardus, historian, 623.
Eglon, king of Moab, 153.
Ehrhart, Fred., German botanist, 1042.
Ekbertus Trevérensis, reforming abbot, 703.
Ekeberg, C. G., voyager to China, 1027.
Elagabalus, Roman emperor, 535–36.
Elah, king of Israel, 192.
El Akbar, Arab poet, 576.
El-Amin, sixth Abbassid khalif, 626.
El-Amr, Fatimite sultan of Egypt, 684, 690.
El-Atthar, Abul Menni ben Abi Nassar ben Hafidh, Jewish pharmacologist, 723.
El-Azdee, Arab poet, 571.
Eldad Hadani, Jewish traveller, 645.
El-Demiri of Cairo, Arab zoölogist, 791.
Eleazar, Jewish high-priest, 149.
Electra, mother of Dardanus, 136.
Electryon, king of Argos, 163.
Elesbas, or Caleb, king of the Ethiopians or Abyssinians, 573–74.
Eleutherus, twelfth bishop of Rome, 530–31.
El-Farra, Arab grammarian, 624.
El-Hadi, fourth Abbassid khalif, 623.
El-Hafez, Fatimite sultan of Egypt, 690, 707.
Elhafits, A. A., Arab writer, 703.
El-Herka, Abyssinian king, 539, 542.
Eli, Jewish high-priest, 170.
Elia Bashiatshi, Jewish writer, 831.
Elia Levita, Jewish grammarian, 872.
Eligius of Noyon, theologian, 601.
Elihu, 236.
Elijah, Jewish prophet, 178, 194.
Eliot, John, missionary in New England, 956, 960, 963.
Eliphaz, son of Esau, 119.
Elisaeus, Armenian historian, 566.
Elishama, 136.
Elizabeth, queen of England, 889, 892, 901, 908, 923.
Elizabeth of Germany, theologian, 703.
Elkanah, son of Korah, 146.
El-Khaleel, Arab grammarian, 621.
El-Kindi, Arab medical writer, 624.
El-Kirkissani el Bassir, Joseph ben Jacob, Karaite Jewish writer, 645.
El-Kisa-ee, Arab grammarian, 621.
Elliot, Stephen, N. American botanist, 1058, 1061.
Ellis, John, English naturalist, 1025, 1030.
Ellowena, king of Ceylon, 520.
El-Mahadi, third Abbassid khalif, 622–23.
El-Mamun, seventh Abbassid khalif, 626, 628–29.
El-Mansur, second Abbassid khalif, 620–22.
El-Muhelhil, Arab poet, 576.
Elnabati, see Abu'l Abbas Nebati.
Elphinstone, Mountstuart, historian in Hindustan, 676.
El-Schebi, Arab zoölogist, 799.
Elsholtz, Io. Siegm., German botanist, 963.
Eltamini, see Temini.
El-Yezeedee, Arab grammarian, 624.
El-Zaharawi, see Abulkasem el Zahrawi.
Emadeddin, Memluk sultan of Egypt, 786.
Emmanuel, or Immanuel, of Rome, Hebrew poet, 782.
Emanuel ben Jacob, Jewish astronomer, 782.
Emanuel Comnena, fifty-third Byzantine emperor, 704, 712, 715.
Empedocles, philosopher and inventor of rhetoric, 269.
Encke, astronomer, 1061.
Endicott, John, first gov. of Massachusetts, 943, 958.
Engelmann, botanist in North America, 1068.
Ennius, Roman poet, 388, 397.
Ennodius, ecclesiastical writer, 571.
Enoch, 64, 65.
Enoch, son of Cain, 3.
Enos, 3.
Enslen, Aloysius, botanist in N. America, 1056.
Eormenburh, princess and abbess, 610.
Eormenred, king of Kent, 610.
Epaminondas, Boeotian general, 312, 318.
Ephialtes of Athens, Greek orator, 323.
Ephippus, Greek historian, 325.
Ephraem of Edessa, Syriac Christian writer, 547.
Ephraemius, scholastic Greek writer, 752.
Ephraim, son of Joseph, 121.
Ephraimius of Antioch, ecclesiastical writer, 576.
Epicharmus, Greek poet, 261.
Epicrates, Greek comic poet, 312.
Epictetus, Greek philosopher, 519.
Epicurus, Greek philosopher, and founder of a new sect, 377.
Epigenes, Greek comic poet, 312.
Epilycus, Greek poet, 268.
Epilycus, Greek comic poet, 298.
Epimetheus, brother of Prometheus, 127.
Epinicus, Greek comic poet, 389.
Epiphanius of Constantinople, ecclesiast. writer, 571.
Epiphanius of Cyprus, ecclesiastical writer, 554, 561.
Epiphanius of Petra, Greek rhetor, 547.
Epopeus, fourteenth king of Sicyon, 152.
Eraric, seventh Gothic king of Italy, 580.
Erasistratus, Greek medical writer, 372.
Erasmus of Rotterdam, 858.
Eratosthenes, Greek geographer and chronographer, 389, 396.
Erdeni-baksi, Chin. instructor of the Mandchous, 920.
Erechtheus, sixth king of Athens, 152–53, 159.
Ergamenes, Nubian or Ethiopian king, 376.
Erginus, king of Orchomenus, 160, 164.
Eric, bishop in Greenland, 687.
Eric, king of Denmark, 747.
Erichthonius, father of Tros, 146.
Erichthonius, fourth king of Athens, 139, 150.
Ericsson, John, inventor and engineer, 1071.
Erikus Rufus, Scandinavian navigator, 660, 662.
Erinna, Greek poetess, 231.
Erinna the younger, Greek poetess, 312.
Eriphus, Greek comic poet, 312.
Ermeias, Greek philosopher, 576.
Erndtel, C. H., botanist, 997.
Erysichthon, founder of the temple at Delphi, 118.
Eryxias, Athenian archon, 220.

Esaias, theologian, 601.
Esarhaddon, king of Assyria, 218–19, 222.
Esau, 112, 115.
Esch-Sheybanee, Arab grammarian, 624.
Esper, E. J. C., cryptogamic botanist, 1052.
Esteve de Bezier, last of the Troubadours, 753.
Esther, Jewish wife of a Persian emperor, 255.
Esthori, Parchi, Jewish writer, 765.
Etearchus, king of the Oasis of Ammon, 269.
Eteocles, Cadmean king of Boeotia, 164.
Ethan the Ezrahite, 179.
Ethbaal, or Eithobalus, Phoenician king, 192, 194.
Ethelbald II., Anglo-Saxon king of England, 633–34.
Ethelbert, Anglo-Saxon king of England, 634, 639.
Ethelred, Anglo-Saxon king of England, 639–40.
Ethelred II., Anglo-Saxon king of England, 658, 667.
Ethelwerd, Fabius, Anglo-Saxon chronologer, 656.
Ethelwold, bishop of Winchester, 655.
Ethelwulf, Anglo-Saxon king of England, 629, 633.
Euarestus, fourth bishop of Rome, 518.
Eubulus, Greek comic poet, 306.
Eubulus of Athens, Academic philosopher, 540.
Eucherius, ecclesiastical writer, 565.
Euclides, Athenian archon, 298.
Eucratides, Greek king of Bactria, 398, 402.
Eucratides II., Greek king of Bactria, 402.
Euctemon, Greek astronomer, 281.
Eudemus, Greek king of Bactria, 340.
Eudemus, Greek writer, 325.
Eudemus of Paros, Greek historian, 244.
Eudoxia, wife of Valentinian III., 568.
Eudoxus of Cnidus, Greek astronomer, 312.
Eudoxus of Cyzicus, Greek navigator, 424.
Euechous, king of Babylon, 83.
Euetes, Greek comic poet, 255.
Eugamon of Cyrene, Greek poet, 237.
Eugenius, claimant of the Roman empire, 558.
Eugenius of Bulgaria, modern Greek writer, 1052.
Eugenius of Carthage, ecclesiastical writer, 570.
Eugenius, tenth Roman archbishop, 605, 607.
Eugenius II., thirty-fifth Roman archbishop, 627–28.
Eugenius III., eleventh pope, 705, 708.
Eugenius IV., fifty-third pope, 813, 815, 821.
Eugeon of Samos, Greek historian, 244.
Eugesippus, Greek writer, 675.
Euhemerus, Greek writer, 325.
Eulamius, Greek philosopher, 576.
Eulh-chi-hoang-ti, of the Thsin, Chinese emperor, 393.
Eulogius, bishop of Caesarea, 561.
Eulogius of Alexandria, ecclesiastical writer, 586.
Eulogius of Toledo, theologian, 629.
Eumachus of Corcyra, Greek historian, 417.
Eumelus, Greek poet, 210.
Eumenius, Roman panegyrist, 544.
Eumolpus, 153.
Eunapius, Greek historian, 560.
Eneus, Aeolian chief, 162.
Eunicus, Greek comic poet, 299.
Eunomius, heretical Christian writer, 552.
Euphantus of Olynthus, Greek writer, 382.
Euphemius, bishop of Constantinople, 570, 572.
Euphorion of Chalcis, Greek grammarian, 382.
Euphranor, Greek painter, 312.
Euphrasius, ecclesiastical writer, 571.
Euphrates, bishop of Cologne, 549.
Euphrates, Greek philosopher, 498.
Euphron, Greek comic poet, 325.
Eupolemus, Greek architect, 285.
Eupolis, Greek comic poet, 282.
Eupompus, Greek painter, 299.
Euric, king of the Goths, 568–69.
Euripides, Greek tragic poet, 278, 296.
Euripides the younger, Greek tragic poet, 299.
Europa, mother of Minos, 147.
Europs, second king of Sicyon, 113.
Eurylochus, leader of the Amphictyons, 234.
Euryphon, Greek medical writer, 288.
Eurypon, or Eurytion, third Proclid king of Sparta, 192.
Eurysthenes and Procles, kings of Sparta, 186, 191.
Eurystheus, king of Argos, 165.
Eusebius, Arian bishop of Emisa, 547.
Eusebius, bishop of Laodicea, 543.
Eusebius, twenty-ninth bishop of Rome, 544.
Eusebius of Caesarea, Greek chronographer, 547–48.
Eusebius Vercellensis, ecclesiastical writer, 550.
Eustathius, Greek chronographer, 568.
Eustathius of Antioch, early Christian writer, 544.
Eustathius of Thessalonica, 711.
Eusthenius, Claudius, Roman panegyrist, 544.
Eustochius, Greek historian, 547.
Euthalius, Greek ecclesiastical writer, 565.
Euthydemus, third Greek king of Bactria, 391, 396.
Euthymius Zigabenus, scholastic Greek writer, 684.
Eutropius, Roman historian, 547.
Eutyches, founder of the Eutychian sect, 566.
Eutychianus, twenty-fifth bishop of Rome, 542, 543.
Eutychius of Amasia, ecclesiastical writer, 576.
Euxenidas, Greek painter, 312.
Euxenides, Greek comic poet, 255.
Euzous, bishop of Caesarea in Palestine, 552.
Evagoras, king of Cyprus, 302–3, 306, 311.
Evagrius, ecclesiastical historian, 586.
Evagrius of Antioch, ecclesiastical writer, 560.
Evander, Greek philosopher, 389.
Evander, leader of a Greek colony, 157.
Evanthius, Roman grammarian, 547.
Evenor, Greek painter, 281.
Eversmann, Russian naturalist at Boukhara, 1062.
Evil-merodach, or Ilvarodamus, king of Babylon, 239.
Evrard of Nevers, theologian, 718.
Evremond of Normandy, humorist and critic, 965.
Exmouth, English admiral, 1060.
Exsuperius, Roman rhetor, 547.
Eyre, traveller, 933.
Ezekiel, Jewish prophet, 236.
Ezra, Abraham ebn, 703.
Ezra, Moses ebn, Jewish writer of Arabic, 703.
Ezra the scribe, 268.

Fa, of the Hia, Chinese emperor, 96.
Fabianus, eighteenth bishop of Rome, 537–39.
Fabius, thirteenth bishop of Antioch, 539.
Fabius Maximus, Q., Roman general, 339, 346.
Fabius Pictor, Roman historian, 392.
Fabregou, M., French botanist, 1013.
Fabricius, Io., botanist, 892.
Fabricius, J. Albertus, classical scholar, 997.
Fabricius, John, astronomer, 928.
Fabricius, Phil. Conr., botanist, 1023.
Facilidas, Abyssinian king, 947.
Facundus, ecclesiastical writer, 576.

Fagius, Paul, of Germany, translator of Hebrew, 885.
Fagon, Guid. Crescent., French botanist, 997.
Fa-Hian, Chinese traveller in Hindustan, 560.
Fai-tai, dairo of Japan, 621.
Falk, I. P., botanist in East Siberia, 1031–33.
Fallopius, Gabriel, 872.
Faneuil, Peter, of Boston, builder and donor of Faneuil Hall, 1017.
Fannasono, dairo of Japan, 767, 774.
Fannius, C., Roman historian, 400.
Fan-sio, nineteenth dairo of Japan, 561–62.
Faraday, scientific experimenter and discoverer, 1066.
Faradj, Memluk sultan of Egypt, 798, 802.
Faresi, Arab grammarian, 650.
Farokhzad, sultan of Ghazni, 677–78.
Faunus, king of the Aborigines in Italy, 157.
Faust, John, early European printer, 815.
Faustinus, bishop of Iconium, 553.
Favorinus, philosopher, 519.
Faye, astronomer, 1061.
Fayez, Fatimite sultan of Egypt, 708–9.
Faymiyoun, Syrian missionary in Yemen, 571.
Fei-dsio, fifty-first dairo of Japan, 625–26.
Felix, Arian bishop of Rome, 550.
Felix, fifty-second bishop of Rome, 574, 576.
Felix, forty-sixth bishop of Rome, 569–70.
Felix, opposition pope, 815, 821.
Felix, procurator of Judea, 482.
Felix, twenty-fourth bishop of Rome, 541.
Fénélon, author of Maximes des Saints, 997.
Fenestella, Roman historian, 467.
Ferdinand, first king of Castile in Spain, 675.
Ferdinand, king of Hungary, 877.
Ferdinand, king of Spain, 850.
Ferdinand VII., king of Spain, 1060.
Ferdinand, thirty-first emperor of Germany and Italy, 891–92.
Ferdinand II, thirty-fourth emperor of Germany and Italy, 935–36, 939–40, 943.
Ferdusi, Persian poet, 664.
Fereira, Peter, 860.
Fergus, king of Scotland, 560.
Fermin, Phil., botanist at Surinam, 1027.
Fernandes, Alvaro, Portuguese navigator, 819–20.
Fernandes, João, traveller in the Western Sahara, 819.
Fernandez, Duarte, 861.
Ferrari, Io. Bapt., Italian botanist, 948.
Ferrer, Don Jayme, Catalan navigator, 787.
Ferrerius Vincentius, theologian, 799.
Festus, Porcius, Roman procurator in Judea, 482.
Festus, Sext. Pompeius, Roman lexicographer, 547.
Festus Rufus, Roman historian, 547.
Feuillée, botanist, 1002.
Fide-jori, cubo and emperor of Japan, 919, 934.
Fide-josi, cubo and emperor of Japan, 905, 908, 909, 915–16, 918–19.
Fidelis, traveller in Egypt and Palestine, 621.
Fide-tada, cubo and emperor of Japan, 945, 957.
Field, Darby, first European visitor of the White Mountains, 952.
Fielding, Henry, English romance writer, 1012.
Fihr-Coraysh, progenitor of the Coraysh tribe, 536.
Fikakusa II, or Go-Fikakusa, dairo of Japan, 740, 750.
Filicaia of Florence, Italian poet, 997.
Finan, bishop of the Scots, 605.
Finiguerra, Maso, earliest Italian engraver, 858.
Firens, Petrus, botanist, 948.
Firmicus Maternus, Latin ecclesiastical writer, 549.
Firmilianus, bishop of Caesarea in Cappadocia, 536.
Firoze, Sasanid king of Persia, 568–69.
Firuz, eighth king of the Deccan, 811.
Fischartus, Io., German botanist, 921.
Fischer, F. E. L., German botanist, 1052, 1066.
Fischer, Levinus, German botanist, 948.
Fi-ti, of the Thsi, Chinese emperor, 570.
Flaccus, Publius Avilius, Roman prefect over Egypt, 478.
Flacourt, Stephan, French gov. of Madagascar, 957.
Flaccus, Verrius, Roman archæologist and grammarian, 464.
Flamel, Nicholas, alchemist, 791.
Flamstead, John, English astronomer, 989, 997, 1037.
Flavianus, bishop of Antioch, 554.
Flavianus, bishop of Constantinople, 552, 566.
Flavianus the younger of Antioch, eccles. writer, 571.
Flavius Blondus, historian, 814.
Fletcher, British colonial governor, 990.
Floerke, H. Gust., German botanist, 1056.
Florentinus, Roman jurist, 536.
Florianus, thirty-seventh Roman emperor, 542.
Fontaine, Jean de la, French poet, 965.
Fontenelle, Bernard de, 1012.
Forbisher, Martin, British navigator, 901.
Foricawa, dairo of Japan, 682, 684.
Foricawa II., dairo of Japan, 721, 723.
Formosus, forty-seventh Roman archbishop, 644–45.
Forrest, Thomas, voyager to New Guinea, 1037.
Forskal, Petrus, Danish botanist in Egypt and Arabia, 1024–26.
Forster, George, accomp. his father on Cook's second voyage, 1034.
Forster, Io. Rein., voyager and botanist, 1031–32, 1034, 1049.
Fortunatianus of Carthage, bishop of Aquileia, 550.
Fotherby, Robert, Arctic voyager, 932.
Fou-chan, preserver of the Chou-king, 399.
Foucquembourg, French commissioner to the East Indies, 953.
Foudo-no Yasou, Japanese historian, 615.
Fou-hi, founder of the Chinese empire, 76.
Fousi-wara-no Naka-fira, 652.
Fousi-wara-no Ye-mi-no, Japanese general, 621.
Fou-y-tchang, Chinese historian, 948.
Fra. Giovanni, called Angelico, Italian painter, 814.
Fracastor, Hieronymus, poet and medical writer, 872.
Fragosus, Ioan., Spanish botanist, 900.
Francis, king of France, 866–67, 869–70, 874–75.
Francis II., forty-third emperor of Germany and Italy, and first Austrian emperor, 1047, 1056.
Franciscus Pedemontium, 773.
Franco, Joan., German botanist, 936.
Franco, mathematician, 675.
Frankenius, Johannes, Swedish botanist, 951.
Franklin, Benjamin, American physicist, 1021–22, 1036, 1039.
Fraser, John, English botanist, 1039, 1052, 1059.
Freculphus of Lisieux, theologian, 629.
Fredegaire, French historian, 619.
Frederic, elector of Saxony, 863–65.
Frederic, first king of Prussia, 994.
Frederic II. the Great, king of Prussia, 1017, 1042.
Frederic V., king of Denmark, 1012.

Frederic William, king of Prussia, 1017.
Frederic William II., king of Prussia, 1042, 1049.
Frederic William III., king of Prussia, 1049.
Fredericus Barbarossa, eleventh emperor of Germany and Italy, 708, 710.
Fredericus II., fourteenth emperor of Germany and Italy, 720, 722, 734, 736, 740.
Fredericus III., twenty-seventh emperor of Germany and Italy, 821.
Freycinet, French navigator, 1061.
Frezier, Amad., voyager, 668, 1003.
Friend, John, physician, 997.
Fries, E. Fr., botanist, 1062.
Frodoard, 650.
Froelich, Jo. Aloys., German botanist, 1049.
Froes, Aloysius, Catholic missionary in Japan, 897.
Froissart, Flemish historian, 791.
Frontinus, Julius, Roman governor in Britain, 515.
Frontinus, Roman writer, 498.
Fronto, Cornelius, Roman rhetor, 528.
Frumentius, missionary in Abyssinia, 547–48.
Fuca, Juan de, Greek navigator, 914.
Fuchsius, L., botanist, 882.
Fuiren, Georg, Danish botanist, 943.
Fulbertus, 664.
Fulgentius, Roman ecclesiastical writer, 568.
Fulton, Robert, American engineer, 1057.
Fulvius Nobilior, Roman historian, 396–97.
Funccius, Joannes, chronologist, 888.
Furnius, Roman orator, 446.
Furnival, Richard de, naturalist, 753.
Fusimi, dairo of Japan, 759, 764.
Fusimi II., dairo of Japan, 764–65.
Fuss, Russian astronomer and physicist, 1065.

GABINIANUS, Roman rhetor, 503.
Gabinius, king of the Quadi, 553.
Gabinius, Roman proconsul in Syria, 453.
Gad, Jewish prophet, 179.
Gærtner, German botanist, 1043.
Gaetano, navigator, 882.
Gage, Thomas, British general in N. America, 1034.
Gaiga-dchargoutsi, Chinese instructor of the Mandchous, 920.
Gai-ti, see Ngai-ti.
Gakenholz, Alex. Chr., botanist, 997.
Galava, Hindu king, 130.
Galba, Roman emperor, 498.
Galen, Greek medical writer, 529.
Galeotti, botanist in Mexico, 1067.
Galerius, colleague of the emperor Diocletian, 544.
Galfridus of Lynn, author of Promptorium parvulorum, 718, 816.
Gali, Franciso, Spanish navigator, 905.
Galileo, Italian astronomer, 928–29.
Galland, French orientalist, 997.
Galle, astronomer, 1069.
Gallesio, G., botanist, 1052.
Gallienus, Roman emperor, 540–41.
Gallio, Junius, Roman rhetor, 467.
Gallus, Aelius, Roman prefect over Egypt, 461, 464.
Gallus, Asinius, Roman orator, 467.
Gallus, Cestius, Roman general, 498.
Gallus, Cornelius, Roman poet and prefect over Egypt, 457, 461.
Gallus, Sulpicius, earliest Roman astronomer, 399.
Gallus, Trebonianus, thirtieth Roman emperor, 539.
Gallus Caesar, Roman viceroy, 549.
Galvani of Bologna, discoverer of galvanic electricity, 1046.
Galvano, Antonio, governor of Ternate, 876.
Galvez, Spanish governor of Louisiana, 1037.
Gama, Vasco de, Portuguese navigator, 856–57, 859, 866.
Gambhira, Hindu king, 626.
Gangeswar, king of Orissa, 708.
Garces, Henrique, 897.
Garcia III., king of Spain, 664.
Garcias, botanist in the East Indies, 888.
Gardar, Scandinavian navigator, 638.
Garden, botanist in Carolina, 1024.
Garga, Hindu astronomer, 175.
Garidel, Joseph, French botanist, 1004.
Gariopontus, medical writer, 862.
Gassendi, Peter, French astronomer, 940.
Gaston Phoebus, naturalist, 791.
Gates, Thomas, second governor of Virginia, 928, 930, 933.
Gathlas, Armenian chief, 87.
Gatianus, first bishop of Tours, 539.
Gaubil, Catholic missionary in China, 1030.
Gaudama, see Buddha.
Gaudapada, commentator on the Vedas, 647, 651.
Gaudichaud, Charles, botanist in Freycinet's Voyage, 1061, 1064.
Gaudin, J. F. G. Philip, Swiss botanist, 1058.
Gay, C. L., botanist in Chili, 1069.
Gay, Jacques, French botanist, 1069.
Gayabahoo, king of Ceylon, 521, 527.
Gaza, Theodorus, translator of Greek, 841.
Gazali, or Ghazali, Arab writer, 684.
Geber, Arab astronomer and alchemist, 646.
Gelanor, king of Argos, 137.
Gelasius, bishop of Caesarea in Palestine, 554.
Gelasius, forty-seventh bishop of Rome, 570.
Gelasius of Cyzicus, ecclesiastical writer, 568.
Gelasius II., fifth pope, 687.
Gelimer, last king of the Vandals in Africa, 576.
Gelon, Greek king of Syracuse, 261, 266.
Geminianus, early Christian writer, 536.
Geminus, C. Fufius, or Rufius, Roman consul, 476.
Geminus, Greek astronomer, 433.
Geminus, L. Rubellius, Roman consul, 476.
Gemistus, Georgius, a scholastic Greek writer, 814.
Genebrardus, Gilbertus, chronographer, 897.
Genesius, J., restorer of learning in Spain, 897.
Gennadius, bishop of Constantinople, 568.
Gennadius, Roman orator, 547.
Gennadius of Massilia, ecclesiastical writer, 570.
Genonei, empress, or dairo, of Japan, 614, 616.
Genseric, king of the Vandals, 566–67, 569.
Gensioo, empress, or dairo, of Japan, 616, 618.
Gentius, king of the Illyrians, 399.
Geoffrey of Monmouth, translator of Welsh, 703.
Geoffroy, Claud. Joseph, French botanist, 1012.
Geoffroy, Steph. Franc., French botanist, 997.
Geoffry, bishop of Rouen, 687.
George, British king, 1004, 1007.
George II., British king, 1007, 1023.
George III., British king, 1023, 1058.

Georgi, Io. Theoph., botanist in East Siberia, 1031–33.
Georgilas, Emmanuel, modern Greek versifier, 831.
Georgius, Arian bishop of Alexandria, 550–51.
Georgius monachus, Greek writer, 650.
Georgius Phrantzes, 831.
Georgius Protosincellus, Greek writer, 831.
Georgius Trapezuntinus, translator of Greek, 831.
Gerard, L., French botanist, 1024–25.
Gerarde, John, English botanist, 918, 947.
Gerardus Cremonensis, orientalist, 680.
Gerber, Traug., Russian botanist, 1012.
Gerbert, see Sylvester II.
Gerbillon, P., Jesuit missionary in China, 989.
Gerhardus, 740.
Germanicus Caesar, son of Drusus, 470, 475.
Germanus Antisiodorensis, legate from the bishop of Rome, 565.
Germanus, Greek patriarch, 618.
Germanus of Constantinople, scholastic Greek writer, 723.
Gerson ben Solomon, Jewish cosmographer, 752.
Gerson, Joannes, of Paris, scholastic theologian, 799.
Gervase of Canterbury, historian, 718.
Gesenius, orientalist, 650.
Gesner, Io, botanist, 882, 884, 887–88, 891–92, 894, 897, 1021, 1025, 1027.
Geta, brother of the emperor Caracalla, 534–35.
Ghatacarpura, Sanscrit writer, 681.
Ghazali, see Gazali.
Gheias-u-din Ghori, sult. of Ghor and Ghazni, 709, 718.
Ghen-so, twenty-fourth dairo of Japan, 569.
Ghiesbreght, botanist in Mexico, 1067.
Ghi-fon, king of the Loo-Choo Islands, 741.
Ghota-abaya, or Maga-warna-Abaya, king of Ceylon, 539, 541.
Gideon, or Jerubbaal, Jewish warrior, 157.
Giganof, author of a Tartar dictionary, 1052.
Gilbert, Humph., leader of an English colony, 905, 936.
Gilbert, Raleigh, leader of an English colony, 926–27.
Gilbert of Poitiers, theologian, 705.
Gildas, earliest British historian, 585.
Gildo, claimant of the Roman empire, 559.
Gilead, 127.
Gillam, British navigator, 965.
Ginnani, Jos., botanist, 1013.
Giorgione, Italian painter, 858.
Giotto, Italian painter, 765.
Giraldi of Ferrara, critic, 872.
Gisco, Carthaginian prince, 265.
Giseke, P. D., botanist, 1027.
Giselbertus, theologian, 650.
Giyoki, Buddhist priest in Japan, 618.
Glaber, Radulphus, historian and theologian, 675.
Glanville, Bartholomew, English botanist, 782.
Glanville, Ranulph de, jurist, 715.
Glaucias, early Christian Greek writer, 498.
Glaucias, Greek medical writer, 392.
Glaucus of Chios, Greek artisan, 220.
Gleditsh, Io. Th., botanist, 1013, 1025.
Glück of Livonia, translator into Lettonian and Russian, 997.
Gluzonius, Emmanuel, modern Greek writer, 897.
Glycas, Michael, scholastic Greek writer, 684.
Glycerius, Roman emperor over the West, 568–69.
Glycon, Greek medical writer, 455.
Gmelin, Io. Frid., botanist, 1025, 1033, 1043.
Gmelin, Io. George, botanist in Siberia, 1013, 1018.
Gmelin jun., voyager on the Caspian, 1033.
Gmelin, Sam. Theoph., voyager on the Caspian, 1028.
Gnipho, Antonius, Roman rhetor, 446.
Gobind Bidyadhar, king of Orissa, 872.
Goddam, Adamus, scholastic theologian, 782.
Godescalcus, author of the doctrine of predestination, 631.
Godfrey of Bouillon, leader of Crusaders, 683.
Godfridus Vindocinensis, theologian, 684.
Goffe, English regicide, 960.
Gofunnazo, dairo of Japan, 812, 818, 830.
Go-Horikawa, see Forikawa II.
Go-jo-sei, dairo of Japan, 913.
Gokomatz, dairo of Japan, 796, 802.
Gollownin, Russian voyager to Japan, 1059.
Gomara, Lopez de, 888.
Gomez, botanist in Brazil, 1059.
Gomez, Esteuan, Spanish navigator, 867.
Gomez, Fernam, 831, 833.
Gonara, dairo of Japan, 868, 892.
Gonarda III., king of Cashmere, 193.
Gonsalo Vello, Portuguese navigator, 813, 822.
Gonsalves, Antam, Portuguese navigator, 816–17, 819.
Goodenough, S., cryptogamic botanist, 1047.
Gookin, Daniel, ethnologist in N. America, 972.
Gordianus Pius, twenty-seventh Roman emperor, 538.
Gordius, king of Phrygia, 150.
Go-reisei, or Reisei II., dairo of Japan, 676, 680.
Gorgias, Greek orator, 281.
Gorram, Nicolaus de, scholastic theologian, 782.
Gorter, D. de, botanist, 1024–25.
Go-san-dsio, dairo of Japan, 680.
Gosnold, Bartholomew, British navigator, 923.
Go-sijrakawa, dairo of Japan, 709.
Go-siu-saku, dairo of Japan, 675–76.
Gothofridus Viterbiensis, chronographer, 716.
Go-Tsutsi-Mikaddo, dairo of Japan, 830.
Gotto-mio, dairo of Japan, 953, 959.
Gouan, Ant., French botanist, 1024–25, 1033.
Gouda, dairo of Japan, 755, 759.
Gourgues, Dominique de, Fr. colonizer in Florida, 898.
Govardhana, Sanscrit poet, 711.
Govindanat'ha, commentator on the Vedas, 651, 655.
Gower, English poet, 798.
Graah, Danish navigator, 862.
Grævius of Saxony, critic, 997.
Graham, John, botanist in Hindustan, 1068.
Grais, leader of a Greek colony, 191.
Grant, U. S., American general, 1071.
Gratian of Tuscany, scholastic theologian, 708.
Gratianus, forty-eighth Roman emperor, 553–54.
Gravé, Du Pont, French navigator, 920.
Gravina of Naples, jurist, 997.
Gray, Asa, N. American botanist, 1069–70.
Green, John, American trader, 1038.
Greene, Benjamin D., American botanist, 1047, 1063.
Greene, Nathaniel, American general, 1037.
Greenvil, Richard, leader of a British colony, 908–9.
Gregentius, bishop of Yemen, 577.
Gregorius, Arian bishop of Alexandria, 548–49.
Gregorius, bishop of Nazianzus, 547.
Gregorius, bishop of Nyssa, 554.
Gregorius, or Theodorus, bishop of Neo-caesarea in Pontus, 537.
Gregorius Ariminensis, scholastic theologian, 782.

Gregorius Boeticus of Spain, early Christian writer, 548.
Gregorius Cyprius, scholastic Greek writer, 752.
Gregorius Degha, bishop of Armenia, 716.
Gregorius Magnus, sixty-second bishop of Rome, 591–92, 597.
Gregorius Palamas, scholastic Greek writer, 782.
Gregorius II., twenty-fourth Roman archb. 616, 619.
Gregorius III., twenty-fifth Roman archbishop, 619.
Gregorius IV., thirty-seventh Roman archb. 628, 630.
Gregorius V., seventy-sixth Roman archb., 663–64.
Gregorius VI., eighty-fourth Roman archb., 676.
Gregorius VII., see Hildebrand.
Gregorius VIII., seventeenth pope, 716.
Gregorius IX., twenty-second pope, 722, 734.
Gregorius X., twenty-eighth pope, 753, 755.
Gregorius XI., forty-fifth pope, 791, 795.
Gregorius XII., forty-ninth pope, 801–2.
Gregorius XIII., seventy-second pope, 905.
Gregorius of Nazianzus the younger, bishop of Constantinople, 554.
Gregorius of Tours, historian and eccles. writer, 589.
Grew, Nehemiah, microscopic observer, 965.
Grigorief, translator of Persian history of the Mongols, 1066.
Grijalva, Fernando de, Spanish navigator, 876.
Grijalva, John de, Spanish navigator, 863.
Grimm, H. Nicol., botanist in the East Indies, 972.
Grimm, Io. F. C., German botanist, 1027.
Grisebach, botanist in Roumelia, 1068.
Grislæus, Gabriel, Portuguese botanist, 960.
Grocyn, William, 847.
Gronovius, James, of Leyden, critic, 997.
Gronovius, J. Frederick, critic, 945.
Gronovius, Joh. Fr., botanist, 1016, 1025.
Grostest, bishop of Lincoln, 723.
Grotius, Hugo, jurist and critic, 948.
Grubb, Mich., Swedish botanist, 1027.
Gruterus of Antwerp, archæologist, 921.
Guadama, see Buddha.
Guatemozin, see Quauhtemotzin.
Guettard, Io. Stephan., zoölogist, 1012, 1025.
Guicciardini of Florence, historian, 872.
Guido Carmelita, scholastic theologian, 782.
Guido Reni, Italian painter, 948.
Guido of Siena, Italian painter, 721.
Guillaume de Normandie, poet and naturalist, 753.
Guilandinus, Melchior, botanist in Egypt, 892.
Guillemeau, French botanist, 1052.
Guitmundus Aversanus, scholastic theologian, 680.
Guldenstadt, Io. Ant., botanist in Caucasus, 1037.
Gulielmus Antisiodorensis, scholastic theologian, 723.
Gulielmus de Baldensel, 752.
Gulielmus Parisiensis, scholastic theologian, 723.
Gunbjorn, Scandinavian navigator, 641, 660.
Gundebald, king of the Burgundians, 571–72.
Gundicar, first king of the Burgundians, 562, 566.
Gunnerus, Io. E., Norwegian botanist, 1027.
Günther, German botanist, 1049.
Gussone, Giovanni, Italian botanist, 1064.
Gustavus II. Adolphus, king of Sweden, 943.
Gutaka, gov. of the Hindu colony on Java, 546, 552.
Gutama, governor of the Hindu colony on Java, 554.
Guthlac, or Gutthlake, first Saxon anchorite, 613.
Guttenberg, John, early European printer, 815.
Gutzlaff, Rev. Charles, missionary, 1067.
Guy de Chauliac, medical writer, 782.
Guyot of Provence, poet, 687.
Guzman, Alonzo Enriquez de, traveller in Peru, 875.
Guzman, Nunho de, traveller in Northw. Mexico, 871.
Gyges, king of Lydia, 217, 222.

Habakkuk, Jewish prophet, 227.
Habkar, joint ruler of Oman, 600.
Hablizl, C. L., botanist in the Tauro-caspian countries, 1044.
Hacquet, Balthasar, German botanist, 1038.
Hadad, king of Edom, 127.
Hadad II., or Hadar, king of Edom, 150.
Hadad, king of Syria, 179.
Hadamarius Fuldensis, theologian, 650.
Hadji Saleh, Memluk sultan of Egypt, 795.
Hadrianus, or Adrian, Roman emperor, 525–27.
Hadrianus, theologian, 601.
Hadrianus, thirty-first Roman archbishop, 622, 624.
Hadrianus II., forty-second Roman archb., 639–40.
Hadrianus III., forty-fifth Roman archbishop, 643.
Hadrianus IV., thirteenth pope, 708–9.
Hadrianus V., thirtieth pope, 755.
Hadrianus VI., sixty-fourth pope, 866.
Haenke, Thaddeus, German botanist, 1046.
Hafiz, Persian poet, 796.
Haggai, Jewish prophet, 251.
Hagisa, king of Babylon, 219.
Haïg, first king of Armenia, 87.
Hajaj-ibn-Yusuf, Muslim general, 612.
Haji Purwa, Javan convert to Mohammedanism, 741.
Hajjaj, governor of Irak, 612.
Hake, Theodore, founder of the London Society, Academy of Arts and Sciences, 956.
Hakem, Fatimite sultan of Egypt, and founder of the sect of Druses, 664–65, 667.
Hakor, or Achoris, king of Egypt, 298, 303.
Halberstadt, Conrad de, naturalist, 753.
Hale, Horatio, American ethnologist, 705, 1068.
Hales, Stephen, chronographer, 1012.
Halevi, Jewish writer, 650.
Halitgarius, Cameracensis, theologian, 624.
Haller, Albertus, botanist, 1016–17, 1020, 1025, 1028.
Haller, Emmanuel, botanist, 1020.
Halley, Edmund, English astronomer, 926, 975, 1012.
Haly Abbas, Arab medical writer, 599, 602, 653.
Hamid Khan Lodi, Muslim ruler of Multan and Laghman, 658.
Hamilcar, Carthaginian prince, 265.
Hamilton, Alexander, first secretary of treasury of the United States, 1043.
Hamilton, Terrick, orientalist, 1052.
Hammond, Dr. Henry, commentator, 948.
Hampden, John, English statesman, 951.
Handell, G. Frederick, 1012.
Hannibal, Carthaginian general, 279.
Hannibal the younger, Carthaginian general, 391, 395.
Hannibalianus, Roman viceroy, 548.
Hanno, Carthaginian prince and navigator, 265, 267.
Han-tsou, early Chinese usurper, 88.
Hapenmat, mother of the Egyptian king Senefru, 68.
Haran, brother of Abraham, 103.
Harb, brought Arabic writing to Mecca, 583.
Hardicanute, king of Denmark and England, 675.
Harding, astronomer, 1052.

Hardouin, sceptic in regard to ancient classic writings, 997.
Hareth, Arab poet, 397.
Harib, Arab writer, 655.
Hariot, Tho., early traveller in N. America, 908, 928.
Harir, king of Cashmere, 677.
Harith-Erraich, first tobba of Yemen, 407.
Harivansa, Sanscrit poet, 702.
Harold, prince of Denmark, 627.
Harold, seventeenth king of England, 675.
Harold II., twentieth king of England, 679.
Harpal, Mahratta chief, 774.
Harsha, king of Cashmere, 686, 688.
Hartmann, Pet. Imman., German botanist, 1020.
Hartmann, Karl Joh., Swedish botanist, 1062.
Hartoghs, Dirck, Dutch navigator, 933.
Hartweg, botanist in Mexico, 1067.
Harun el Rashid, fifth Abassid khalif, 623–24, 626.
Harvard, John, patron of Harvard University at Cambridge, New England, 951.
Harvey, William, discoverer of the circulation of the blood, 936.
Hasan ben Musa, Arab writer on Hindustan, 646.
Hasan Gangu, Bahmani king of the Deccan, 787.
Hasdrubal, Carthaginian general, 394.
Hassan, fifth khalif, 607.
Hassan, Memluk sultan of Egypt, 787, 799.
Hassan Beg, or Uzan Hassan, king of Persia, 822, 833, 842.
Hasselquist, bot. in Palestine and Egypt, 1020, 1025.
Hatafi, Persian poet, 845.
Haterius, Q., Roman rhetor, 467.
Hattiraza, king of Pegu, 823.
Havishman, Hindu king, 234.
Hawkins, Richard, British trader, 915.
Haworth, A. H., English botanist, 1048.
Haymo of Canterbury, theologian, 675.
Hayne, Fr. Gottl., German botanist, 1049.
Hazael, Syrian king, 195.
Heath, Captain, English navigator, 981.
Heath, Robert, attorney-general to King Charles, 947.
Hebenstreit, Io. Ern., botanist at Tripoli, 1012.
Hebert, English Canadian colonist, 943.
Hecale, Greek woman, 165.
Hecataeus, Greek historian and geographer, 254.
Hecataeus of Abdera, Greek historian, 325.
Hecate, wife of Aeetes, king of Colchis, 160.
Hecaton the Stoic, Greek philosopher, 407.
Hedessi, Jehuda ha-Abel, Karaite Jew. writer, 688, 703.
Hedwig, Ioan., cryptogamic botanist, 1027, 1049.
Hegelochus, Greek actor, 292.
Hegemon, Greek orator, 325.
Hegemon, inventor of parody, 291.
Hegesander, Greek writer, 399.
Hegesianax of Alexandria, Greek poet, 389.
Hegesinus, Greek philosopher, 395.
Hegesinus, Greek poet, 213.
Hegesippus, early Christian writer, 526.
Hegesippus, Greek comic poet, 379.
Hegesippus, Greek orator, 312.
Hegumen, Daniel, Russian traveller in Palestine, 684.
Heinzelmann, botanist on the Ural, 1012–13.
Heisterus, Laur., botanist, 1012.
Helena, Flavia Julia, mother of Constantine, 547.
Helena, wife of the emperor Julian, 550.
Heliodorus, Greek rhetor, 534.
Helladius Besantinus, Greek grammarian, 544.
Helladius, Greek grammarian, 555, 564.
Hellanicus, Greek historian, 270.
Hellen, ruler at Phthiotis in Greece, 132.
Hellwing, botanist, 997.
Helvicus, Christopher, chronographer, 921.
Heman, 179.
Hemina, Cassius, Roman historian, 400.
Hencke, astronomer, 1069.
Heniochus, Greek comic poet, 312.
Hennepin, Catholic missionary in N. America, 977.
Henri, king of France, 672.
Henri II., king of France, 887.
Henri III., king of France, 901, 914.
Henri IV., king of France, 914, 919.
Henricus Auceps, king of Germany, 650.
Henricus II. Claudus, emperor of Germany and Italy, 664, 669.
Henricus III. Niger, emperor of Germany and Italy, 675, 678.
Henricus IV., seventh emperor of Germany and Italy, 678, 680–82, 684.
Henricus V., eighth emperor of Germany and Italy, 684, 686–87.
Henricus VI., twelfth emp. Germany and Italy, 716.
Henricus VII., twentieth emp. Germany and Italy, 767.
Henricus a Gandavo, scholastic theologian, 752.
Henricus de Hassia, scholastic theologian, 791.
Henricus of Ghent, scholastic theologian, 752.
Henry, bishop of Garde, 797.
Henry, Greenland bishop, 801.
Henry, prince of Portugal, 803, 813, 816–17, 819, 821, 829.
Henry, twenty-third king of England, 684, 686–87.
Henry II., twenty fifth king of England, 708, 713–14.
Henry III., twenty-eighth king of Eng., 720, 747, 751.
Henry IV., thirty-third king of England, 801.
Henry V., thirty-fourth king of England, 803.
Henry VI., thirty-fifth king of England, 813, 823.
Henry VII., thirty-ninth king of England, 843, 856–57.
Henry VIII., fortieth king of England, 861–62, 865, 869, 872.
Henry of Blois, bishop of Winchester, 703.
Henshaw, Nathan, one of the discoverers of oxygen gas, 959.
Heou-tcheou, nominal Chinese emperor, 536.
Hephaestion, Greek grammarian, 526.
Hepher, 131.
Heraclas, twelfth bishop of Alexandria, 536, 538.
Heracleonas, sixteenth Byzantine emperor, 603.
Heracles, son of Alexander, 346.
Heraclides, Greek comic poet, 312.
Heraclides, Greek rhetor, 529.
Heraclides Creticus, Greek ethnologer and satirist, 388.
Heraclides of Oxyrhinchis, Greek historian, 400.
Heraclides of Pontus, the younger, Greek gramm. 477.
Heraclides of Pontus, Greek writer, 325.
Heraclides Tarentinus, Greek medical writer, 393.
Heraclitus, early Christian writer, 529.
Heraclitus, Greek philosopher, 255.
Heraclitus of Halicarnassus, Greek poet, 382.
Heraclius, fourteenth Byzantine emperor, 597–603.
Herbertus de Jager, botanist, 965.
Hercules, see Samson.
Heredia, Pedro de, 871.
Heresbach, Conrade, 872.

Hermachus, Greek philosopher, 382.
Hermagoras, Greek rhetor, 434.
Hermagoras the younger, Greek rhetor, 456.
Hermann, Paullus, botanist, 970, 982, 991.
Hermannus comes Veringensis, orientalist, 680.
Hermannus Contractus, mathematician and chronographer, 676.
Hermannus de Neuenare, botanist, 870.
Hermas, early Christian writer, 528.
Hermeias of Methymne, Greek historian, 312.
Hermes, or Ermes, see Ramses III.
Hermippus, Greek biographer, 389.
Hermippus, Greek comic poet, 281.
Hermippus of Berytus, Greek grammarian, 519.
Hermocrates, Greek rhetor, 534.
Hermocrates, Syracusan general, 292.
Hermogenes, Greek rhetor, 529.
Hermolaus, Greek grammarian, 576.
Hermolaus Barbarus of Venice, botanist, 846.
Hermon, thirty-ninth bishop of Jerusalem, 544.
Hermotimus, Greek philosopher, 268.
Hernandez, Spanish naturalist in Mexico, 915.
Herod, king of Judæa, 456, 466.
Herod Antipas, tetrarch of Galilee, 466, 478.
Herodes Atticus, Greek rhetor, 528, 531.
Herodianus, Greek historian, 533.
Herodicus, Greek historian, 281.
Herodicus of Babylon, Greek grammarian, 407.
Herodorus of Heraclea, Greek historian, 281.
Herodotus, Greek historian, 274, 277, 736.
Heron of Alexandria, Greek engineer, 390.
Herophilus, Greek anatomist, 346, 389.
Herschel, John F. W., English astronomer, 1066.
Herschel, William, English astronomer, 960, 1037.
Hervæus Natalis, scholastic theologian, 765.
Hescham, tenth Ommiad khalif, 618–19.
Hesiod, Greek poet, 186.
Hesychius, bishop of Jerusalem, 597.
Hesychius of Miletus, Greek historian, 576.
Hetton, bishop and traveller, 624.
Heucherus, Io. H., German botanist, 1012.
Heydenberger, Ortolf de Bavaria, botanist, 814.
Hezekiah, king of Judah, 214, 219.
Hezion of Damascus, 189.
Hezron, grandson of Judah, 123.
Hiao-hiouan-ti, see Siouan-ti.
Hiao-hoaï-ti, of the Tcin, Chinese emperor, 545.
Hiao-hoeï-ti, of the Tcin, Chinese emperor, 544.
Hiao-ping-ti, of the Han, Chinese emperor, 468.
Hiao-tchao-ti, of the Han, Chinese emperor, 442.
Hiao-tsoung, of the Soung, Chinese emperor, 710.
Hiao-wang, of the Tcheou, Chinese emperor, 193.
Hiao-wen-wang, of the Thsin, Chinese emperor, 383.
Hiao-wou-ti, of the Tcin, Chinese emperor, 552.
Hiao-wou-ti II., of the Northern Soung, Chinese emperor, 567.
Hicetas of Syracuse, Greek astronomer, 320.
Hien-kang, prince of Tsin in China, 225.
Hien-ti, of the Han, Chinese emperor, 532.
Hien-tsoung, of the Thang, Chinese emperor, 625.
Hien-tsoung II., of the Ming, Chinese emperor, 830.
Hien-Wang, of the Tcheou, Chinese emp., 312, 318.
Hiero, king of Syracuse, 266.
Hiero II., king of Syracuse, 378.
Hierocles, Greek philosopher, 565.
Hieronymus, or Jerome, eccles. writer, 552, 555, 561.
Hieronymus of Braunsweig, botanist, 843.
Hieronymus of Cardia, Greek historian, 377.
Hieronymus of Rhodes, Greek philosopher, 382.
Higgeson, Francis, clergyman in New England, 945.
Hilarion, early Christian writer, 547.
Hilarius, or Hilarus, forty-fourth bishop of Rome, 568.
Hilarius Pictaviensis, ecclesiastical writer, 550.
Hildebertus Cenomanensis, theologian and poet, 684.
Hildebrand of Tuscany, founder of the papal hierarchy, 680–82.
Hildegarde, abbess, 705.
Hildephonsus, see Ildefonsus.
Hilduinus, abbot of St. Denis, theologian, 629.
Hilkiah, Jewish high-priest, 228.
Hill, John, English botanist, 1023, 1025, 1035.
Hillel, Jewish patriarch, 565.
Hillel Hannasi, Jewish chronographer, 549.
Hillsborough, Lord, British statesman, 1028.
Himerius, Greek rhetor, 552.
Himilco, Carthaginian general, 279.
Himilco, Carthaginian prince, 265.
Himyar, fourth Cahtan ruler of Yemen, 226.
Hincmarus of Rheims, theologian, 639.
Hing-wang, Chinese emperor, 21, 518.
Hiouan-ti, of the Han, Chinese emperor, 528.
Hiouan-ti II., of the Tchin, Chinese emperor, 586.
Hiouan-tsoung, of the Thang, Chin. emp., 615, 618–19.
Hiouan-tsoung, of the Kin, ruler of N. China, 719.
Hiouan-tsoung II., of the Ming, Chinese emperor, 812.
Hiouen-thsang, Chinese traveller in Hindustan, 601.
Hippalus, Greek navigator, 481.
Hipparchus, Greek astronomer, 400, 407.
Hipparchus, Greek comic poet, 299.
Hipparchus, son of Pisistratus and ruler of Athens, 249, 252.
Hippocrates, Greek medical writer, 306.
Hippodromus, Greek rhetor, 534.
Hippolochus son of Elaphus, Greek physician, 281.
Hippolytus, disciple of Irenæus and chronog., 536.
Hippomenes, Athenian archon, 215
Hipponax, Greek poet, 242.
Hippotus, Heraclid chief, 179.
Hippys of Rhegium, Greek historian, 255.
Hiram, Phœnician king, 179.
Hi-tsoung, of the Thang, Chinese emperor, 640.
Hi-tsoung of the Kin, ruler of Northern China, 703.
Hi-tsoung II., of the Ming, Chinese emperor, 939, 942.
Hiu-chin, Chinese lexicographer, 535
Hiu-heng, Chinese philosopher and statesman, 751.
Hoai, of the Hia, Chinese emperor, 91.
Hoai-nan-tseu, Chinese philosopher and physicist, 401.
Hoai-tsoung, of the Ming, Chinese emperor, 943.
Hoang-long, prince of Tching in China, 203.
Hoang-tchao, claimant of the Chinese empire, 640–42.
Hoang-tchi, Chinese pirate, 888.
Hoang-ti, or Hien-youang, early Chin. emp., 80, 1006.
Hobaisch, Arab medical writer, 639.
Hobbes, Thomas, 965.
Hobomack, aboriginal American, 939.
Hodgson, B. H., English orientalist in Nepal, 1062.
Hoei-chin, Buddhist missionary in the Loo-Choo Islands, 570.
Hoeida, Alfonso, 859.
Hoei-ti, of the Han, Chinese emperor, 396.
Hoei-tsoung, of the Soung, Chinese emperor, 684, 686.
Hoeï-wang, of the Tcheou, Chinese emperor, 222, 225.

Hoffmann, Geo. Fr., German botanist, 1052.
Hoffmannsegg, botanist, 1050.
Hofmannus, Maurit., German botanist, 965.
Hogarth, William, English painter, 1013.
Holbein, Hans, German painter, 872.
Holcot, Robertus, of Eng., scholastic theologian, 782.
Holm, Geo. Tycho, Swedish botanist, 1027.
Ho-lo-mien, Hindu king, 603.
Homerus, Greek poet, 182.
Homerus, Greek tragic poet, 370.
Honain-ebn-Izhak, Arab physician, 631.
Honestis, Christoph. de, botanist, 799.
Honoria, sister of Valentinianus III., 565.
Honorius, fifth Roman archbishop, 600, 602.
Honorius, Roman emperor of the West, 558, 564.
Honorius II., seventh pope, 688, 690.
Honorius III., twenty-first pope, 720, 722.
Honorius IV., thirty-fourth pope, 758–59.
Honorius Augustudunensis, 718.
Hook, Robert, microscopic observer, 965.
Hooker, Wm. J., English botanist, 1058.
Hooper, bishop, originator of Puritanism, 887.
Hootman, Cornelius, Dutch navigator, 918.
Hophra, or Apries, or Uaphres, king of Egypt, 234, 237.
Hoppe, D. H., German botanist, 1042.
Hoppe, T. K., German botanist, 1033.
Horapollo, Egyptian exponent of hieroglyphics, 13.
Horatius, Roman poet, 461.
Hormisdas, fiftieth bishop of Rome, 572–73, 576.
Hormisdas, third Sasanid king of Persia, 542.
Hormisdas II., Sasanid king of Persia, 544.
Hormisdas III., or Hoormuz III., Sasanid king of Persia, 589, 591.
Horsfield, American botanist on Java, 1053.
Hortensius, Roman orator, 446.
Horus, king of Egypt, 122.
Hosea, Jewish prophet, 210.
Hosein Meerza, sultan of Herat, 845.
Hoshea, king of Israel, 214.
Hosius, early bishop in Spain, 547.
Host, N. Thom., German botanist, 1049.
Hostilius, Tullus, third king of Rome, 225, 227.
Ho-tan-kia, of the Chang, Chinese emperor, 113.
Ho-ti, of the Han, Chinese emperor, 517.
Ho-ti II., of the Thsi, Chinese emperor, 571.
Hotomanus of Paris, jurist, 897.
Hottonus, Petr, Dutch botanist, 997.
Hou-eul-ma, king of Cambodia, 792.
Houstoun, Gul., bot. in the W. Indies and Mexico, 1012.
Houttuyn, Martinus, Dutch botanist, 1036.
How, William, English botanist, 958.
Hualcopo Duchicala, fourteenth scyri of Quito, 813, 829.
Hualpa, discoverer of Potosi silver mines, 885.
Huascar, thirteenth inca of Peru, 868, 871.
Huayna Capac, twelfth inca of Peru, 667, 827, 834, 841, 845, 868.
Huc, traveller in China and Thibet, 767.
Hudson, Henry, British navigator, 927–29.
Hudson, William, English botanist, 1025.
Huematzin, Mexican astronomer and writer, 614.
Huet, Daniel, critic, 997.
Huetzin, Toltec king of Mexico, 622.
Hughes, Griffith, botanist in Barbados, 1021.
Hugius, Swiss theologian and hellenist, 1052.
Hugo de S. Caro, theologian, 723.
Hugo de S. Victore, Saxon scholastic theologian, 703.
Hugo Etherianus, theologian, 711.
Huitzilchuatl, second Mexican emperor, 797, 802.
Hulagu, Tartar chief, 747, 750.
Huldericus, bishop of Augsburg, 639.
Hull, John, mint-master in New England, 958.
Humaioon, emperor of Northern Hindustan, 891.
Humbertus Cardinalis, theologian, 675.
Humboldt, traveller and physicist, 1049, 1051, 1054.
Humenus, Egyptian astronomer, 703.
Humphreys, secretary of Eng. missionary society, 997.
Hunahpu, third king of Guatemala, 657.
Hur, first-born of Ephratah, 127, 140.
Husein, son of Ali, 612.
Husham, king of Edom, 125.
Huss, John, 802, 811.
Huygens, Christian, astronomer, 959–60.
Hyagnis, Greek flute-player, 152.
Hybreas, Greek orator, 446.
Hygynus, eighth bishop of Rome, 464, 527.
Hyllus, Heraclid chief, 166, 178.
Hymenaeus, thirty-seventh bp. of Jerusalem, 540, 544.
Hypatia, Greek mathematician, 562.
Hyperechius, Greek grammarian, 565.
Hyperides of Athens, Greek orator, 323, 326.
Hypermnestra, daughter of Danaus, 147.

Iamblichus of Babylon, Greek writer, 526.
Iamblichus of Chalcis, Neo-Platonist, 544.
Iambulus, Greek voyager to East Africa, 443.
Iannas, or Ianias, Hyksos king of Egypt, 100.
Iasus, or Inachus II., king of Argos, 128.
Iaxava, Io., botanist, 872.
Ibek, first Memluk sultan of Egypt, 741, 747.
Iberville, French admiral, 994.
Ibn al-Gezzar, Arab writer, 655.
Iborea, Lombard chief, 553.
Ibrahim, Arab shipmaster, 778.
Ibrahim, nineteenth Turkish sultan, 951, 957.
Ibrahim, sultan of Ghazni, 678, 683.
Ibrahim, thirteenth Ommiad khalif, 619.
Ibrahim Meerza, governor of Shiraz in Persia, 803.
Ibrahim Pasha, viceroy of Egypt, 1066.
Ibycus, Greek poet, 241.
Icon Amlac, Abyssinian king, 747.
Idatius, historian and eccles. writer, 561, 565, 568.
Idatius, or Ithacius, bishop in Spain, 555.
Iddo, Jewish prophet, 186.
Idomeneus, Dorian chief, 164.
Idomeneus of Lampsacus, Greek historian, 370.
Iemitz, cubo and emperor of Japan, 957–58.
Ignatius, early Christian writer, 520.
Ignatius, patriarch of Constantinople, 640.
Igumnof of Irkutzk, author of Mongol-Russian dictionary, 1052.
Ijesaz, regent and emperor of Japan, 919, 930, 934, 945.
Ikshid, governor of Egypt, 651–52.
Ilasar, king of the Rammanite Arabs, 461.
Ildefonsus, bishop of Toledo, 613.
Ildibad, sixth Gothic king of Italy, 580.
Ilus, founder of the city of Troy, 152.
Immanuel, or Emmanuel, Hebrew poet, 782.
Imperatus, Ferrandus, 920.
Imra-el-Keys, Arab poet, 585.
Ina, Saxon king of England, 613, 615, 618.

Inachus, first king of Argos, 102, 107.
Inarus, Egyptian chief, 268
Ingersoll, Capt. Jonathan, American navigator, 1039.
Ingolf, leader of a Scandinavian colony, 640.
Ingor, Russian prince, 651.
Ingraham, Joseph, American navigator, 1046.
Ingulphus of England, theologian, 680.
In-kio, twentieth dairo of Japan, 562, 567.
Innocentius, thirty-eighth bishop of Rome, 560, 562.
Innocentius II., eighth pope, 690, 704.
Innocentius III., twentieth pope, 718, 720.
Innocentius IV., twenty-fourth pope, 735–36, 743.
Innocentius V., twenty-ninth pope, 755.
Innocentius VI., forty-third pope, 789, 791.
Innocentius VII., forty-eighth pope, 801.
Innocentius VIII., fifty-ninth pope, 843, 847.
Io, daughter of Iasus, 128.
Iolas of Bithynia, Greek pharmacologist, 390.
Ion, Attic lawgiver, or king, 153.
Ion of Chios, Greek tragic poet, 268.
Iophon, Greek tragic poet, 281.
Ioulun-Tieghin, chief of the Ouigour Tartars, 610.
Iphicrates, Greek traveller in West Africa, 442.
Iphigeneia, 162.
Iphitus of Elis, restorer of the Olympic Games, 200.
Irad, son of Enoch, 3.
Irenaeus, bishop of Lugdunum in Gaul, 531.
Irene, Byzantine empress, 623–24.
Isaac, Abyssinian king, 800.
Isaac, son of Abraham, 107.
Isaac Ibn Gajjat, Hebrew poet, 680.
Isaac Israeli ben Joseph, Jewish astronomer, 765.
Isaac Lattas ben Jehudah of Provence, Jewish medical writer, 765.
Isaac of Antioch, Syriac Christian writer, 565.
Isaac of France, of Charlemagne's embassy to Bagdad, 624.
Isaacius Theophanes, Greek writer, 624.
Isaacus Comnena, forty-seventh Byzant. emperor, 678.
Isaacus II., A. Comnena, fifty-sixth Byzant. emperor, 715, 717.
Isabella, queen of Spain, 852.
Isabella, wife of Edward II. of England, 779.
Isaeus, Greek orator, 312.
Isaeus, Greek rhetor, 498.
Isaiah, Jewish prophet, 211.
Isakh, second ruler of Ghazni, 657–58.
Iscander, or Alexander, Abyssinian king, 845.
Isert, Paul Erdm., botanist, 1049.
Ishak ben Amran, 612.
Ishak ben Jaakub-el Isfahani, Karaite Jew. writer, 621.
Ishak Ebn Honain, Arab medical writer, 645.
Ishmael, son of Abraham, 110.
Isidorus, Greek architect, 584.
Isidorus Hispalensis, ecclesiastical and encyclopedic writer, 599.
Isidorus Pacencis, 619.
Isidorus of Gaza, Greek philosopher, 576.
Ismael, founder of the sect of Hassassins, 688, 690.
Ismael-Bey, 1001.
Ismael el Okbari, in Irak, Karaite Jewish writer, 629.
Ismael Pasha, khedive of Egypt, 1062, 1071.
Isnard, A. Dant. d', French botanist, 1004.
Isocrates, Greek orator, 303.
Israeli, Ishak, see Isaac el Israeli.
Isse, Japanese authoress, 644.
Ister, Greek historian, 382.
Isthakhri, Arab geographer, 647.
Ithacius, bishop in Spain, 555.
Itsi-dsio, dairo of Japan, 663, 667.
Itsi-dsio II., or Go-itsi-dsio, dairo of Japan, 667, 675.
Itzcoatl, fourth Mexican emperor, 811, 815.
Ivan, king of Russia, 827.
Ivan II., king of Russia, 896.
Ivar, Danish chief, 639.
Ivar Bardsen, Greenland writer, 788.
Ivo of Chartres, theologian, 680.
I-wang, of the Tcheou, Chinese emperor, 194.
Ixtlicuechahuac, Toltec king of Mexico, 614.

JABAL, son of Lamech, 3.
Jabin the Canaanite, king of Hazor, 155.
Jackson, Andrew, N. American general and president, 1060.
Jackson, Charles T., discoverer of the anæsthetic qualities of ether, 1069, 1071.
Jacob, or Israel, 112, 119.
Jacob ben Chajjim, Hebrew editor, 867.
Jacob ben Machir, or Prophatius, Jewish astronomer, 765.
Jacob ben Reuben, Karaite Jewish writer, 680.
Jacob of France, Jewish traveller, 723.
Jacobi, inventor of electrotyping, 1068.
Jacobus, Greek physician, 565.
Jacobus a Vitriaco, theologian, 723.
Jacobus de Voragine, 752.
Jacobus of Edessa, founder of the secf of Jacobites, or Copts, 567, 586.
Jacobus of Nisibis, Syrian bishop, 548.
Jacquin, Jos. Franc. von, German botanist, 1058.
Jacquin, Nicol. Jos., botanist in the West Indies, 1022, 1025, 1030, 1033, 1037, 1042, 1049, 1051.
Jael, wife of Heber the Kenite, 155.
Jahangir, emperor of Hindustan, 924, 939, 943.
Jahia-Ebn-Serapion, Arab medical writer, 624.
Jahja Ibn Batrik, see Ebn Batrik.
Jakmak, or Djakmak, Memluk sult. of Egypt, 815, 823.
Jamadagni, Hindu king, 116.
James, Edwin, American botanist, 1062.
James II., British king, 981, 985.
James, king of Arragon, 740.
James, king of Scotland, 801.
James II., king of Scotland, 821.
James III., king of Scotland, 829.
James IV., king of Scotland, 847, 859, 861.
James V., king of Scotland, 861.
James VI., king of Scotland and England, or first king of United Britain, 897, 903, 925, 926, 939, 942.
James, son of Alphaeus, 483.
James, son of Zebedee, 481.
James, Thomas, British navigator, 947.
Jami, Persian poet, 845.
Jana-bin-Abbada, governor of Oman, 620.
Jana Kesari, king of Orissa, 651.
Jansen, H. & Z., inventors of the compound microscope, 914, 939.
Janus Damascenus, or Mesue the elder, see Ebn Masawia.
Japhet (Abu Ali Hassan el Basri) Halevi, Karaite Jewish writer, 650.
Jared, 62.

Jason, leader of the Argonautic expedition, 162.
Jason of Cyrene, Greek writer, 400.
Jason the Stoic, Greek philosopher, 446.
Jaubert, Amedée, French orientalist, 1052.
Jauhar Kaid, Muslim general, 656.
Jay, John, American statesman, 1048.
Jayadevas, Sanscrit poet, 711.
Jaya Misaya, Javan prince, 597.
Jefferson, Thomas, American statesman and president, 1039, 1054.
Jehan-Shah, or Giausa, king of Persia, 822.
Jehoahaz, king of Israel, 198.
Jehoahaz, last king of Judah, 229.
Jehoash, or Joash, king of Judah, 195.
Jehoash, or Joash, twelfth king of Israel, 199.
Jehoiachin, governor of Jerusalem, 232, 239.
Jehoiakim, or Eliakim, governor of Jerusalem, 229, 232.
Jehoram, king of Judah, 194.
Jehoram, or Joram, son of Ahab and king of Israel, 194.
Jehoshaphat, king of Judah, 193.
Jehu, Jewish prophet, 192.
Jehu, tenth king of Israel, 195.
Jehuda ben Moses, Jewish translator, 765.
Jehuda ben Moses Naphtali, or Löb Brzsc, translator of Hebrew, 885.
Jehuda Halevi of Spain, Jewish writer, 703
Jehuda Ibn Balam, Jewish commentator, 680.
Jehuda Ibn Koreish, of Tahart in Africa, Jewish philologist, 645.
Jeia Chandra, last Hindu king of Canouj, 716.
Jeiel, the scribe, 210.
Jeipal, see Chaitra-pala.
Jeipal II., last Hindu king of Lahore, 668.
Jelal-u-din Khilji, eleventh sult. of Delhi, 721, 760, 762.
Jemaleddin Yusuf, Memluk sultan of Egypt, 815.
Jenghiz-Khan, Tartar chief, 716, 719, 721–22.
Jenkinson, Anthony, traveller to Bokhara, 892.
Jenkinson, Jac., English botanist, 1022.
Jensu II., dairo of Japan, 792, 796.
jen-wo, or Jin-jo, dairo of Japan, 656, 662.
Jephthah, Jewish warrior, 162.
Jephunneh, 136.
Jeremiah, Jewish prophet, 230.
Jeroboam, first king of Israel, 185.
Jeroboam II., thirteenth king of Israel, 202, 210.
Jerome, see Hieronymus.
Jerome of Prague, 803.
Jesse, 175.
Jetznako, cubo and emperor of Japan, 958, 976.
Jeune, Paul le, Jesuit missionary in Canada, 948.
Jezebel, 193.
Jidahana, king of Delhi, 686.
Jingo-Kogu, dairo of Japan, 538.
Jin-tsoung, of the Soung, Chinese emperor, 668.
Jin-tsoung II., of the Youan, Chinese emperor, 773.
Jin-tsoung III., of the Ming, Chinese emperor, 811.
Jisch Ben Hasan, 612.
Joachimus, theologian, 711.
Joan d'Arc, female warrior, 812.
Joannes, author of the Climax, Greek writer, 597.
Joannes, bishop of Jerusalem, 561.
Joannes, fifty-first bishop of Rome, 573–74.
Joannes, fifty-ninth bishop of Rome, 585, 589.
Joannes, patriarch of Jerusalem, theologian, 619.
Joannes, Roman emperor of the West, 564.
Joannes Antiochenus, scholastic Greek writer, 703.
Joannes Biclariensis, ecclesiastical writer, 586, 591.
Joannes Cameniates, Greek writer, 645.
Joannes Cinnamus, scholastic Greek writer, 684.
Joannes Damascenus, Greek historian, 619.
Joannes de Capistrano, scholastic theologian, 814.
Joannes de Turrecremata, scholastic theologian, 814.
Joannes Diaconus and Rhetor, 639.
Joannes Epiphaniensis, Greek historian, 586.
Joannes Januensis, of Genoa, lexicographer, 759.
Joannes Lydus, Greek historian, 576.
Joannes Mailrosius of Scotland, theologian, 619.
Joannes Malalas, Greek historian, 586.
Joannes Mercurius, fifty-fourth bishop of Rome, 576.
Joannes Micrologus, Greek writer, 680.
Joannes Moschus, Greek writer, 597.
Joannes Nauclerus, 831.
Joannes of Antioch, ecclesiastical writer, 570.
Joannes of Apri, patriarch of Constantinople, 787.
Joannes of Sicily, Greek writer, 629.
Joannes of Tornamira, medical writer, 799.
Joannes Parisiensis, scholastic theologian, 753.
Joannes Philoponus of Alexandria, Greek grammarian, 597.
Joannes Rhetor, Greek historian, 576.
Joannes Scylitzes, Greek writer, 680.
Joannes Zemisces, thirty-ninth Byzantine emperor, 656.
Joannes II. or Calo-Joannes, fifty-second Byzantine emperor, 687, 704.
Joannes III. Ducas, fifty-ninth Byzantine emperor, 721, 733, 743.
Joannes IV. Theodorus, sixtieth Byzantine emperor, 743, 751.
Joannes V. Palaeologus, sixty-fourth Byzantine emperor, 784, 791, 796.
Joannes VII., sixty-seventh Byzant. emperor, 803, 810.
Joannes VIII., sixty-eighth Byzant. emperor, 810, 818.
Joannes IV., seventh Roman archbishop, 602–3.
Joannes V., seventeenth Roman archbishop, 612–13.
Joannes VI., twentieth Roman archbishop, 613–14.
Joannes VII., twenty-first Roman archbishop, 614–15.
Joannes VIII. Joanna, 632.
Joannes IX., forty-third Roman archbishop, 640, 643.
Joannes X., fifty-first Roman archbishop, 645, 647.
Joannes XI., fifty-eighth Roman archbishop, 647, 650.
Joannes XII., sixty-first Roman archbishop, 650.
Joannes XIII., sixty-sixth Roman archbishop, 655.
Joannes XIV., sixty-ninth Roman archbishop, 655–56.
Joannes XV., seventy-third Roman archbishop, 662
Joannes XVI., seventy-fourth Roman archb., 662–63.
Joannes XVII., seventy-fifth Roman archbishop, 663.
Joannes XVIII., seventy-eighth Roman archb., 665.
Joannes XIX., seventy-ninth Roman archb., 665, 667.
Joannes XX., eighty-second Roman archb., 669, 675.
Joannes XXI., thirty-first pope, 755.
Joannes XXII, fortieth pope, 774, 782.
Joannes XXIII., fifty-first pope, 801–3.
Job, 236.
Jobab, second king of Edom, 124.
Jochebed, mother of Moses, 129.
Joel, Jewish prophet, 213.
Joel, scholastic Greek writer, 711.
Johannitius, see Honain.
John, king of Portugal, 796, 803, 811, 814.
John II., king of Portugal, 842–43, 845, 847, 856.
John IV., king of Portugal, 951.
John II., king of France, 789, 791.

John, twenty-seventh king of England, 719.
John Baliol, king of Scotland, 762.
John de Santarem, Portuguese navigator, 833.
John Descouar, Portuguese navigator, 833.
John of Halifax, mathematician, 723.
John of Montecorvino, Franciscan missionary, 762.
John the Baptist, Jewish prophet, 476.
John the Elder, 531.
John the Evangelist, 481, 517–18.
Johnson, Edward, historian of New England, 958.
Johnson, Thomas, English botanist, 947.
Johrenius, Mart. Dan., botanist, 997.
Joinville, John de, historian, 752.
Joktan, son of Eber, 96.
Jonas, Angrimus, Icelandic writer, 747.
Jonas Aurelianensis, theologian, 624.
Jonas Hybernus, theologian, 597.
Joncquet, Dionysius, botanist, 948.
Jones, Inigo, English architect, 948.
Jones, Margaret, first victim of the witchcraft delusion in New England, 957.
Jonson, Ben, English dramatist, 921.
Joram, see Jehoram.
Jordanus, missionary in Sumatra, 775.
Jordanus de Rivalto, writer, 756.
Jori-sje, second cubo of Japan, 718.
Joritomo, see Yori-tomo.
Joritzne, cubo of Japan, 725.
Jorius, earliest bishop of Mt. Sinai, 576.
Jornandes of Ravenna, historian and bishop of the Goths, 584.
Josei, dairo of Japan, 641, 643.
Josei II., or Go-Josei, dairo of Japan, 930.
Joseph, Benjamin, British navigator, 932.
Joseph, Greek hymnographer, 639.
Joseph, son of Jacob, 116, 121.
Joseph ben David Jewani, Jewish lexicographer, 782.
Joseph Ibn Santas, Jewish writer, 655.
Joseph Studites, Greek writer, 624.
Josephine, wife of Napoleon, 1057.
Josephus, Flavius, Jewish historian, 498.
Josephus de Arom., Italian botanist, 921.
Joshua, Jewish chief, 145.
Josiah, nineteenth king of Judah, 226.
Josijmassa, cubo of Japan, 818, 846.
Josijsimmi, cubo of Japan, 854.
Josijtira, cubo of Japan, 897, 905.
Josisaki, cubo of Japan, 790.
Jositanno, cubo of Japan, 860.
Jositir, cubo of Japan, 869.
Josselyn, John, botanist in New England, 951, 961, 967–70.
Jotham, king of Judah, 212–13.
Joui-tsoung, of the Thang, Chinese emperor, 615.
Jovianus, forty-sixth Roman emperor, 552.
Juba II., historian, and king of Mauritania, 467.
Jubal, son of Lamech, 3.
Judas, early Christian chronographer, 534.
Judas, fifteenth bishop of Jerusalem, 527.
Judith, or Goudit, Abyssinian queen, 680.
Judith, wife of Esau, 115.
Jugaeus, king of Babylon, 214.
Jugurtha, king of Numidia, 424.
Julanda, Cahtan Arab, 600.
Julanda-bin-Mas'ud, first imam of Oman, 620.
Julianus, ecclesiastical writer, 560.
Julianus, forty-fifth Roman emperor, 549–52.
Julianus, Greek rhetor, 544.
Julianus, tenth bishop of Alexandria, 532.
Julianus of Toledo, theologian, 609.
Julius, thirty-third bishop of Rome, 548.
Julius II., sixty-second pope, 859, 861.
Julius of Britain, Christian martyr, 545.
Jungermann, Joachim, botanist, 914.
Jungermann, Lud., German botanist, 933.
Jungius, Ioach., German botanist, 948.
Jussieu, Anton. Laur., French bot., 1012, 1043, 1057.
Jussieu, Bernard, French botanist, 1025, 1034.
Jussieu, Joseph, botanist in South America, 1019.
Justinianus, bishop of Spain, 576.
Justinianus, ninth Byzantine emperor, 574–75.
Justinianus II., nineteenth Byzant. emperor, 613, 615.
Justinus, eighth Byzantine emperor, 572, 574.
Justinus II., tenth Byzantine emperor, 585–86, 589.
Justinus Martyr, early Christian writer, 526.
Justus, bishop, 576.
Justus of Tiberias, Jewish writer and chronogr., 498.
Juvenalis, Roman poet, 519.
Juvenatiensis, Ang. Pall., botanist, 885.
Juvencus of Spain, early Christian poet, 544.

Kadu, voyager from the Caroline coral-archipel., 1061.
Kæhler, botanist, 1025.
Kaempfer, E., naturalist in Japan, 981, 989.
Kafur the eunuch, governor of Egypt, 652, 656.
Kaher, nineteenth Abbassid khalif, 650.
Kaiechos, king of Egypt, 64.
Kaim, Austrian chemist, 1017.
Kalaoon, Memluk sultan of Egypt, 756–57, 760.
Kalasa, king of Cashmere, 684, 686.
Kalidasa, Sanscrit poet, 711–12.
Kalimera, king of Karagué, 730.
Kallinatha, Hindu commentator, 823.
Kalm, Peter, Swedish naturalist in N. Am., 1019, 1025.
Kalonymos, Jewish translator, 765.
Kamal Kesari, king of Orissa, 626.
Kamala Pulu, king of Ternate, 795.
Kame-jamma, dairo of Japan, 750, 755.
Kamel, botanist at the Philippines, 990.
Kanak Sena, Ballabi king of Guzerat, 528.
Kandiawan, king of Java, 648.
Kang-hi, of the Tai-thsing, three hundred and first Chinese emperor, 961, 999, 1004, 1006.
Kang-ti, of the Tcin, Chinese emperor, 549.
Kang-wang, of the Tcheou, Chinese emperor, 168.
Kansu Abu-Said, Memluk sultan of Egypt, 857.
Kansu Djan-balat, Memluk sultan of Egypt, 857–58.
Kansu El-Gouri, Mem. sult. of Egypt, 858, 860, 862.
Kantemir, Antiochus, Russian writer, 1012.
Kao, of the Hia, Chinese emperor, 96.
Kao-ti, of the Thsi, Chinese emperor, 569.
Kao-tsong, of the Chang, 127.
Kao-tsou, of the Han, Chinese emperor, 395.
Kao tsou II., of the Thang, Chinese emperor, 600.
Kao-tsou III., of the later Tsin, Chinese emperor, 650.
Kao-tsou IV., of the later Han, Chinese emperor, 652.
Kao-tsoung, of the Thang, Chin. emp. 605, 608, 610.
Kao-tsoung II, of the Soung, Chinese emp., 689, 704.
Kao-wang, of the Tcheou, Chinese emperor, 279.
Karadshitch, Vuk Stephanovitch, Servian writer, 1052.
Karamzin, Nicholas, Russian historian, 1052.

Karika, leader of a Polynesian colony, 680.
Karo, Joseph, Jewish writer, 872.
Karumamma, Egyptian queen, 193.
Kasembeg, Tartar author of a Turco-Tartar grammar, 1066.
Kasiawabara, dairo of Japan, 858, 860, 868.
Kasuma Wichtra, king of Java, 620.
Kaswini, Arab geographer and naturalist, 651, 752, 755.
Kasyapa, Buddhist priest, 241, 347, 592, 814.
Katha, king of Pegu in Burmah, 591.
Katharuya Deva, king of Orissa, 872.
Kutb-u-din Eibak, Ghaznian general, 716–17, 719.
Kaxapa, Buddhist high priest, 667.
Kayt-Bay, Memluk sultan of Egypt, 831, 856.
Kayu, or Cuiuc, Tartar khan, 736.
Kei Kobad, tenth sultan of Delhi, 758, 760.
Keï-taï, twenty-seventh dairo of Japan, 572.
Keller, Ferd., discov. of pre-historic Lake village, 1069.
Kempis, Thomas à, theologian, 831.
Keng-ting, of the Chang, Chinese emperor, 148.
Keng-wang, of the Tcheou, Chinese emperor, 251, 266.
Kenkenes, king of Egypt, 63.
Kenneth II., king of Scotland, 629.
Kentmann, Io., ichthyologist and botanist, 887.
Keou-tsien, prince of Youe in China, 266.
Kepler, John, German astronomer, 936.
Kerner, Joh. Sim. de, German botanist, 1042.
Kerpheres, king of Egypt, 67.
Kertk, David, French Protestant in Canada, 944.
Khaled, Muslim general, 601.
Khaled ben Yezid, 609.
Khalil Dhaheri, Arab writer, 799.
Khalyl, Memluk sultan of Egypt, 760.
Khang-hi, of the Taï-thsing, Chinese emperor, 961, 964, 967, 980, 989, 990, 1006.
Khanikof, Russian writer on the Kirgises, 1066.
Khanloung, Burmese king, 391, 398.
Khi-tsu, king of Corea, 159.
Khnumhotep, Egyptian priest, 70.
Khondemir, Persian historian, 845.
Khoubilai-khan, Tartar ruler of Northern China, 750–51, 753, 756–57, 759, 762.
Khoung-tseu, or Confucius, Chinese philosopher, 240, 260, 266, 325, 407, 543, 639, 649, 999.
Khusrau, of Delhi, 752.
Khusru, Abulhaçan, Hindustanee poet, 751.
Khusru, first sultan of Lahore, 708–9.
Khusru, Hindu convert to Mohammedanism, 774–75.
Khusru Malik, second and last sultan of Lahore, 709, 716.
Ki, of the Hia, Chinese emperor, 84.
Kia-king, three hundred and fourth Chinese emperor, 1048, 1062
Kian, king of Corea, 652.
Kian-wen-ti, of the Tcin, Chinese emperor, 552.
Kian-wen-ti II., of the Liang, Chinese emperor, 583.
Kian-wen-ti III., of the Ming, Chinese emperor, 798.
Kia-tan, Chinese geographer, 626.
Kibino Daisi, Japanese writer, 616.
Kicab-Tanub, fourteenth king of Guatamala, 866.
Kieft, William, Dutch gov. of New Netherland, 951.
Kie-kouei, of the Hia, Chinese emperor, 96, 98.
Kie-li-tie, Hindu king, 603.
Kien-loung, of the Taï-thsing, three hundred and third Chin. emp., 1015, 1019, 1028, 1030, 1035, 1037, 1048.
Kien-wang, of the Tcheou, Chinese emperor, 235.
Kiertissry-magawarna, king of Ceylon, 545, 547.
Kilianus, theologian, 609.
Kim, André, traveller in Mandshuria, 1069.
Kimchi, David, of Provence, Jewish grammarian, 723.
Kimchi, Joseph, Jewish writer, 711.
Kin, of the Hia, Chinese emperor, 93.
King-ti, of the Han, Chinese emperor, 401–2.
King-ti II., of the Liang, Chinese emperor, 584.
King-ti, regent, or acting Chinese emperor, 822.
King-tsoung, of the Thang, Chinese emperor, 627.
King-tsoung II., of the Soung, Chinese emperor, 688.
Kin-mei, thirtieth dairo of Japan, 580, 588.
King-wang, of the Tcheou, Chinese emperor, 228, 241.
Kinsen, dairo of Japan, 963–64, 981.
Kinsen II., dairo of Japan, 981.
Kioung, of the Hia, Chinese emperor, 92.
Kitaibel, Paul, botanist, 1053.
Ki-tsun, king of Corea, 390.
Kiu-youen, Chinese poet, 371.
Klaproth, J., philologist, 1032, 1056.
Klein, botanist, 1049.
Kleinhoff, botanist, 1025.
Knapp, J. L., English botanist, 1053.
Knaut, Christian, botanist, 997.
Knauth, Christophorus, German botanist, 982.
Kneller, Godfrey, German painter, 997.
Kniphof, Io. H. botanist, 1012.
Knorr, G. W., German naturalist, 1033.
Knox, John, 897.
Koa, Polynesian chief, 705
Koan, sixth dairo of Japan, 302, 373.
Kobad, or Cabades, Sasanid king of Persia, 569.
Kobell, Francis Von, mineralogist, 1066.
Kobou-daisi, Japanese convert to Buddhism, 625.
Koch, G., German botanist, 1052.
Ko-cheou-king, Chinese astronomer, 752.
Koker, Œgid. de, Dutch botanist, 997.
Kolpin, A. B., botanist, 1027.
Kölreuter, Ios. Theoph, botanist, 1027.
Konig, Io. G., traveller in Iceland and the East Indies, 1026, 1033, 1056.
Konjei, seventy-sixth dairo of Japan, 704, 708–9.
Kooken, empress or dairo of Japan, 619, 621.
Kooko, dairo of Japan, 643–44.
Koonin, forty-ninth dairo of Japan, 621, 623.
Kopitar, B, Slavonic scholar, 1052.
Korah, 136.
Koschkadam, Memluk sultan of Egypt, 825, 831.
Koster, Laurence, of Haerlem, earliest European printer, 815.
Kostha ben Luca, Arab writer, 639.
Ko-tok, thirty-seventh dairo of Japan, 604–5.
Kotoz, Memluk sultan of Egypt, 750–51.
Kotzebue, Russian navigator, 1061.
Kouan-mu, fiftieth dairo of Japan, 623, 625.
Kouang-tsoung, of the Soung, Chinese emperor, 716.
Kouang-tsoung II., of the Ming, Chinese emperor, 936.
Kouang-wang, of the Tcheou, Chinese emperor, 228.
Kouang-wou-ti, of the Han, Chin emperor, 476, 482.
Koung-kia, of the Hia, Chinese emperor, 93, 95.
Koung-tcheng, descendant of Thsao-thsao, 539.
Koung-ti, of the Tcin, Chinese emperor, 564.
Koung-ti II., of the Soui, Chinese emperor, 599.
Koung-wang, of the Tcheou, Chinese emperor, 191.
Kouo-gien, acting dairo of Japan, 781–82.
Kouo-gen II., dairo of Japan, 789–90, 792.

Kouo-tching, Cambodian ambassador, 791.
Kouotei, dairo of Japan, 945.
Koutchouk, Memluk sultan of Egypt, 785–86.
Kou-yang-ti, Chinese historian, 948.
Kovanko, astronomer, 1065.
Koxinga, or Tching-tching-koung, Chinese pirate-chief, 961.
Kramer, Io. G. Henr., Hungarian botanist, 1025.
Krascheninnikovius, botanist in Siberia, 1018, 1025.
Kretos, early king of Crete, 113.
Krieg, David, botanist, 961.
Krunglau, king of Martaban in Burmah, 766.
Krusenstern, Russian navigator, 1055.
Krylof Ivan, Russian fabulist, 1066.
Kuhn, C. F., botanist, 1013.
Kulesekara Pandya, king of Orissa, 667.
Kundal Kesari, king of Orissa, 626.
Kunkel, alchemist, 981.
Kunth, C. S., German botanist, 1059.
Kurma Kesari, king of Orissa, 675.
Kutaiba ben Muslim, Muslim general, 615.
Kutb Shah, fourth Muslim king of Guzerat, 822, 825.
Kutb-u-din Eibak, first sultan of Delhi, 716–17, 719.
Kutrub, Arab grammarian, 624.
Kuyuk Khan chief of the Tartars, 733.
Kwo-gok, dairo empress of Japan, 603–5, 608.
Kyllingius, botanist, 972.
Kylwarbi, Robertus, old English writer, 753.

Laadan, 127.
Laban, 116–17.
Labat, Io. Bapt., botanist in Africa and the West Indies, 1009.
Labazarris, Guido de, Spanish governor of the Philippines, 900.
Labdacus, grandson of Cadmus, 152.
Laberius, Decimus, Roman writer, 446.
Labillardiere, Jacq. Jul., French botanist, 1028.
Laborde, Leon de, traveller in Arabia Petraea, 1065.
Laborosoarchod, king of Babylon, 240.
Labotas, fourth Agid king of Sparta, 193.
Lachares, Greek rhetor, 565.
Lachenal, W., Swiss botanist, 1027.
Lacius, leader of a Greek colony, 220.
Lacshana Pala, prime minister at Delhi, 711.
Lactantius, early Christian writer, 544.
Lacydes, Greek philosopher, 382
Ladislaus, king of Hungary, 818.
Laertius, Diogenes, Greek biographer, 534.
La Fayette, French general and statesman, 1037.
Lagasca, Mar., botanist, 1055.
Lagerstroem, botanist, 1025.
Lahontan, French explorer in North America, 980.
Laius, king of Boeotian Thebes, 152, 163.
Lalande, traveller in Arabia, 1002.
Lamarck, J. B. M., French nat., 1036, 1045–46, 1049.
Lambert, A. B., English botanist, 1050, 1052–53.
Lambertus Schafnaburgensis, chronographer, 681.
Lamech, 3, 65, 73.
Lamotte, French botanist, 1070.
Lamouroux, French botanist, 1055.
Lampares, Assyrian emperor, 148.
Lamprides, Assyrian emperor, 136.
Lançarote, Portuguese navigator, 819.
Landa, Francisco de, Spanish pilot, 918.
Lando, fifty-seventh Roman archbishop, 647.
Landulphus Carthusianus, commentator on the book of Psalms, 782.
Lane, Rafe, governor of Roanoak colony, 908.
Lanfranc, archbishop of Canterbury and earliest scholastic theologian, 676, 680.
Lanfranc, medical writer, 752.
Langius, Paulus, chronographer, 862.
Langsdorff, G., botanist and voyager, 1055.
Languliva Narsinh, king of Orissa, 725.
Lannoy, Guillebert de, traveller in the East, 802, 811.
Laodamas, king of Boeotian Thebes, 164, 167.
Laodice, mother of Apis and Niobe, 110.
Laomedon, king of Troy, 152, 156.
Laonicus Chalcondyles, Greek historian, 828.
Laosthenes, Assyrian emperor, 193.
Lao-tseu, Chinese philosopher, 231.
Laperouse, French navigator, 1042, 1046.
Lapeyrouse, P. Picot, French botanist, 1048.
Lapilaye, French botanist in Newfoundland, 1065.
Lartius, Roman dictator, 254.
La Salle, M. de la, French explorer in N. America, 978.
Lascaris, Constantinus, scholastic Greek writer, 831.
Lascaris, John, of Constantinople, 842.
Lassell, English astronomer, 960, 1069.
Lasus of Hermione, Greek poet, 244.
Latourette, A. L., French botanist, 1027.
Latro, Porcius, Roman rhetor, 457.
Laudonniere, leader of a French colony, 896–97.
Lauremberg, Gul., German botanist, 921.
Laurentius Justinianus, 814.
Laurentius, see Koster.
Lavoisier, French chemist, 1034.
Lawarre, Lord Thomas de, governor of Virginia, 929–30, 936.
Lay and Collie, botanists on Beechey's voyage, 1064.
Laxmann, Adam, Russian navigator, 1046.
Laxmann, Ericus, botanist in Siberia, 1029.
Lebid, Arab poet, 597.
Leblond, botanist in Guayana, 1047.
Leche, Johan., Swedish botanist, 1018.
Lechford, early writer on New England, 952.
Le Conte, John, N. American naturalist, 1057, 1060.
Lecoq, French botanist, 1070.
Ledebour, C. Fr., botanist in Siberia, 1064.
Ledyard, John, American voyager, 1043.
Leers, Io. Dan., botanist, 1035.
Lee, Arthur, American envoy at Paris, 1036.
Leeuwenhoek, A. van, microscopic observer, 997.
Legazpi, M. L de, conq. of the Philippines, 896, 900.
Lehmann, I. F, German botanist, 1058.
Lehmann, J. G. Chr., German botanist, 1062.
Leibnitz, mathematician and philosopher, 997.
Leidrade, archbishop of Lyons, 624.
Leif, Scandinavian navigator, 664.
Leinker, Io. S., botanist, 1027.
Leland, archaeologist to Henry VIII., 872.
Lelex, first king of Laconia, 127.
Le Maier, Isaac, Dutch navigator, 933.
Le Monnier, G., French botanist, 1019, 1025.
Le Moyne, J., French colonist in Florida, 896.
Lenaeus, Roman grammarian, 447.
Lenfant, James, historian and critic, 997.
Lentulus, Cn. Cornelius, Roman consul, 467.
Leo, fourth Byzantine emperor, 568.
Leo II., fifth Byzantine emperor, 569.

Leo III. Isaurus, twenty-third Byzantine emperor, 616, 618–19.
Leo IV., twenty-fifth Byzantine emperor, 622–23.
Leo V. Armenius, thirtieth Byzantine emperor, 626–27.
Leo VI., Sapiens, thirty-fifth Byzantine emperor, 643
Leo II., fifteenth Roman archbishop, 612.
Leo III., thirty-second Roman archbishop, 624, 626.
Leo IV., thirty-ninth Roman archbishop, 631–32.
Leo V., fifty-third Roman archbishop, 647.
Leo VI., fifty-ninth Roman archbishop, 650.
Leo VII., sixty-second Roman archbishop, 650–51.
Leo VIII., sixty-seventh Roman archbishop, 655.
Leo IX., eighty-seventh Roman archbishop, 676-77.
Leo X., sixty-third pope, 861, 864.
Leo Africanus, Arab writer, 868.
Leo diaconus, Greek writer, 655.
Leo grammaticus, 664.
Leo Hostiensis, historian, 682.
Leo Magnus, forty-third bishop of Rome, 566, 568.
Leo of Byzantium, Greek historian, 325.
Leo of Thessalonica, see Leo philosophus.
Leo philosophus et medicus, 629.
Leocrates, Athenian archon, 217.
Leodamas, Greek orator, 312.
Léon, Cieza de, traveller, 877, 887.
Leonicenus, Nicolaus, botanist, 846.
Leonidas, king of Sparta, 265
Leonidas of Tarentum, Greek writer, 370.
Leontius, jurist at Constantinople, 613.
Leontius Pil., restorer of Greek learning in Italy, 782.
Leopold II., forty-second emperor of Germany and Italy, 1047.
Lepechin, Iwan., Russian botanist, 1029.
Lepidus, M. Aemilius, Roman triumvir, 456, 464.
Lepsius of Berlin, archaeologist in Egypt, 1068.
Lerche, Io. Iac., bot. in Persia and at Astrachan, 1012.
Lerius, J., early traveller in Brazil, 891.
Lery, Baron de, 863.
Leschenault, bot. in the Malayan archipelago, 1053.
Lesches of Mytilene, Greek poet, 227.
Leucon, Greek comic poet, 281.
Leuvigild, Gothic king of Spain, 586, 590.
Leverrier, astronomer, 1069.
Levi, Jacob, of Mayence, reputed founder of German synagogue music, 799.
Levi ben Gerson, Jewish astronomer, 782.
Lewellyn, Welsh prince, 757.
Lewis and Clark, travellers across N. America, 1054.
Leysser, F. G. à, German botanist, 1024–25.
L'Heritier, C. L., French botanist, 1039, 1043.
Libanius, Greek rhetor, 552.
Liberalis, M. Antonius, Roman rhetor, 482.
Liberatus, ecclesiastical writer, 576.
Liberius, thirty-fourth bishop of Rome, yielded to Arianism, 550, 552.
Libon, Greek architect, 281.
Libussa, traditional princess and prophetess of Bohemia, 618.
Licinius, colleague of Constantine, 546.
Licinius, see Crassus.
Licinius Cal., C., Roman tribune and consul, 306, 319.
Liebmann, botanist in Mexico, 1068.
Lieou-yu, Chinese historian, 689.
Lie-tseu, Chinese philosopher, 231.
Lie-wang, of the Tcheou, Chinese emperor, 306.
Lightfoot, John, English botanist, 1036.
Linant, geographer and archæologist in Egypt, 1068
Lincoln, Abraham, American president, 1070–71.
Lincoln, Benjamin, American general, 1042.
Lindenau, Gotske, voyager to Greenland, 924.
Lindern, F. B., German botanist, 1009.
Linderus, Johannes, Swedish botanist, 1004.
Lindley, John, English botanist, 1065, 1068.
Ling-ti, of the Han, Chinese emperor, 529.
Ling-wang, of the Tcheou, Chinese emperor, 237.
Link, A. F., botanist in Portugal, 1030.
Link, H. F., German botanist, 1067.
Linnæus, Swedish naturalist, 941, 1011, 1014–15, 1018–24, 1027, 1031.
Linnæus fil., Swedish botanist, 1025–26, 1028, 1037.
Linocierus, Gaufridus, French botanist, 908.
Linschoten, voyager to the East Indies and China, 902.
Lin-sin, of the Chang, Chinese emperor, 147.
Linturius, Johannes, chronographer, 862.
Linus, first bishop of Rome, 498.
Linus, Greek poet-musician, 154.
Linus, son of Psamathe, 136.
Lipmann of Mülhausen, Jewish writer, 799.
Lippershey, Hans, maker of telescopes, 928.
Lippi, Augustin, botanist in Egypt and Abyssinia, 997.
Lipsius, Justus, critic, 921.
Lister, Martin, English naturalist, 975.
Li-tai-pe, Chinese poet, 619.
Li-tchhing-Kouei, a revolter under Tchhang and Yao, 797.
Li-tseu-tching, claimant of the Chinese empire, 956.
Li-tsoung, of the Soung, Chinese emperor, 722–23, 751.
Little, Henry, American botanist, 1063.
Liu-chi, of the Han, Chinese empress, 397.
Liu-koung-tchu, Chinese philosopher, 682.
Liu-va, Gothic king of Spain, 586.
Livius, Roman historian, 457.
Livius Andronicus, earliest writer of Latin, 388.
Li-wang, of the Tcheou, Chinese emperor, 195.
Li-wang II., 221.
Li-yan-tcheou, Chinese historian, 597.
Lloque Yupanqui, third inca of Peru, 683, 688.
Lloyd, William, chronographer, 997.
Loayza, Geronimo, archbishop of Lima, 887.
Lobel, Matthias, Belgian botanist, 898, 901, 903, 933
Locke, John, English metaphysician, 965.
Locrus, grandson of Amphictyon, 148.
Loddiges, Conr., English botanist, 1061, 1068.
Loefling, Peter, bot. in Spain and Cumana, 1022, 1025.
Loesel, Ioan., German botanist, 959.
Logan, Iac., English botanist, 1012.
Lollianus, Greek rhetor, 519.
Lomonosof, Mich., of Archangel, Russian writer, 1012.
Longinus, Greek philosopher, 538, 546.
Lonicer, Adam, German botanist, 887.
Loomis, H. American botanist, 1066.
Lopez, Francisco, resident on the Canaries, 795.
Lorraine, French botanist, 1031.
Lot, 103.
Lotharius II., ninth emp. of Germany and Italy, 690.
Louis, king of Hungary, 866, 869.
Louis, or Ludovicus Pius, emperor of France and Germany, 626–27, 629.
Louis II., king of France, 641–42.
Louis III., king of France, 642.
Louis V., king of France, 663.
Louis VI., king of France, 687.

Louis VII., king of France, 704.
Louis VIII., king of France, 721–22.
Louis IX. le Saint, king of France, 722, 740–41, 753.
Louis X., king of France, 774.
Louis XI., king of France, 829.
Louis XII., king of France, 859, 861.
Louis XIII., king of France, 939, 947.
Louis XIV., king of France, 971, 981, 993–94, 1004.
Louis XV., king of France, 1004, 1034.
Louis XVI., king of France, 1034, 1036, 1043, 1047.
Louis XVIII., ruler of France, 1060.
Louis II. Bavarus, twenty-first emperor of Germany and Italy, 774, 782.
Louis Philippe, ruler of France, 1065.
Loureiro, botanist in Cochinchina, 1018.
Lou-wan, last king of Yan in Northern China, 390.
Lou-wang, of the later Thang, Chinese emperor, 650.
Lowe, T. S. C., American aeronaut, 1070.
Loyola, Ignatius, founder of the Jesuit mon. order, 880.
Lucana, Andr., Spanish botanist, 890.
Lucanus, Roman poet, 477.
Lucas Ghini, Italian botanist, 887.
Luccejus, Roman historian, 446.
Lucianus, Greek satirist, 529.
Lucifer, bishop of Sardinia, 550.
Lucilius, Roman poet, 431.
Lucius, Arian bishop of Alexandria, 553.
Lucius, king of South Britain, 531.
Lucius, twentieth bishop of Rome, 539.
Lucius II., tenth pope, 705.
Lucius III., fifteenth pope, 715.
Lucretius, Roman poet, 453.
Lucullus, L. Licinius, Roman general and hist., 445–46.
Ludgerus, first monastic bishop and theologian, 624.
Ludius, Roman painter, 467.
Ludolff, Mich. Math., botanist, 1027.
Ludovicus Pius (Louis), emperor of France and Germany, 626–27.
Ludwig, C. G., botanist in Barbary, 1027.
Luitprand of Pavia, historian and theologian, 650.
Luke the Evangelist, 482.
Lupercus, Greek grammarian, 537.
Lupicinus, Roman general in Britain, 550.
Lusitanus, Zacutus, Jewish writer, 948.
Luther, leader of the Protestant reformation, 863–67, 870, 877.
Lycaon, second king of Arcadia, 128.
Lycis, Greek comic poet, 281.
Lycon, Greek philosopher, 382.
Lycophron, Greek tragic poet, 370.
Lycortas, Achaean praetor, 398.
Lycurgus, Greek orator, 323.
Lycurgus, Spartan lawgiver, 198, 202.
Lycus of Rhegium, Greek historian, 370.
Lygdamus, Roman poet, 468.
Lynacre, Thomas, one of the founders of the College of Physicians, 858.
Lynceus, king of Argos, 147.
Lynceus of Samos, Greek writer, 370.
Lyon, John, botanist in N. America, 1053.
Lyons, British ambassador at Washington, 1070.
Lysander of Sparta, Greek admiral, 298.
Lysanias of Cyrene, Greek grammarian, 382.
Lysias, Greek orator, 277.
Lysicrates, choregus, or choir-master at Athens, 323, 325.
Lysimachus, brother of Ptolemy III, 391.
Lysimachus, Greek comic poet, 281.
Lysimachus, Greek philosopher, 382.
Lysimachus, Macedonian general, 340, 348, 372–73, 377.
Lysippus, Greek comic poet, 281.
Lysippus, Greek sculptor, 325.
Lyte, H., English botanist, 902.

MAADD, Ishmaelite ancestor of Mohammed, 436.
Macar, leader of a Greek colony, 132.
Macarius, fortieth bishop of Jerusalem, 546.
Macartney, first British ambassador in China, 1047.
Macbeth, king of Scotland, 676, 678.
Maccabaeus, Judas, king of Jerusalem, 400.
Macchaleus, or Aschalius, Assyrian emperor, 113.
Mace, Samuell, English navigator, 923.
Macedonius, bishop of Constantinople, 572.
Macer, Aemilius, Roman poet, 457.
Macer the younger, Roman writer, 467.
Machiavel, secretary of the Republic of Florence, 858.
Machim, discoverer of Madeira, 794, 810.
Machir, son of Manasseh, 120–21.
Machon, Greek comic poet, 382.
Mackenzie, George, jurist and critic, 965.
Maclaurin, Colin, mathematician, 1012.
Macrae, James, botanist in Brazil, Chili, and the Hawaiian Islands, 1064.
Macrinus, twenty-second Roman emperor, 535.
Macrobius, Roman grammarian, 552.
Madain, Arab historian, 619.
Madan Mahadeva, king of Orissa, 714.
Madoc, Welsh voyager, 712.
Madschhul, Arab writer, 612.
Maelius, Sp., wealthy Roman plebeian, 279.
Maenius, M., Roman tribune of the people, 292.
Magadu, king of Martaban in Burmah, 766.
Magalhan, P. Gabriel de, Jesuit mission. in China, 958.
Magas, son of Ptolemy III., 391.
Magellan, or Magalhaens, Portuguese navigator in Spanish employ, 864–65.
Magnentius, claimant of the Roman empire, 549.
Magnes, Greek comic poet, 255.
Magnol, Petr., French botanist, 973, 988.
Magnus, Joannes, Gothic historian, 878.
Magnus, king of Norway, 747.
Mago, Carthaginian agricultural writer, 255.
Mago, Carthaginian general, 302.
Mahalo-mana, king of Ceylon, 527.
Mahaloo Wijayaba, king of Ceylon, 649, 657.
Mahamandala, Hindu king, 285, 306.
Mahanama, Ceylon historian, 568.
Maha-nawma, king of Ceylon, 561, 565.
Mahasena, king of Ceylon, 542, 545.
Mahayensan, king of Ceylon, 627, 630.
Mahendra-pala, Hindu king, 665.
Mahinda, Buddhist priest, 386.
Mahmed Ben Hasan, 612.
Mahmood, twenty-fifth Turkish sultan, 1010, 1022.
Mahmood II., thirty-first Turkish sultan, 1057, 1068.
Mahmud, sultan of Ghazni, 664–65, 667–69.
Mahmud Ben Mohammed, Persian medical writer, 831.
Mahmud Shah Begara, sixth Muslim king of Guzerat, 825, 843, 855.
Mahomed Shah, first sultan of Malacca, 755.

Maigret, Catholic missionary among the Polynesians, 704–5, 1068.
Mailla, P. de, Jesuit missionary in China, 989.
Mailrosius, see Joannes.
Maimburg of Lorraine, historian, 965.
Maimonides, Jewish writer, 711, 723.
Maisa Lalean, king of Java, 664.
Majorianus, Roman emperor of the West, 568.
Makea, Polynesian chief, 680.
Makrizi, Arab writer, 799.
Malachi, Jewish prophet, 281.
Ma-la-ma-thou-fang, Cambodian ambassador, 687.
Malaus, leader of a Greek colony, 179.
Malchion, early Christian writer, 541.
Malchus, Greek historian, 568.
Malchus, see Porphyrius.
Malcolm II., king of Scotland, 675.
Malcolm III., king of Scotland, 678.
Malcolm IV., king of Scotland, 708.
Malebranche, metaphysician, 997.
Malherbe, who first imparted harmony to French poetry, 921.
Malik, first Cahtan ruler of Oman, 227.
Malocello, Lancelote, voyager to the Canaries, 764.
Malpighi, Marc., microscopic observer, 965.
Mamercinus, M. Aemilius, Roman dictator, 280.
Mamertinus, Roman panegyrist, 544.
Mamertinus the younger, Roman rhetor, 548.
Mamylus, Assyrian emperor, 119.
Mamythus, Assyrian emperor, 111.
Manardus, Johannes, Italian botanist, 865.
Manasseh, king of Judah, 219, 222, 226.
Manasseh, son of Joseph, 121.
Manasseh ben Israel, Jewish writer, 948.
Manasses, scholastic Greek writer, 703.
Manco Capac, first inca of Peru, 667, 678.
Manes, founder of the Manichaean sect, 542.
Manetho, Egyptian hist. and chronographer, 13, 371.
Manfred, Norman king of Sicily, 751.
Manfredus de Monte Imperiali, medical writer, 799.
Mang, of the Hia, Chinese emperor, 91.
Mangou Khan, chief of the Tartars, 742, 747, 750.
Manik Rai, eighth Hindu king of Ajmir, 613.
Manka, translator of Sanscrit into Persian, 623.
Manliis, Io. Iacob de, botanist, 824.
Manlius Capitolinus, P., Roman dictator, 312.
Manlius Torquatus, T., Roman dictator, 318, 322.
Mansur, sixth Samani king of Bactria, 655–657.
Mansur II., eighth and last Samani king of Bactria, 664.
Mantegna, Andrea, Italian painter, 831.
Mantias, Greek pharmacologist, 389.
Mantuanus, Baptista, poet, 858.
Manu, or Menu, Institutes of, 420–21.
Manuel, sixty-sixt. Byzantine emperor, 796, 803.
Manuel, fourteenth king of Portugal, 856, 859.
Manutius, Paulus, lib'n of the Vatican, and critic, 897.
Mappus, Marcus, German botanist, 965.
Maputeva, Polynesian chief, 705.
Mar, last Talmudical authority, 568.
Mar Apas Catina, Armenian historian, 401.
Maranta, Barthol., botanist, 892.
Marathius, king of Sicyon, 115.
Maratti, Carlo, Italian painter, 965.
Marcellinus, twenty-seventh bishop of Rome, 544.
Marcellinus Comes of Illyria, chronographer, 576, 586.
Marcellinus presbyter, theologian, 613.
Marcellus, bishop of Ancyra, 548.
Marcellus, M. Claudius, Roman general 390, 393.
Marcellus, twenty-eighth bishop of Rome, 544.
Marcellus, Ulpius, Roman governor of Britain, 532.
Marcellus of Bourdeaux, medical writer, 555.
Marcellus Virgilius, of Florence, 863.
Marcgraf, G., botanist in Brazil, 950.
Marcianus, Greek physician, 466.
Marcianus, third Byzantine emperor, 566.
Marcion, heretical Christian, 527–28.
Marcius, founder of a Roman colony, 411.
Marcius, Roman writer, 389.
Marco Polo, traveller in Central and Eastern Asia, 642, 756–58, 762.
Marcos de Missa, Franciscan Monk, 877.
Marcus, first Gentile bishop of Jerusalem, 527.
Marcus, thirty-second bishop of Rome, 548.
Marcus eremita, theologian, 645.
Marcus Græcus, 756.
Marcus of Byzantium, Greek rhetor, 526.
Mardocempadus, king of Babylon, 215.
Mardonius, Persian general, 256, 265.
Margaret, queen of Denmark and Norway, 797.
Margaret, queen of Scotland, 759.
Margaret Tudor, wife of James IV., 859.
Margaritone, earliest Italian painter, 723.
Margounius, Maximus, modern Greek writer, 897.
Marhum, king of Ternate, 830.
Maria Louisa, second wife of Napoleon, 1057.
Maria Theresa, empress of Germany and Italy, 1019.
Mariana, Spanish historian, 921.
Marianus Scotus, chronographer, 681.
Maribas, Syrian writer of Armenian history, 407.
Mariette, French archæologist, 1066.
Marie Antoinette, wife of Louis XVI., king of France, 1047.
Marignolli, John de, Franciscan missionary, 782.
Marini, Andreas, Italian botanist, 894.
Marini, J. Baptista, Italian poet, 921.
Marino Sanuto Torsello, Italian geographer, 766.
Marinus, Greek philosopher, 568.
Marinus, or Martinus, forty-fourth Roman archbp., 643.
Marinus II., sixty-fourth Roman archbishop, 651–52.
Mariti, botanist in the East, 1023, 1030.
Marius, Aventiensis, chronographer, 589.
Marius, Caius, Roman general, 432, 441–42.
Marius, Simon, astronomer, 928.
Marius, third king of the Gauls, 541.
Mark the Evangelist, 479, 483.
Marot, French poet, 872.
Marquette, Jesuit missionary in N. America, 971.
Marsarchis, Nestorian emigrant, 756.
Marsden, English philologist in Sumatra, 1038.
Marshall, Humphrey, N. American botanist, 1039.
Marsham, John, chronographer, 965.
Marsigli, Ludw. Ferdin., botanist, 1007.
Marsilius, Io., botanist, 1027.
Marsilius ab Ingen, scholastic theologian, 791.
Marsilius Ficinus, 831.
Marsilius Patavinus, 765.
Marsyas, Greek flute-player, 157.
Marsyas of Pella, Greek historian, 325.
Martens, Fried., voyager to Spitzbergen, 970.
Marthad, tobba of Yemen, 549.
Martialis, first bishop of Lemovicinis in Gaul, 539.
Martialis, Roman poet, 518.

Martin, Petrus, Swedish botanist, 941, 1025.
Martini, P. Martin, Jesuit missionary in China, 952.
Martinus, ninth Roman archbishop, 605.
Martinus, rhetor at Constantinople, 564.
Martinus, see Marinus.
Martinus II., thirty-third pope, 757–58.
Martinus III., fifty-second pope, 803, 813.
Martinus Dumiensis, ecclesiastical writer, 576.
Martinus of Tours, ecclesiastical writer, 555.
Martinus Polonus, chronographer, 758.
Martius, botanist in Brazil, 1061.
Martyn, John, English botanist, 1009.
Marudach Baldanes, king of Babylon, 219.
Mary, queen of England, 888–89, 891–92.
Mary, queen of Scotland, 892, 897, 912.
Mary II., wife of William III. of Britain, 985, 991.
Masaccio, founder of a new style of painting, 814.
Masasoit, aboriginal American, 939.
Masaud, sultan of Ghazni, 669, 676.
Masaud II., sultan of Ghazni, 684, 686
Maserjawia, Jewish writer of Arabic, 586.
Mashallah el-Andrusger, astronomer, 624.
Mason, Francis, missionary and bot. in Burmah, 1069.
Mason, John, resident in Newfoundland, 935.
Massé, Enmond, first Jesuit missionary in N. Am., 930.
Masso, Papirius, jurist and historian, 921.
Masson, Francis, English botanist, 1049.
Masudi, Arab geographer, 647, 651.
Matatja ben Moses, Jewish writer, 782.
Matgenus, Phoenician king, 194.
Mather, Cotton, clergyman of Boston, 1096.
Ma-touan-lin, Chinese geographer and hist., 721, 774.
Matsya Kesari, king of Orissa, 675.
Matthæus, bishop of Myra, modern Greek writer, 965.
Matthæus Paris, English historian, 723.
Matthew of Westminster, English historian, 791.
Matthias, thirty-third emperor of Germany and Italy, 930, 936.
Matthias the apostle, 476.
Matthias Hunniades Cor., king of Hungary, 824, 869.
Matthioli, P. A., Italian botanist, 887–89, 894.
Mattuscha, H. G. comes, botanist, 1027.
Matwalesen, king of Ceylon, 627.
Maubant, earliest French missionary in Corea, 1067.
Maud, wife of king Henry of England, 684.
Maundeville, John, traveller to the E. Indies, 687, 787.
Maundrell, Henry, traveller in Palestine, 993.
Maupertius, Mor. de, traveller to the Arc. Circle, 1015.
Maurice of Nassau, voyager to Brazil, 950.
Mauricius, twelfth Byzantine emperor, 589, 591, 597.
Mausolus, king of Caria, 312, 319.
Mavrocordatus, Alex., scholastic Greek writer, 997.
Maximianus, colleague of the emperor Diocletian, 543.
Maximianus, Greek ecclesiastical writer, 560.
Maximilian, twenty-eighth emperor of Germany and Italy, 859, 864.
Maximilian II., thirty-first emperor of Germany and Italy, 898.
Maximilla, one of the founders of the sect of Montanists, 531.
Maximinus, ambassador to Attila, 566.
Maximinus, Roman general and claimant of the empire, 545.
Maximinus, twenty-fifth Roman emperor, 537–38.
Maximus, claimant of the Roman empire, 554–55.
Maximus, forty-first bishop of Jerusalem, 549.
Maximus, fourteenth bishop of Alexandria, 540, 543.
Maximus, or Maximinus, seventh bp. of Antioch, 532.
Maximus, Pupienus, see Pupienus.
Maximus, rhetor at Constantinople, 564.
Maximus, Roman emperor of the West, 567.
Maximus, Valerius, see Valerius.
Maximus Confessor, ecclesiastical writer, 601.
Maximus of Ephesus, Greek philosopher, 547.
Maximus of Tyre, Greek philosopher, 526.
Mayer, Tobias, astronomer, 1037.
May, Henry, navigator, 915.
Mayronis, Franciscus, scholastic theologian, 765.
Mayta Capac, fourth Inca of Peru, 580, 688, 705, 709.
Ma-yuan, Chinese general, 482.
Mecophanes, Greek painter, 382.
Medeia of Colchis, 164.
Medhatithi, Hindu king, 192.
Medici, Cosmo de, duke of Florence, 814.
Medici, Laurence de, duke of Florence, 842.
Medius, Greek historian, 325.
Medon, first Athenian archon, 186, 191.
Meerburgh, Nicolaas, Dutch botanist, 1027.
Meese, David, botanist, 1025.
Megabazus, or Megabyzus, Persian general, 252, 269.
Mehingá, king of Karagué, 730.
Mehujael, son of Irad, 3.
Meir ben Isaac, Hebrew poet, 684.
Meisner, Karl Friadr., botanist, 1064.
Melampus, Dionysian prophet, 153.
Melancthon, Philip, protestant reformer, 876.
Melanippides, Greek poet, 244.
Melanopus, Greek orator, 299.
Melanthius, Greek tragic poet, 281.
Melanthus, Greek painter, 325.
Melanthus, king of Athens, 185.
Melciades, or Miltiades, thirtieth bishop of Rome, 546.
Meleager, Greek poet, 434.
Meleager of Gadara, Greek philosopher, 382.
Melek-Adel Seif-Eddin, Ayoubite sultan of Egypt, 718, 720.
Melek-Adel II., Ayoubite sultan of Egypt, 725, 730.
Melek-Aziz Othman, Ayoubite sult. of Egypt, 716, 718.
Melek-el-Mansur, Ayoubite sultan of Egypt, 718.
Melek-Kamel, Ayoubite sultan of Egypt, 720, 725.
Melek-Saleh, Ayoubite sultan of Egypt, 730, 735, 741.
Melik Shah, king of Persia, 683.
Melendez, Pedro, Spanish admiral, 897.
Meletius of Athens, modern Greek writer, 997.
Meletius of Lycopolis, early Christian writer, 544.
Meletus, Greek tragic poet, 301.
Melissus, C., Roman writer, 457.
Melissus, Greek philosopher, 268, 279.
Meliton, bishop of Sardis, 529.
Mellent, earl of, 684.
Melvill, James, historian, 897.
Membliarus, Phoenician colonist, 150.
Memnon, inventor of alphabetic writing, 106.
Menaechmus, Greek writer, 325.
Menage of Anvers, critic, 965.
Menahem, Karaite Jewish writer, 645.
Menahem, sixteenth king of Israel, 210.
Menahem ben Solomon, Jewish lexicographer, 703.
Menander, Greek comic poet, 325.
Menander, Nicator, Greek king of Bactria, 396.
Menander, Simonian Christian, 498.
Menander Protector, Greek historian, 586.

Menas, ecclesiastical writer, 576.
Mencius, Chinese philosopher, see Meng-tseu.
Mendaña, Alvaro de, Spanish navigator, 898, 917.
Mendelssohn, translator of Bible into German, 1027.
Mendez, Soeiro, governor of Arguin, 825.
Mendoça, Antonio de, viceroy of Mexico, 882.
Mendoza, Peter de, leader of a Spanish colony, 875.
Menecrates of Nysa, Greek grammarian, 400.
Menelaus, Greek chieftain, 176.
Menelaus, Jewish high-priest, 399.
Menelaus of Caria, Greek astronomer, 518.
Meneptha Sethos, king of Egypt, 123.
Meneptha II., king of Egypt, 130.
Meneptha III., king of Egypt, 131.
Menes, first king of Egypt, 62.
Meneses, Emman. Telez de, Portuguese navigator, 860.
Menestheus, king of Athens, 174.
Meng-tseu, Chinese philosopher, 312, 325.
Meniates, Elias, modern Greek writer, 997.
Menilec, Abyssinian king, 407.
Menippus of Caria, Greek rhetor, 434.
Menippus of Gadara, Greek philosopher, 382.
Menkera, or Mycerinus, king of Egypt, 68.
Menkera II., king of Egypt, 71.
Menodotus of Perinthus, Greek historian, 396.
Mento, C. Julius, Roman consul, 282.
Mentuatep, king of Egypt, 80.
Mentuatep II. Nebtura, see Nuantef IV.
Mentuatep III., king of Egypt, 81.
Mentuatep IV., king of Egypt, 83.
Mentzelius, Christian, German botanist, 978.
Menzel, Phil. and Alb., German botanists, 936.
Menzies, botanist on Vancouver's voyage, 1046, 1048.
Merboldus, 675.
Mercator, Gerhardus, chronographer, 902.
Mercator, Marius, ecclesiastical writer, 560.
Meredyth ab Rhys, Welsh bard, 712.
Merenra, king of Egypt, 75.
Merera Miamun, king of Egypt, 131.
Merhet, Egyptian prince, 67.
Merian, M. S., naturalist in Surinam, 1004.
Merlin, or Myrdhyn, Welsh bard, 609.
Merobaudes, Latin poet, 566.
Merrett, Christopher, English botanist, 958, 965.
Merula, Georgius, philologist and historian, 831.
Mervellius, traveller in Arabia, 1002.
Merwan, fourth Ommiad khalif, 612.
Merwan II., fourteenth and last Ommiad khalif, 619–20.
Mesesimordachus, king of Babylon, 220.
Mesochris, king of Egypt, 66.
Mesomedes, Greek poet, 526.
Messala, M. Valerius, Roman painter, 389.
Messala Corvinus, Roman writer, 457.
Messerschmid, traveller in Siberia, 1005, 1007, 1013.
Mestor, king of Argos, 163.
Mesue the elder, see Ebn Masawia.
Metacom, or Philip, aborig. American chief, 964, 972.
Metagenes, Greek comic poet, 281.
Metellus, L. Cæcilius, Roman general, 417.
Metellus, Q. Cæcilius, Roman consul and general, 394, 411, 446.
Methodius, early Christian writer, 546.
Methodius, missionary to the Slavonians, 639.
Methusael, son of Mehujael, 3.
Methuselah, 64.
Metius, Hollander, inventor of the telescope, 928.
Meton, Greek astronomer, 281.
Metrodorus, Greek philosopher, 370.
Metrodorus of Chios, Greek philosopher, 299.
Metrodorus of Persia, Greek writer, 544.
Metrodorus of Scepsis, Greek writer, 424.
Metrophanes of Smyrna, Greek writer, 639.
Meursius, John, archæologist and critic, 933.
Meyan, botanist on the Hawaiian Islands, 1066.
Meyenberg, H. I. botanist, 997.
Meyendorf, ambassador, 1062.
Meyer, Ernst H. F., botanist, 1065, 1067.
Meyer, K. A., botanist in Siberia, 1064, 1066.
Mezeray, French historian, 965.
Micah, Jewish prophet, 213.
Micah of Mount Ephraim, 150.
Michael Curopalata, twenty-ninth Byzantine emp., 626.
Michael II., Balbus, thirty-first Byzantine emp., 627–28.
Michael III., thirty-third Byzantine emperor, 630, 639.
Michael IV., Paphlago, forty-second Byzantine emperor, 675–76.
Michael V., Calaphata, forty-third Byzantine emp., 676.
Michael VI. Strato, forty-sixth Byzantine emperor, 678.
Michael VII. Ducas, forty-ninth Byzant. emp., 680–81.
Michael VIII. Palaeologus, sixty-first Byzantine emperor, 751, 757.
Michaux, André, botanist in N. America, 1038, 1041, 1043–44.
Michaux, F. A., botanist in N. America, 1053, 1056–57.
Micheli, Petr. Ant., botanist, 894, 1010.
Michetti, Italian botanist, 973.
Midas, king of Phrygia, 150.
Middleton, Conyers, 1012.
Miebidos, king of Egypt, 64.
Mieg, Ach., Swiss botanist, 1027.
Miesrob, translator of the Bible and inventor of the Armenian alphabet, 561.
Millar, John, Protestant martyr, 887.
Miller, J. F., botanist, 1036.
Miller, Philip, English botanist, 1021, 1024, 1029.
Milo, Greek wrestler, 252.
Miltiades, early Christian writer, 529.
Miltiades of Athens, Greek general, 258.
Milton, John, English poet, 965.
Mimnermus, Greek poet, 227.
Mims, Christopher, Englishman, 960.
Minervius Burdigalensis, Roman rhetor, 548.
Ming-ti, king of Wei in China, 536.
Ming-ti, of the Han, Chinese emperor, 482, 497.
Ming-ti, II., of the Tcin, Chinese emperor, 546.
Ming-ti IV., of the North. Soung, Chinese emp., 568.
Ming-ti V., of the Thsi, Chinese emperor, 570.
Ming-tsoung, of the later Thang, Chinese emp., 649.
Minos, Cretan legislator and king, 151.
Min-ti, of the later Thang, Chinese emperor, 650.
Minuart, botanist, 1025.
Minucianus, Greek rhetor, 537.
Mirbel, C. F. B., French botanist, 1052.
Miriam, sister of Moses, 129.
Mirkhond, Persian historian, 845.
Mitchell, John, American botanist, 1018.
Mithraeus, or Metraius, Assyrian emperor, 160.
Mithridates, king of Pergamus, 455.
Mithridates, king of Pontus, 318.
Mithridates IV., king of Pontus, 389.
Mithridates V., king of Pontus, 411.
Mithridates VI., king of Pontus, 411, 434, 440, 447.

Mitl, sixth Toltec king of Mexico, 649.
Miyoye, introduced tea plant into Japan, 718.
Mizraim, see Ramses III.
Mnaseas of Patara, Greek writer, 396.
Mnesiptolemus, Greek historian, 389
Mnesitheus, Greek medical writer, 320.
Mnestheus, twelfth Attic king, 166.
Moawiyah, Syrian general, 602.
Mobarik Khilji, thirteenth sultan of Delhi, 774–75.
Mocino, botanist, 1052.
Modestus, early Christian writer, 529.
Modud, sultan of Ghazni, 676.
Moench, Conr., German botanist, 1036, 1039.
Moeris, see Amenemha III.
Moerocles of Athens, Greek orator, 323.
Moez, first Fatimite sultan of Egypt, 656.
Mohalib, Muslim general, 609.
Mohammed, founder of the Muslim relig., 598–99, 601.
Mohammed, seventh Turkish sultan, 802, 811.
Mohammed II., ninth Turkish sultan, 822–23, 825, 831, 834, 843.
Mohammed III., fifteenth Turkish sultan, 918, 923.
Mohammed IV., twentieth Turkish sultan, 957, 982.
Mohammed Abu-l-Saadat, Mem. sult. of Egypt, 856–57.
Mohammed Ali, pasha of Egypt, 1058.
Mohammed ben Abdallah, Arab chieftain, 621.
Mohammed Casim, Muslim general, 615.
Mohammed el-Mansur, Memluk sult. of Egypt, 790–91.
Mohammed Ghori, sultan of Ghor and Ghazni, 718.
Mohammed Kaisi, 703.
Mohammed Khodah Bundah, first Persian ruler of the sect of Ali, 765.
Mohammed Saleh, Memluk sultan of Egypt, 811.
Mohammed Shah, third Mus. king of Guzerat, 817, 822.
Mohring, P. H. G., botanist, 1027.
Mohtadi, fourteenth Abbassid khalif, 639–40.
Moizz-u-din Behram, sultan of Delhi, 725.
Moktader, eighteenth Abbassid khalif, 647, 650.
Moktafi, seventeenth Abbassid khalif, 645–47.
Molay, last chief of the mon. Order of Templars, 773.
Molière, French comic dramatist, 965.
Molina, C. de, on the ancient Peruvians, 898.
Molina, Giov. Ign., botanist in Chili, 1038.
Monaldus Dalmata, scholastic theologian, 782.
Monardes, Nicol., Spanish botanist, 900.
Monmu, forty-second dairo of Japan, 613–14.
Montagnana, Bartholom., Italian medical writer, 818.
Montaigne, French essayist, 897.
Montalbanus, Ovid., Italian botanist, 948.
Montanus, founder of the sect of Montanists, 531, 535.
Montanus Votienus, Roman rhetor, 467.
Montaser, eleventh Abbassid khalif, 638–39.
Montcalm, French general in Canada, 1023.
Montesquieu, 1012.
Montezuma, or Montezuma-Ilhuicamina, fifth Mexican emperor, 815, 820, 829.
Montezuma II., or Montezuma-Xocojotzin, ninth Mexican emperor, 859, 864.
Montfaucon, archæologist and critic, 997.
Montfort, minister of Henry III. of England, 751.
Montigiano, Italian botanist, 885.
Monti, Joseph, Italian botanist, 1005, 1025.
Montin, Larsius, botanist, 1020, 1025.
Montoku, or Bontoku, dairo of Japan, 631, 634.
Monts, M. de, leader of a French colony, 923, 925.
Moorhouse, traveller, 934.
Moquin Tandon, Alfred, botanist, 1068.
Moramir, inventor of Arabic writing, 583.
More, Richard, leader of an English colony, 930.
Morga, Antonio de, historian of the Philippines, 916.
Morhoff of Mecklenburgh, critic, 965.
Moris, G. H., Italian botanist, 1065.
Morison, Robert, English botanist, 965, 975, 977–78.
Moritzi of Geneva, philological botanist, 1066.
Morlæus, Daniel, English orientalist, 680.
Morlandus, Sam., botanist, 997.
Morsimus, Greek tragic poet, 281.
Morton, Thomas, early colonist in New Engl., 943, 947.
Morton, W. T. G., dental experimenter with ether, 1069.
Morychus, Greek tragic poet, 281.
Moschus, Greek bucolic poet, 393.
Moses, Jewish lawgiver and prophet, 130, 149.
Moses Barkepha, Syrian bishop, 650.
Moses ben Elia Pobian, translator of Hebrew, 901.
Moses Narboni, or Maestro Vidal, Jewish writer, 782.
Moses of Chorene, Armenian historian, 561, 565.
Mosih ben Elhakam, 612.
Mostaali, Fatimite sultan of Egypt, 683–84.
Mostain, twelfth Abbassid khalif, 639.
Mostakfi, twenty-second Abbassid khalif, 652.
Mostanser, Fatimite sultan of Egypt, 675–76, 683.
Mota, Antony de, Portuguese navigator, 882.
Motadhed, sixteenth Abbassid khalif, 644–45.
Motaki, twenty-first Abbassid khalif, 651–52.
Motamed, fifteenth Abbassid khalif, 640, 644.
Motassem, eighth Abbassid khalif, 629–30.
Motawakkel, tenth Abbassid khalif, 631, 638.
Motaz, thirteenth Abbassid khalif, 639.
Mothi, twenty-third Abbassid khalif, 652, 656.
Mou-koung, Chinese prince, 228.
Mou-ti, of the Tcin, Chinese emperor, 549.
Mou-tsoung, of the Ming, Chinese emperor, 897.
Mou-wang, of the Tcheou, Chinese emperor, 180, 191.
Mozaffer Shah, first Muslim king of Guzerat, 802.
Mu'awiyah, first Ommiad khalif, 604, 607, 611–12.
Mu'awiyah II., third Ommiad khalif, 612.
Muda Sari, king of Java, 709.
Muhammad Taki, dep.-gov. of Orissa, 1007, 1013.
Muhlenberg, Henry, N. Am. botanist, 1033, 1059–60.
Mukka, king of Pegu, 812.
Mukund Deva, last king of Orissa, 897.
Mulana Ibrahim, Arab missionary on Java, 796, 801.
Mulana Ishak, or M. Alul Islam, Arab missionary in Sumatra and Malacca, 813.
Mula-tissa, king of Ceylon, 529, 532.
Muller, Otto Frid., Danish botanist, 1031.
Müller, C. German, hellenist, 1066.
Mummius, Lucius, Roman general, 402.
Munchhausen, O. de, botanist, 1025.
Munck, Danish navigator, 936.
Munda, or Mudda, Hindu king, 260.
Mundella, Aloysius, botanist, 872.
Munding Sari, king of Java, 741, 743.
Munding Wangi, king of Java, 743, 762.
Munja, Hindu king, 681.
Munk, S., orientalist, 1066.
Munster, Sebastian, 872.
Munsur Mohammed, Persian medical writer, 765.
Muntingius, Abr., Dutch botanist, 965.
Muntingius, Henr., Dutch botanist, 957.
Murad, or Amurath, third Turkish sult., 790, 793, 796.
Murad II., eighth Turkish sultan, 811, 822.

Murad III., fourteenth Turkish sultan, 900, 918.
Murad IV., eighteenth Turkish sultan, 942, 951.
Murakami, dairo of Japan, 652, 656.
Murdoch, who first successfully employed gas-lighting, 1042.
Murillo, B. Estevan, Spanish painter, 965.
Murray, Io. And., botanist, 1031, 1034, 1036.
Murshid Kuli Khan, governor of Orissa, 1013.
Mus, P. Decius, Roman consul, 322.
Musaeus, ecclesiastical writer, 565.
Musaeus, Greek poet, 169.
Musanus, early Christian writer, 529.
Muse Gilibi, sixth Turkish sultan, 801–2.
Musianus, early Christian writer, 534.
Musir ben Muhalhil, Arab traveller in Hindustan, 651.
Musonius Rufus, Greek philosopher, 498.
Mustafa, seventeenth Turkish sultan, 935, 942.
Mustafa II., twenty-third Turkish sultan, 991, 997.
Mustafa III, twenty-seventh Turkish sult., 1023, 1034.
Mustafa IV., thirtieth Turkish sultan, 1056–57.
Mutis, Ios. Celest., bot. on the Bogotan Andes, 1032.
Mycerinus, see Menkera.
Mycon, Greek painter, 281.
Mylus, Greek comic poet, 255.
Myrdhyn, or Merlin, Welsh bard, 609.
Myrepsus, see Nicolaus.
Myro of Byzantium, Greek poetess, 325.
Myrtilus, Greek comic poet, 281.
Myson, one of the "seven sages" of Greece, 233.

Naamah, daughter of Lamech, 3.
Nabonassar, king of Babylon, 212–13.
Nabonnedus, last king of Babylon, 240.
Nabopolassar, or Sardanapallus, Assyrian emp., 198, 203, 228.
Nabuchadnezzar, king of Babylon, 231–32.
Nacaxoc, fifth Toltec king of Mexico, 640.
Nachmanides, Jewish kabalistic writer, 752.
Nachshon the gaon, Jewish astronomer, 639.
Nacht-en-ra, king of Egypt, 82.
Nadab, king of Israel, 191.
Nadius, king of Babylon, 213.
Naevius, Roman poet, 394.
Nagadaseka, Hindu king, 260, 267.
Nagarisingna, king of Burmah, 517.
Nahor, 100.
Nahor, the younger, 103.
Nahshon, 136.
Nahum, Jewish prophet, 222.
Nahusha, Hindu king, 93.
Nanak Schah, founder of the sect of the Sikhs, 877.
Nanda, Hindu king, 321, 328, 337.
Nandaraza, king of Pugan in Burmah, 753.
Nan-keng, of the Chang, Chinese emperor, 120.
Nan-wang, of the Tcheou, Chinese emperor, 341, 371.
Napier, John, mathematician, 933.
Narapadisæthu, king of Pugan in Burmah, 719, 753.
Narcissus, thirtieth bishop of Jerusalem, 533, 535.
Narsès, seventh Sasanid king of Persia, 544.
Narses the eunuch, Byzantine general, 584, 586.
Narvaez, Pamphilo de, early traveller along the shore of Texas, 869, 877.
Naser, Memluk sultan of Egypt, 760, 772, 774, 779, 785.
Nasir-eddin Tousi, Persian geographer and astron., 723.
Nasir-u-din Mahmud, eighth sultan of Delhi, 736, 751.
Nathan, Jewish prophet, 179.
Nauclerus, Joannes, chronographer, 858.
Naudé, Gabriel, physician and critic, 948.
Nausicrates, Greek comic poet, 312.
Navarrete, Fernandez, missionary in the Malayan archipelago, 959–60, 963.
Nayen, Tartar prince, 759.
Nazarius, Roman rhetor, 544.
Nazir Jung, ruler of the Deccan, 1020.
Neacles, Greek painter, 389.
Neander, Michael, 897.
Neanthes of Cyzicum, Greek historian, 382.
Nearchus, Greek navigator through the Persian Gulf, 330, 335, 337.
Nebuchadnezzar, see Nabuchadnezzar.
Neccham, Alexander, old English writer, 720.
Nechao, or Nechoh, see Neku.
Nechepsos, king of Egypt, 221.
Necherophis, king of Egypt, 65.
Necker, French minister of Finance, 1043.
Necker, N. Jos., botanist, 1027.
Nectanebus, king of Egypt, 303, 311–12.
Nectanebus II., last native king of Egypt, 312.
Nectarius, bishop of Constantinople, 554.
Née, Luis, botanist in Mexico, 1045.
Needham, Turb., zoölogist, 1027.
Nees von Esenbeck, C. G., botanist, 1067.
Nees von Esenbeck, T. F. L., botanist, 1062.
Nefrikera, king of Egypt, 70.
Nefruatep, king of Egypt, 92.
Nefruke, king of Egypt, 76.
Nefrukera, king of Egypt, 65.
Nefrukera II., king of Egypt, 76.
Nefrukera-chentu, king of Egypt, 76.
Nefrukera-nebi, king of Egypt, 76.
Nefrukera-pepi-seneb, king of Egypt, 76.
Nefrukera-rerelé, king of Egypt, 76.
Nehemiah, governor of Jerusalem, 276, 281.
Neku, or Nechoh, or Nechao, king of Egypt, 222.
Neku II., king of Egypt, 228.
Neledinsky-Meletzky, Russian poet, 1027.
Neleus, king of Pylos in Greece, 154, 157.
Neleus, leader of a Greek colony, 192.
Nelson, botanist in Northwest America, 1058.
Nelson, British admiral, 1050, 1055.
Nemesianus, Roman poet, 541.
Nentef, king of Egypt, 78.
Nentef II., king of Egypt, 78.
Nentef III., king of Egypt, 80.
Nentef IV., king of Egypt, 82.
Neophron, Greek tragic poet, 268.
Neophytus, scholastic Greek writer, 711.
Neoptolemus, Greek general, 434.
Nepherheres, a later king of Egypt, 179.
Nepherites, king of Egypt, 292, 298.
Nepherites II., king of Egypt, 303.
Nepos, Cornelius, Roman historian, 446.
Nepos, Julius, Roman emperor of the West, 569.
Neriglissoor, king of Babylon, 239.
Nero, fifth Roman emperor, 482, 498.
Nerses Clajensis, Armenian poet, 705.
Nerva, Roman emperor, 518.
Nestor, son of Neleus, 157, 176.
Nestor of Tarsus, Greek philosopher, 456.
Nestor the Russian monk, earliest Slavonic hist., 680.
Nestorianus, Greek chronographer, 569.

Nestorius, bishop of Constantinople and founder of the sect of Nestorians, 565.
Newport, Chris., leader of an English colony, 926, 928.
Newton, Isaac, English astronomer, 967, 977.
Nezahualcojotl, Aztec king and poet, 831.
Nezamysl, duke of Bohemia, 620.
Ngai-ti, of the Han, Chinese emperor, 464.
Ngai-ti II., of the Tcin, Chinese emperor, 551.
Ngai-tsoung, of the Kin, ruler of Northern China, 721.
Ngan-ti, of the Han, Chinese emperor, 519, 525.
Ngan-ti II., of the Tcin, Chinese emperor, 558.
Ngan-wang, of the Tcheou, Chinese emperor, 298.
Niai Gedi Pinateh, a woman of Cambodia, 813, 817, 823.
Nicagoras, Greek rhetor, 537.
Nicander, Greek poet, 403.
Nicander, seventh Proclid king of Sparta, 207.
Nicanor, Greek grammarian, 519.
Nicephorus, twenty-eighth Byzantine emp., 624, 626.
Nicephorus II., Phocas, thirty-eighth Byzantine emperor, 655–56.
Nicephorus III., Botoniates, fiftieth Byzan. emp., 681.
Nicephorus Blemmides, scholastic Greek writer, 723.
Nicephorus Callistus, Xanthopulus Greek hist., 765.
Nicephorus Chumnus, scholastic Greek writer, 752.
Nicephorus Gregoras, Greek historian, 782.
Nicephorus patriarcha, ecclesiastical writer and chronographer, 630.
Nicephorus Theotokes, modern Greek writer, 1027.
Niceratus, Greek medical writer, 467.
Nicetas Choniates, scholastic Greek writer, 718.
Nicetes of Smyrna, Greek rhetor, 518.
Nicetas of Syracuse, see Hicetas.
Nicetas Paphlago, David, 639.
Nicholas of Hereford, translator of the Bible with Wicleff, 795.
Nicholas of Linn, nautical surveyor, 790.
Nicias, Greek painter, 396.
Nicias of Athens, Greek general, 291.
Nicochares, Greek comic poet, 299.
Nicocles, king of Cyprus, 311.
Nicola Pisano, 751.
Nicolas, N. Harris, English chronographer, 1068.
Nicolas, Russian emperor, 1064.
Nicolaus, forty-first Roman archbishop, 633, 639.
Nicolaus II., ninetieth Roman archbishop, 678.
Nicolaus III., thirty-second pope, 757.
Nicolaus IV., thirty-fifth pope, 759, 762.
Nicolaus V., fifty-fourth pope, 821, 823.
Nicolaus, Greek rhetor, 565.
Nicolaus Alexandrinus, medical writer, 765.
Nicolaus Cabasilas, 782.
Nicolaus de Cusa, scholastic theologian, 814.
Nicolaus de Lyra, scholastic theologian, 782.
Nicolaus Myrepsus, Greek medical writer, 733.
Nicolaus of Damascus, Greek historian, 456, 464.
Nicolaus of Laodicea, Greek writer, 552.
Nicolaus Præpositus, medical writer, 685.
Nicoloso de Recco, Genoese pilot, 785.
Nicomachus, Greek comic poet, 281.
Nicomachus, Greek historian, 542.
Nicomachus, Greek painter, 325.
Nicomachus, Greek tragic poet, 281.
Nicomedes, king of Bithynia, 377, 445.
Nicon, Greek writer, 675.
Nicophanes, Greek painter, 325.
Nicophon, Greek comic poet, 299.
Nicostratus, Greek comic poet, 312.
Nicostratus, Greek medical writer, 446.
Nicostratus of Macedonia, Greek rhetor, 526.
Nidsioo, dairo of Japan, 709, 711.
Nidsio II., dairo of Japan, 765, 767.
Niger, Pescennius, claimant of the Roman empire, 533.
Niger, Sextus, Roman pharmacologist, 468.
Nigrodha, Buddhist priest, 383.
Nikitin, Athanasius, Russian traveller in Hindustan, 831–32.
Nilus of Rhodes, 782.
Nimaquiché, Toltec king of the fifth period, 649.
Nimmo, English botanist in Hindustan, 1068.
Nimrod, see Ninus.
Ning-tsoung, of the Soung, Chinese emperor, 716, 719.
Nin-ken, twenty-fifth dairo of Japan, 569, 571.
Ninmio, dairo of Japan, 629, 631.
Nino, Andrew, Spanish navigator, 865.
Nin-tok, seventeenth dairo of Japan, 559.
Ninus, or Nimrod, founder of the Assyrian empire, 93.
Ninyas, or Zames, Assyrian emperor, 96.
Niobe, daughter of Phoroneus, 113.
Niobe, daughter of Tantalus, 153.
Niote, or Siote, dairo of Japan, 945, 953.
Niphon, Greek monk, 704.
Nirmoha, Hindu king, 569.
Nithardus, grandson of Charlemagne, theologian, 629.
Nizami, Persian poet, 687.
Nizar, Ishmaelite chief at Mecca, 457.
Noah, 73.
Noah, or Noh, seventh Samani king of Bactria, 663–64.
Nobou-firo, Japanese general, 817.
Nobunanga, cubo of Japan, 905.
Noetus, early Christian, 538.
Nonianus, M. Servilius, Roman orator and historian, 477.
Nonnos of Panopolis, Greek poet, 565.
Nono, last Wanyambo king of Karagué, 730.
Nooreddin, sultan of Damascus, 713–14.
Nooreddin Ali, Memluk sultan of Egypt, 747, 750.
Nopaltzin, king of the Chichimecs in Mexico, 741.
Nori-firo, prince of Matsmaye, 967.
Norman, Robert, inventor of the dipping needle, 901.
Nossis of Loeri, Greek poetess, 370.
Nothippus, Greek tragic poet, 281.
Nova, John de, Portuguese navigator, 858.
Novatianus, early schismatic Christian, 539.
Novatus, a presbyter, 539.
Nripa Kesari, king of Orissa, 651.
Ntaré, king of Karagué, 730.
Ntaré II., king of Karagué, 730.
Ntaré VII., king of Karagué, 730.
Nuantef, see Nentef.
Numa Pompilius, second king of Rome, 220, 225, 398.
Numenius, Greek medical writer, 372.
Numerianus the poet, colleague of the emperor, Carinus, 543.
Nunez de Balboa, Basco, first European who saw the Pacific, 861–62.
Nunho, Tristam, Portuguese navigator, 816–17, 820.
Nushirwan, see Chosroes.
Nuttall, Thomas, botanist in N. America, 1057–58, 1060–61, 1064–67.
Nycteus, regent in Boeotian Thebes, 152.
Nyctimus, third king of Arcadia, 132.
Nymphis of Heraclea, Greek historian, 382.

OAKES, WILLIAM, American botanist, 1062–64.
Oanamuchi-no-mikoto, ruler of Japan, 98.
Oannes, see Onas.
Oataia, leader of a Polynesian colony, 441.
Oates, Titus, 975.
Obadiah, Jewish prophet, 231.
Obed, 164.
Obodas, Arabian king, 461.
Obradovitch, Dosithei, of Temeswar, Servian writer, 1012.
Ocampo, Sebastian de, Spanish navigator, 860.
Occam, William, scholastic theologian, 782.
Oceanus, father of Clymene, 125.
Ochus, see Artaxerxes.
Octavia, daughter of the emperor Claudius, 482.
Octavius, see Augustus
Odenatus, Roman general and king of Palmyra, 540–41.
Odo, regent of France, 644.
Odoacer, founder of the Gothic kingdom of Italy, 569–70.
Odoric, Franciscan missionary, 776.
Oecumenius, ecclesiastical writer, 650.
Oeder, G. Ch., Danish botanist, 1024, 1030–31.
Oedipus, king of Boeotian Thebes, 164.
Oelhafen, Nicol., German botanist, 953.
Oemler, American botanist, 1059.
Oenomaus, Greek philosopher, 519.
Oenotrus, leader of a Greek colony, 132.
Offa, king of Essex, 613, 615.
Oglethorpe, James, founder of the city of Savannah, 1012, 1016.
Ogotai, Mongol chief, 723.
Ogyges, 112.
Ohthere, a Northman navigator, 643.
Ojeda, Alonso de, Spanish navigator, 857, 860.
Okassa wara, Japanese navigator, 846, 972.
Okkodai, khan of the Tartars, 722–23, 733.
Olaus Magnus, geographer, 878.
Olbers, astronomer, 1052.
Oldenland, botanist in Austral Africa, 986.
Olearius, Io. Gotlfr., German botanist, 997.
Olen, Greek poet, 154.
Olga (Helena), wife of Ingor, Russian prince, 651.
Olivier, G. A., naturalist on the Euphrates, 1047.
O-lo-pen, first Christian missionary in China, 601, 605.
Olybrius, Roman emperor of the West, 568.
Olympias, of Macedonia, 340.
Olympiodorus, Greek historian, 560.
Olympus of Phrygia, Greek poet-musician, 164.
Olympus the younger, Greek composer of music, 213.
Omar, second khalif, 601, 604.
Omar II., eighth Ommiad khalif, 616.
Omar Cheyam, Persian astronomer, 683
Omri, sixth king of Israel, 192.
Onas, or Onnas, king of Egypt, 71.
Oñate, Juan de, Spanish viceroy in Mexico, 916.
Onasimus, Greek rhetor, 544.
Ondogardo, Polo de, report on the Peruvians, 892.
Onesicritus, Greek traveller in Hindustan, 330.
Onnuphis of Heliopolis, preceptor of Pythagoras, 245.
Onomacritus, Greek poet, 239.
Onomarchus, Greek rhetor, 529.
O-no-no Assa-yemi, general, 618.
Oo-da-do-kwan, founder of Vedo city in Japan, 825.
Ookimatz, dairo of Japan, 892, 897, 905, 908, 913.
Ooparaza, king of Pegu, 834.
Gosei-tsumi, inventor of pottery in Japan, 98.
Ophelas, Greek general and geographer, 346.
Ophelion, Greek comic poet, 312.
Opilius, Aurelius, Roman grammarian, 434, 439.
Oppianus of Apamea, Greek poet, 534.
Oppianus of Cilicia, Greek poet, 529–30.
Optatus, bishop of Milevita, 532.
Opye, a Sandwich Islander, 1046.
Orbilius Pupillus, Roman grammarian, 446.
Orchan, second Turkish sultan, 779, 790.
Ordaz, Diego de, Spanish traveller in Guayana, 870.
Orellana, discoverer of the Amazon river, 880.
Orem, Nicolaus, religious reformer, 791.
Orestes, king of Argos and Mycenae, 176, 179.
Orestes, Roman general, 569.
Oribasius, Greek medical writer, 551.
Origen, early Christian writer, 536.
Origen the younger, Neo-platonist, 539, 584.
Orion, Greek grammarian, 560.
Orlandus de Lasso, musician, 897.
Oroëtes, Persian prefect, 250.
Orosius, ecclesiastical writer, 560.
Orpheus, Greek poet, 190.
Orpheus of Croton, Greek poet, 239.
Orsini, John Gaetan, thirty-second pope, 756.
Ortega, C. G. de, botanist, 1025, 1036.
Ortelius, Abraham, geographer, 897, 898.
Ortiz, John, Spanish traveller in Florida, 877, 881.
Osbeck, Peter, voyager to the East Indies and China, 994, 1021, 1025.
Oserkna, see Osorcho.
Osman, or Othman, founder of the Turkish empire, 764, 779.
Osman II., twenty-sixth Turkish sultan, 1022–23.
Osochor, king of Egypt, 180.
Osorcho, or Osorho, king of Egypt, see Osorkon III.
Osorius of Portugal, historian and critic, 897.
Osorkon, or Osorthon, king of Egypt, 190–91.
Osorkon II., king of Egypt, 191.
Osorkon III., king of Egypt, 209.
Osthanes, magian, 263.
Osthanes the younger, magian, 326.
Ostorius Scapula, Roman general in Britain, 481.
Ostromir, mayor of Novogorod, 678.
Oswin, king of Northumbria, 605.
Otacilius, Roman rhetor, 434.
Otfridus Wissenburgensis, theologian, 638.
Othman, third khalif, 604, 607.
Othman, see Osman.
Othman el-Mansur, Memluk sultan of Egypt, 823.
Othman ez-Zenjily, governor of Aden, 714.
Othmarus, theologian, 613.
Othniel, 151.
Otho, king of Greece, 1066.
Otho, or Otto, papal legate in England, 725.
Otho, or Otto, emp. Germany and Italy, 650–51, 655–56.
Otho II., second emp. of Ger'y and Italy, 656, 658, 660.
Otho III., third emp. of Germany and Italy, 660, 664.
Otho, seventh Roman emperor, 499.
Otho Frisingensis, theologian, 705.
Othoes, see Atai.
Otiartes, king of Babylon, 82.
Otto, see Otho.
Ottogar, king of Bohemia, 756.
Ouang-kien, first king of united Corea, 681.
Ouenephes, king of Egypt, 63.

Quen-kong, Chinese prince, 225.
Ou-hien, Chinese astronomer, 103.
Ou-kong, king of Ouei in China, 211–12.
Ousaphaithos, king of Egypt, 64.
Ovalle, Francis de, Spanish navigator, 905.
Ovidius, Roman poet, 470.
Oviedo, early resident in the West Indies, 861, 867.
Owen, O., capt. of a British barque, 1072.
Owen Gwynedd, prince of North Wales, 712.
Oxa, Anglo-Saxon physician, 633.
Oxyartes, king of Bactria, 95.
Oxyntes, king of Athens, 178.
O-zin, sixteenth dairo of Japan, 543.

Paapios, father of Amenophis, 127.
Paawius, Petrus, Dutch botanist, 921.
Pacatus, Drepanius, Roman rhetor, 552.
Pachacutec, ninth inca of Peru, 662, 783, 788, 798.
Pacho, Juan, Spanish captain, 918.
Pachymeres, scholastic Greek writer, 765.
Pacianus, bishop of Barcelona in the Pyrenees, 552.
Pacificus, clockmaker, 629.
Pacificus, theologian, 831.
Pacuvius, Roman tragic poet, 400.
Paddock, Ichabod, founder of the Nantucket whale-fishery, 986.
Paez, Peter, jesuit in Abyssinia, 923.
Paine, Thomas, English political writer, 1035.
Palæmon Vicentinus, Roman grammarian, 477.
Palæphatus, Greek historian, 325.
Palladio, Italian architect, 897.
Palladius, first bishop of the Scots, 565.
Palladius, Roman agricultural writer, 550.
Pallas, Russian naturalist in Siberia, 582, 759, 1028–34, 1039, 1054, 1058.
Palma, Cornelius, Roman prefect in Syria, 519.
Palma, Jacopo, il Vecchio, Italian painter, 872.
Palmas, bishop of Pontus, 533.
Palmerius, Matthæus, chronographer, 822, 846.
Paludanus, Petrus, scholastic theologian, 782.
Pamphila, Greek historian, 477.
Pamphila, inventor of weaving gauze, 129.
Pamphilus, early Christian writer, 544.
Pamphilus, Greek grammarian, 477.
Pamphilus, Greek painter, 312.
Pamphos, Greek poet, 166.
Pamprepius, Greek philosopher, 568.
Panaceia, called daughter of Aesculapius, 156.
Panaenus, Greek painter, 281.
Panaetius, Greek philosopher, 402.
Pancirolus, professor of law at Padua, 897.
Pancovius, Thomas, Swedish botanist, 902, 948.
Pancrates, Greek poet, 517.
Pander, naturalist, 1062.
Pandien, king in Southern Hindustan, 632.
Pandion, fifth king of Athens, 150, 152.
Pandion II., eighth king of Athens, 159.
Pandion, king in Southern Hindustan, 462.
Pandita-wijeya-Chako, king of Ceylon, 669.
Pandu Dewa Nata, chief of the Hindu colony on Java, 571–72, 586.
Pangeran Sabrang Lor., second sult. of Java, 843, 845.
Pangeran Trafggana, third sultan of Java, 845.
Pan-hoei-pan, Chinese poetess and historian, 498.
Pani, Samoan voyager, 1017.
Panina, Hindu grammarian, 320.
Panjar Masin, 814.
Panji, Javan hero, 664.
Pan-keng, of the Chang, Chinese emperor, 123.
Pan-kou, Chinese historian, 498.
Panodorus, Egyptian chronographer, 560.
Pantaenus, Stoic philosopher and early Christian, 532.
Panvinius, Onuphrius, scholar and chronographer, 898.
Panyas, Assyrian emperor, 151.
Panyasis, Greek poet, 268.
Pan young, Chinese general, 525.
Panzer, G. W. F., botanist, 1049.
Papeyan, Burmese king, 448, 469.
Papias, early Christian writer, 526, 531.
Papias, lexicographer, 677.
Papinianus, Roman jurist, 535.
Pappus, Greek mathematician, 552.
Paracelsus, Theophrastus, 872.
Parackramabahoo, king of Ceylon, 664, 667, 669.
Parasara, Hindu astronomer, 154.
Parasurama, Hindu king, 118, 616.
Paris, or Alexander, Trojan prince, 167.
Parker, Dr., missionary, 1067.
Parkinson, John, English botanist, 945, 951.
Parmenides, lawgiver in Italy and philosopher, 255.
Parmigiano, Italian painter, 872.
Parrhasius of Ephesus, Greek painter, 281.
Parrot, Friedrich, botanist on Ararat, 1066.
Parthenius, Greek writer, 457.
Pascal, Blaise, mathematician and essayist, 948.
Paschalis, thirty-fourth Roman archbishop, 626–27.
Paschalis II., fourth pope, 684, 687.
Paschasius, Ratbertus, theologian, 624.
Pasiphilus, Roman praefect, 550.
Pasoscanki, translator into Aymara, 665.
Paspati, A. G., Greek writer on Gypsies, 1066.
Pasquier, Stephen, archæologist and jurist, 921.
Passienus, Roman rhetor, 457.
Patera, Roman rhetor, 547.
Paterculus, Velleius, Roman historian, 468.
Patricius, or St. Patrick, 566.
Patrocles, Greek geographer, 370.
Paul, Russian emperor, 1040, 1053.
Paul the apostle, 148, 378, 477–78, 480–82, 498.
Paula, early Christian traveller in Palestine, 555.
Paulinus Aquileiensis, theologian, 621.
Paullu, 667.
Paulus, bishop of Constantinople, 548.
Paulus, bishop of Narbonne, 539.
Paulus, Greek rhetor, 537.
Paulus, Sim., Danish botanist, 948.
Paulus, twenty-ninth Roman archbishop, 621.
Paulus II., fifty-seventh pope, 829, 833.
Paulus III., sixty-sixth pope, 877, 880, 885.
Paulus Aegineta, Greek medical writer, 607.
Paulus Æmilius, 85.
Paulus Bergensis, Greek writer, 799.
Paulus Diaconus, historian and theologian, 622.
Paulus Jovius, 872.
Paulus of Antioch, ecclesiastical writer, 571.
Paulus of Samosata, heretical Christ. writer, 540, 542.
Paulus of Thebes, Christian and earliest hermit, 539.
Paulus the Novatian, 565.
Pausanias, Greek archæologist, 529, 531.
Pausanias, king of Macedonia, 306.
Pausanias, Spartan general, 265.

Pausias, Greek painter, 370.
Pauson, Greek painter, 281.
Pauthier, G., orientalist, 1067.
Pavon, Spanish botanist in Peru, 1037.
Pechi, king of Egypt, 195.
Pedro Vadillo, traveller and explorer, 877.
Pegolotti, F. Balducci, writer on commerce, 782.
Pehor Siamun, king of Egypt, 169.
Peine, Elias, German botanist, 965.
Peirasus, son of Argus, 121.
Peiresc, Fabri de, historian, and patron of learning, 948.
Peixoto, Antony, Portuguese navigator, 882.
Pekah, king of Israel, 211.
Pekahiah, king of Israel, 211.
Pelagius, bishop of Laodicea, 554.
Pelagius, fifty-eighth bishop of Rome, 584–85.
Pelagius, sixty-first bishop of Rome, 589, 591.
Pelagius Alvarus, scholastic theologian, 782.
Pelasgus, first king of Arcadia, 126.
Pelasgus, leader of a Greek colony, 120.
Peleg, son of Eber, 96.
Pellew, British navigator, 1057.
Pelops, king of Argos, 153.
Pelsart, Francis, Dutch navigator, 944.
Penco de la Vega, writer on the morality of the Stock exchange, 965.
Penn, British admiral, 959.
Penn, Wm., founder of the city of Philadelphia, 978.
Penneius, Thomas, English botanist, 897.
Penthilus, leader of a Greek colony, 179.
Pepi, or Apappus, or Phiops, king of Egypt, 74.
Pepin, king of France, 620–21.
Percy, Sir George, acting governor of Virginia, 930.
Perdiccas, king of Macedonia, 221.
Perdiccas II., eleventh king of Macedonia, 288, 291, 318.
Perdiccas, Macedonian general, 337.
Peregrine, Petrus, physicist, 750.
Peregrinus, Greek philosopher, 529.
Perez, Juan, Spanish navigator, 1034.
Perez, Laurentius, Spanish botanist, 901.
Periander, king of Corinth, 228, 235.
Pericles of Athens, Gr statesman and orator, 268, 282.
Periclymenus, Aeolian chief, 160, 162.
Pernetty, voyager to the Falkland Islands, 1026.
Perring, archæologist in Egypt, 1066.
Perron, Jaques Davy du, 921.
Perseus, Greek painter, 370.
Perseus, king of Argos, 155, 163.
Perseus, last king of Macedonia, 398–99.
Persius, Roman poet, 477.
Perthes, Boucher de, French archæologist, 1069.
Pertinax, eighteenth Roman emperor, 533.
Perugina, Pietro, Italian painter, 858.
Petachja of Regensburg, Jewish traveller, 711.
Petavius of Orleans, chronographer, 948.
Peter III., king of Aragon and Naples, 757.
Peter III., Russian emperor, 1024.
Peter de Cintra, Portuguese navigator, 825.
Peter de Vignes, 723.
Peter the disciple, 478–79, 481, 498.
Peter the Great, Russian emperor, 981, 999, 1007.
Peter the hermit, originator of the Crusades, 683.
Petit, Franc., French botanist, 997.
Petit Thouars, French botanist, 1054.
Petitnicolas, French missionary in Corea, 1071.
Petiver, Jacob, English botanist, 990, 997, 1004.
Petrarch, Italian poet, 791.
Petronius, C., Roman satirist, 483.
Petronius, Caius, Roman prefect over Egypt, 461, 463.
Petronius, Roman ecclesiastical writer, 560.
Petronius Sabinus, early Roman scribe, 244.
Petrus, Cornelius, of Leyden, botanist, 871.
Petrus, physician to Theoderic, 570.
Petrus, sixteenth bishop of Alexandria, 544, 546.
Petrus, twentieth bishop of Alexandria, 552–53.
Petrus ab Alliaco, encyclopædic writer, 801.
Petrus Antiochenus, Greek writer, 675.
Petrus Apianus, 872.
Petrus Aureolus, scholastic theologian, 765.
Petrus Canisius, 897.
Petrus Cantor, see Cantor.
Petrus Cluniacensis, scholastic theologian, 684.
Petrus Comestor, scholastic theologian, 711.
Petrus Damiani, ecclesiastical reformer, 678.
Petrus Lombardus, scholastic theologian, 703.
Petrus Patricius, Greek historian, 576.
Petubastes, king of Egypt, 203, 208–9.
Peucetius, leader of a Greek colony, 132.
Peyssonel, zoölogist in the West Indies, 1012.
Pezagno of Genoa, Portuguese admiral, 774.
Pfeifer, Louis, German botanist, 1069.
Phaethon, 133.
Phalanthus, leader of a Greek colony, 218.
Phalaris, king of Agrigentum in Sicily, 237, 241.
Phanias of Eresus, 348.
Pharamond, first king of the French, 564.
Pharez, 120.
Pharnabazus, Persian general, 302, 311.
Pharnaces, uncle of Cyrus, 236.
Pharnaces II., king of Pontus, 447, 454–55.
Pheles, Phoenician king, 192.
Phemius, Greek poet, 175.
Phemonoe, Greek poetess, 132.
Pherecles, Athenian archon, 198.
Pherecrates, Greek comic poet, 280.
Pherecydes of Athens, Greek historian, 268.
Pherecydes of Syros, Greek philosopher, 237.
Phidias, Greek sculptor, 281.
Phidon, king of Argos, 212.
Philager, Greek rhetor, 526.
Philagrius, Greek medical writer, 547.
Philammon, Greek poet, 162, 177.
Phile, Manuel, 765.
Philelphus, Franciscus, 831.
Philemon, Greek comic poet, 325.
Philemon the younger, Greek comic poet, 370.
Philetas of Cos, Greek poet, 370.
Philetus, tenth bishop of Antioch, 536.
Philinus, Greek orator, 325.
Philinus of Agrigentum, Greek historian, 389.
Philinus of Cos, Greek physician, 376.
Philip, king of France, 682.
Philip II., king of France, 715–16.
Philip III., king of France, 753.
Philip IV. le Bel, king of France, 759, 765.
Philip V., king of France, 774.
Philip II, king of Spain, 889, 891–92, 897, 913, 919.
Philip III., king of Spain, 919, 935.
Philip, see Metacom.
Philip the disciple, 477.
Philippicus, twentieth Byzantine emperor, 615.
Philippides, Greek comic poet, 323.

Philippus, Flavius, Roman consul, 549.
Philippus, Greek comic poet, 312.
Philippus, king of Macedonia, 318, 322.
Philippus III. Aridæus, king of Macedonia, 337, 340.
Philippus IV., king of Macedonia, 391.
Philippus V., king of Macedonia, 393, 396, 398.
Philippus, M. Julius, Roman emperor, 538.
Philippus, sixth king of Macedonia, 226.
Philippus Bergomensis, 831.
Philippus of Side, ecclesiastical writer, 560.
Philippus Presbyter, ecclesiastical writer, 565.
Philiscus, Greek rhetor, 534.
Philiscus of Corcyra, Greek tragic poet, 370.
Philistion, Greek writer, 467.
Philistus, Greek historian, 299, 319.
Philo, Q. Publilius, Roman prætor, 322.
Philochorus, Greek historian, 370.
Philocles, Greek tragic poet, 281.
Philogonus, bishop of Antioch, 546.
Philolaus, Greek lawgiver, 213.
Philolaus, Greek philosopher, 301.
Philon Byblius, Greek historian, 519.
Philon of Heraclea, Greek writer, 382.
Philon of Larissa, Greek philosopher, 433, 478.
Philonides, Greek comic poet, 281.
Philopœmen, prætor of the Achæan League, 397–98.
Philoponus, see Joannes.
Philostephanus of Cyrene, Greek historian, 382.
Philostorgius, Greek ecclesiastical historian, 564.
Philostratus the younger, Greek rhetor, 537.
Philoxenes, Greek painter, 370.
Philoxenus, translator into Syriac, 599.
Philoxenus of Cythera, Greek poet, 299.
Philumenus, Greek medical writer, 540.
Philyllius, Greek comic poet, 299.
Phinehas, Jewish high-priest, 150.
Phiops, see Pepi.
Phips, William, British colonial admiral, 986, 990.
Phlegon of Tralles, Greek historian, 526.
Phocas, thirteenth Byzantine emperor, 597.
Phocylides, Greek poet, 244.
Phœbadius, bishop of Agenni in Gaul, 552.
Phœnix, father of Europa, 147.
Pho-mi, viceroy of Cambodia, 623.
Phorbas, king of Argos, 124, 127.
Phormis, Greek comic poet, 255.
Phoroneus, second king of Argos, 107, 112.
Phortius, Leonardus, modern Greek versifier, 858.
Photinus, bishop of Sirmich in Illyria, 549.
Photius, patriarch at Constantinople, 640.
Phraates, Parthian king, 468.
Phraortes, second Median emperor, 226–27.
Phrylus, Greek painter, 281.
Phrynichus, Greek comic poet, 281.
Phrynichus, Greek tragic poet, 255–56.
Phrynichus of Arabia, Greek writer, 529.
Phylarchus, Greek historian, 389.
Phylas, Heraclid chief, 175, 179.
Piazzi, astronomer, 1052.
Picard, astronomer, 967, 971.
Picignano, geographer, 791.
Pickering, Timothy, of Salem, 1034.
Picus Mirandula, Joannes, 831.
Pick-i, introduced Christianity into Corea, 1039.
Pieri, botanist in Greece, 1057.
Pierius of Alexandria, early Christian writer, 541.
Pierre le bon de Lombardie, 782.
Pigres, Greek poet, 263.
Pi-kan, minister of the emperor Cheou-sin, 155.
Pilletier Casp., Belgian botanist, 921.
Pilpay, Sanscrit writer of fables, 517, 576.
Pindar, Greek poet, 256.
Pineda, Alonzo Alv. de, discov. of the Mississippi, 864.
Ping-wang, of the Tcheou, Chinese emperor, 209, 215.
Pinus, Cornelius, Roman painter, 498.
Pinytus, bishop of Cnossus in Crete, 529.
Pinzon, Vincent Yanez, Spanish navigator, 858, 860.
Pisander, Greek comic poet, 268.
Pisander of Camira, Greek poet, 227.
Pisander of Laranda, Greek poet, 534.
Pisides, Georgius, Greek poet and hist., 584, 609, 601.
Pisistratus, king of Athens, 239, 249.
Piso, Calpurnius, Roman historian, 400.
Piso, W., botanist in Brazil, 950.
Pitcher, American botanist, 1067.
Pithou, Peter, French critic, 897.
Pitt, William, British statesman, 1026.
Pittacus of Mytilene, one of the "seven sages" of Greece, 233.
Pittheus, son of Pelops, 157.
Pius, ninth bishop of Rome, 528.
Pius II., fifty-sixth pope, 825, 829.
Pius III., sixty-first pope, 859.
Pius IV., seventieth pope, 892, 896.
Pius VI., ninety-sixth pope, 1051.
Pius VII., ninety-seventh pope, 1051, 1057, 1060.
Pizarro, Fr., Span. conq. of Peru, 866, 870–71, 875, 881.
Pizarro, Gonzalo, Span. trav. in S. America, 662, 868.
Placidia, Rom. wife of the Goth. king Ataulphus, 562.
Placidus Actor, botanist, 629.
Plan Carpin, traveller in Central Asia, 736.
Plancus, leader of a Roman colony, 455.
Plancus, Munatius, Roman orator, 457.
Planudes, Maximus, scholastic Greek writer, 765, 779.
Platearius, Joannes, botanist, 854.
Plateo, father of Pamphila, 129.
Platerus, Felix, botanist, 894.
Platina, Baptista, historian, 831.
Plato, Greek comic poet, 284, 292.
Plato, Greek philosopher, 13, 301, 320.
Plato the younger, Greek comic poet, 370.
Plautus, Roman dramatist, 394.
Pletho, Georgius Gemistus, of Constantinople, 831.
Plinius, Roman encyclopedic writer, 498, 515.
Plinius Secundus, Roman praetor, 517, 519.
Plinius Valerianus, botanist, 629.
Plot, Robert, English naturalist, 965.
Plotinus, founder of Neo-Platonism, 539.
Plotius Gallus, Roman rhetor, 434.
Plukenet, L., botanist, 989, 992, 995, 999.
Plumier, Carolus, botanist in the West Indies, 986, 990.
Plutarchus, Greek biographer, 517.
Plutarchus of Athens, Greek philosopher, 560.
Pocahontas, aboriginal American, 926.
Pococke, R., traveller in the East, 1018.
Poellus, Greek writer, 684.
Poeppig, Ed., botanist in Chili and Peru, 1065.
Poggio, Florentine historian, 814.
Pohl, I. F., botanist, 1049.
Poiret, I. L. M., French botanist, 1040, 1050.
Poiteau, botanist in the West Indies, 1054, 1057.
Poivre, Petrus, botanist in the Mauritius Islands, 1027.

Polemo, Antonius, Greek rhetor, 526.
Polemon, Greek archæologist, 396.
Polemon, Greek philosopher, 325, 340.
Polignac, author of Anti-Lucretius, 997.
Politianus, Angelus, poet and scholar, 831.
Pollich, Io. Ad., botanist, 1035.
Pollini, Cyrus, Italian botanist, 1063.
Pollio, C. Asinius, Roman orator and consul, 457.
Pollio, Trebellius, Roman historian, 544.
Pollio, Valerius, of Alexandria, philosopher, 519.
Pollio of Tralles, Greek philosopher, 456.
Pollux, Greek chronographer, 650.
Pollux, Julius, Greek lexicographer, 531.
Polyaenus, Greek military writer, 526.
Polybius, Greek historian, 398, 401–2.
Polycarpus, early Christian writer, 529.
Polychares, Olympic victor, 210.
Polycleitus of Argos, Greek sculptor, 285.
Polycleitus the younger, Greek sculptor, 299.
Polycrates, bishop of Ephesus, 533.
Polycrates, king of Samos, 245, 250.
Polydorus, Greek sculptor, 325.
Polydorus, son of Cadmus, 152.
Polydorus, tenth Agid king of Sparta, 213.
Polyeuctus of Athens, Greek orator, 323.
Polygnotus, Greek painter, 281.
Polyhistor, Alexander, Greek historian, 433.
Polyidus, Greek poet, 299.
Polymnastus, Greek poet, 222.
Polynices, Cadmean chief, 164.
Polyzelus, Greek comic poet, 299.
Polyzelus, Greek historian, 244.
Pomare, New Zealand chief, 1017.
Pomerius, Julianus, ecclesiastical writer, 570.
Pompeius, Roman general and triumvir, 446, 455.
Pompeius, Sextus, rival of Antony and Octavius, 456.
Pompeius Sextus, Roman consul, 472.
Pomponatus, Petrus, of Mantua, 858.
Pomponius Bononiensis, Roman dramatist, 434.
Pona, Io., botanist at Verona, 918.
Ponce de Leon, John, Spanish navigator, 861.
Pontanus, J. Jovianus, restorer of classic learning in Italy, 858.
Pontedera, Jul., botanist, 1006.
Pontianus, sixteenth bishop of Rome, 536.
Pontin, botanist in Malabar, 1025.
Pontius, early Christian writer, 537.
Pontoppidan, Ericus, Norwegian naturalist, 1021.
Poo, Fernando da, Portuguese navigator, 833.
Poole, R. S., English archæologist, 1066.
Pope, Alexander, English poet, 1012.
Popham, George, leader of a British colony, 926–27.
Poppaea, wife of Nero, 498.
Porphyrius, or Malchus, Neo-Platonist, 540.
Porphyrius, Optatianus, Roman poet, 544.
Porsena, king of Etruria, 252.
Porta, Io. Bapt., Italian botanist, 913.
Porus, Hindu king, 328, 340.
Posidippus, Greek comic poet, 370.
Posidonius, Greek medical writer, 519.
Posidonius, Greek traveller and astronomer, 442.
Possidius, Roman ecclesiastical writer, 565.
Postumus, C., first king of Gaul, 539, 541.
Pothinus, bishop of Lugdunum, 531.
Poti-kiang, of the Hia, Chinese emperor, 92.
Poukpasau, king in Burmah, 602.
Pourthié, Catholic missionary in Corea, 1071.
Poussin, Caspar, landscape painter, 965.
Poussin, Nicholas, French painter, 948.
Poutrincourt, leader of a French colony, 925.
Powatah, or Pawatah, abor. chief under Powhatan, 926.
Powhatan, or Powaton, abor. American chief, 913, 926.
Prabu Jaya Baya, king of Guj'rat, 543, 760.
Praetextatus, Vettius, heathen priest, 552.
Prasenadjit, Hindu king, 306.
Prasene, Hindu king, 241.
Pratab Rudra Deva, king of Orissa, 859.
Pratinas, inventor of Satyric drama, 255.
Praud'ha, or Pratapa Deva, Hindu king, 823.
Praxilla, Greek poetess, 255.
Praxiteles of Magna Graecia, sculptor, 370.
Prescott, Colonel William, Am. revolu. officer, 1035.
Presl, C. B., German botanist, 1067.
Prestor Johan, see Ung-kan.
Priamus, king of Troy, 156.
Prideaux, Humphrey, historian, 997.
Prieras, Sylvester, scholastic theologian, 858.
Priestley, Joseph, Engl. theologian and chemist, 1034.
Pring, Martin, British navigator, 923.
Prior, Matthew, English poet, 997.
Prior, R. C. A., philological botanist, 1071.
Priscianus, Greek grammarian, 576.
Priscilla, early heretical Christian, 531.
Priscillianus, bishop of Gallaecia, 555.
Priscus, Accius, Roman painter, 498.
Priscus, Greek historian, 566.
Priscus, Heathen priest, 558.
Prithwi, last Hindu king of Delhi, 676, 712, 716.
Pritzel, Georg August, German botanist, 1069.
Proaeresius, Greek rhetor, 547.
Probus, thirty-eighth Roman emperor, 542–43.
Probus of Berytus, Greek grammarian, 477.
Procles and Eurysthenes, kings of Sparta, 186.
Proclus, Greek mathematician, 569, 572.
Proclus of Naucrates, Greek rhetor, 529.
Procopius, historian, 577.
Prodicus of Ceos, Greek philosopher, 281.
Prodicus of Phocaea, Greek poet, 213.
Proetus, ruler at Tiryns, 153.
Pronis, French governor of Madagascar, 953, 956.
Propertius, Roman poet, 457.
Proserpina, 148.
Prosper Aquitanus, chronog. and theologian, 563, 567.
Protagoras, Greek sophist, 281.
Proterius, bishop of Alexandria, 567.
Proteus, see Pehor Siamun.
Protogenes of Rhodes, Greek painter, 325.
Prudentius, Roman ecclesiastical writer, 560.
Prusias, king of Bithynia, 389.
Prytanis, fourth Procłid king of Sparta, 193.
Psamathë, daughter of Crotopus, 136.
Psammetichus, king of Corinth, 235.
Psammetichus, see Psamtik.
Psammouthis, king of Egypt, 303.
Psammous, see Psimut.
Psamtik, or Psammetichus, king of Egypt, 224.
Psamtik II., king of Egypt, 233.
Psamtik III., king of Egypt, 249.
Psaon of Plataea, Greek historian, 370.
Psimut, king of Egypt, 211.
Psinakes, king of Egypt, 180.
Psousennes, king of Egypt, 178–79.

Psousennes II., king of Egypt, 180.
Ptolemaeus, Claudius, Greek geographer and astronomer, 526–27.
Ptolemaeus Appion, king of Cyrene, 438.
Ptolemaeus Ceraunus, usurp. king of Macedonia, 377.
Ptolemaeus Soter, Gr. king of Egypt, 337, 347–8, 376.
Ptolemaeus II. Philadelphus, Greek king of Egypt, 375, 378, 386.
Ptolemaeus III. Euergetes, Gr. king of Egypt, 386, 391.
Ptolemaeus IV. Philopator, Gr. king of Egypt, 391, 395.
Ptolemaeus V. Epiphanes, Gr. king of Egypt, 395, 398.
Ptolemaeus VI. Philometor, Greek king of Egypt, 398, 400, 402.
Ptolemaeus VII. Physcon, Greek king of Egypt, 399, 402, 407.
Ptolemaeus VIII. Lathyrus, Greek king of Egypt, 417, 439, 441, 443.
Ptolemaeus IX. Alexander, Gr. king of Egypt, 431, 441.
Ptolemaeus X. Alexander II., Gr. king of Egypt, 443.
Ptolemaeus XI. Auletes, Gr. king of Egypt, 443, 453.
Ptolemaeus XII. of Egypt, 455.
Ptolemaeus of Megalopolis, Greek historian, 389.
Ptolemaeus of Mendes, Greek historian, 456.
Ptolemaeus of Naucratis, Greek rhetor, 529.
Ptolichus, Greek sculptor, 255.
Puchpamitra, Hindu king, 444.
Puchyadharman, Hindu king, 438, 444.
Puffendorf of Saxony, jurist and historian, 965.
Pul, Assyrian emperor, 210.
Pula Sara, father of the Javan chief Abiasa, 570.
Pulimat, or Pulomarchish, Hindu king, 566.
Pungnaréka, king of Pegu, 619.
Punta Dewa, ruler of the Hindu colonies on Java, 586.
Pupienus Maximus, twenty-sixth Roman emperor, 538.
Purbach, George, inventor of decimals, 829.
Pursh, botanist in N. America, 1053, 1055–56, 1058.
Puru, Hindu prince, 99.
Puruhanman, Sanscrit poet, 420.
Pururava, Hindu king, 88.
Purushottama Deva, king of Orissa, 859.
Pushkin, Alexander, Russian poet, 1066.
Puteanus, Ericius, critic, 948.
Putiatine, Russian ambassador to Japan, 1070.
Pygmalion, Phoenician king, 196, 202.
Pylades, Roman actor, 457.
Pyrrhon, Greek philosopher, 325.
Pyrrhus, king of Epirus, 373, 377–78.
Pythagoras, Greek philosopher, 245.
Pythangelus, Greek tragic poet, 281.
Pytheas of Massilia, Greek voyager to N. Europe, 325.
Pytheos, Greek architect, 322.
Pythocles, Greek orator, 325.
Pythocritus, Greek musician, 237.

QUADRA, Spanish navigator, 1035.
Quadratus, Asinius, Greek historian, 537.
Quadratus, early Christian writer, 525.
Quadrigarius, Claudius, Roman historian, 434.
Quakelbeen, botanist at Constantinople, 891.
Quassan, dairo of Japan, 662–63.
Quatrami, Evang., Italian pharmacologist, 918.
Quauhtemotzin, eleventh and last Mexican emperor, 864–65, 867.
Quer y Martinez, Spanish botanist, 1026.
Quetzalcohuatl, teacher of civilization in Mexico, 580.
Quevedo, Francis, Spanish humorist, 948.
Quinctius, Flamininus, Roman general, 396, 398.
Quintilianus, Roman grammarian, 498.
Quintilius Cremonensis, Roman poet, 457.
Quirinalis, Clodius, Roman rhetor, 477.
Quiros, P. Fernandez de, Portuguese navigator, 863, 920, 924–25.
Quo-mio, dairo of Japan, 782.

RABANUS MAURUS, theologian, 631.
Rab, or Abba Aricha, editor of the Mishna, 532.
Rab Ashe, principal col. of the Talmud Babeli, 560.
Rabbi Jochanan, 541.
R. Abraham Aben Ezra, 703.
R. Adæ, Jewish chronographer, 549.
R. Elias Misrachi, 831.
R. Isaac the blind, founder of kabbalis. literature, 718.
R. Ishak Aben Sid, Jewish astronomer, 743.
R. Ishak Cordubensis, 680.
R. Jehuda, compiler of the Mishna, 532.
R. Jose, editor of the Talmud Babeli, 568.
R. Oschaja, compiler of the External Mishna, 532.
Rabel, Dan, botanist, 948.
Rabelais, French humorist, 872.
Rachel, mother of Joseph, 116.
Rachid-eddin, Persian hist. of the Mongols, 772–73.
Racine, French tragic dramatist, 965.
Radagasius, Gothic general, 560.
Raden Aji Nirmala, king of Java, 620.
Raden Paku, appointed chief of Gresik in Java, 813, 817, 830, 854.
Raden Pankas, king of Java, 709.
Raden Patah, first sultan of Java, 814, 824, 829, 834, 843.
Raden Rachmat, muslim prince and missionary on Java, 815, 817, 830.
Raden Sawela, gov. of a Hindu col. on Java, 552, 554.
Raden Tanduran, king of Java, 762, 775.
Radi, twentieth Abbassid khalif, 650–51.
Radulphus; Richardus of Armagh, 782.
Radulphus Flaviacensis, theologian, 645.
Radzivil, 897.
Rafinesque Schmaltz, C. S., nat. in N. America, 1066.
Rafn, C. G., Danish botanist, 1049.
Rahotep, king of Egypt, 99.
Raimundus Lullius, 758.
Rainaldus, architect, 678.
Raitch, J., Servian historian, 1012.
Raja Bhoja, Hindu king, 681.
Rajendrala Mitra, Hindu writer, 401.
Rajrajeswar Deva, king of Orissa, 725.
Rakamai, king of Egypt, 96.
Rakamat, Egyptian princess, 178.
Rakta Bahu, Yavana invader of Orissa, 546.
Raleigh, Walter, 908, 913, 916, 923, 936.
Rallè, Jesuit missionary in N. America, 1007.
Ralph of Diceto, historian, 718.
Ram, 140.
Rama, Hindu warrior, 118.
Ramanuja, Sanscrit writer and reformer of the Saiva doctrine, 667.
Ramdeo, Mahratta king, 762, 766.
Ramessu, or Ramses, king of Egypt, 123.
Ramessu II., king of Egypt, 125.
Ramessu III., king of Egypt, 132, 139.

Ramessu IV., king of Egypt, 139, 146.
Ramessu V., king of Egypt, 146.
Ramessu VI., king of Egypt, 148, 150.
Ramessu VII., king of Egypt, 150.
Ramessu VIII., king of Egypt, 150.
Ramessu IX., king of Egypt, 152, 153.
Ramessu X., king of Egypt, 155.
Ramessu XI., king of Egypt, 155, 157.
Ramessu XII., king of Egypt, 157, 166.
Ramessu XIII., king of Egypt, 166, 169.
Ramirez, first king of Arragon in Spain, 675.
Ramon de la Sagra, botanist in Cuba, 1068.
Ramunsalingda, Burmese king, 476, 478.
Ramus, Jonas, Norwegian botanist, 1012.
Ramus, Peter, opponent of Aristotelian philos., 897.
Rand, Isaac, English botanist, 1012.
Rando, German prince, 552.
Randolph, Edward, collector of customs in New England, 976–77.
Randolph, Peyton, pres. of the first Am. congress, 1034.
Ranman, Burmese king, 370, 383.
Ranthinkha, king in Burmah, 476.
Raphael, Italian painter, 858.
Raphael Mengs, Ant., Bohemian painter, 1027.
Raphael Morghen, Italian engraver, 1027.
Raphael Volaterranus, 858.
Rapin of Tours, critic, 965.
Ra-sekenen, king of Egypt, 103.
Ratanpal, or Ratibal, prince of Cabul, 613.
Rathgeb, botanist, 1025.
Rathotis, or Teti, queen of Egypt, 120.
Rathoures, king of Egypt, 71.
Ratoises, king of Egypt, 69.
Ratu Peng'ging, Javan admiral, 814.
Rauwolf, L., botanist in Palestine, 900.
Rawson, Grindal, missionary in New England, 994.
Ray, John, Eng. bot., 958, 962, 981, 988, 990, 999, 1010.
Raya-sena, Hindu king, 676.
Rea, John, English botanist, 964.
Reaumur, Renat. Ant., French botanist, 1012.
Rebekah, daughter of Bethuel, 112.
Rebentisch, Joh. Friedr., German botanist, 1055.
Recared, Gothic king of Spain, 590.
Redouté P. J., artist and botanist, 1053.
Regas of Velestinus, modern Greek versifier, 1027.
Regibalus, king of Babylon, 219–20.
Regio, Henr., Dutch botanist, 965.
Regiomontanus, restorer of astronomy in Europe, 829.
Regulus, Roman general, 383.
Rehfeld, Abrah., botanist, 997.
Rehoboam, Jewish king, 185.
Reichard, J. Jac., German botanist, 1033.
Reiner, Jos., botanist, 1049.
Reisch, encyclopædic writer, 845.
Rekkhan, Burmese king, 383, 391.
Rema, Abyssinian king, 526, 530.
Rembrandt van Ryn, Dutch painter, 965.
Remigius Antisiodorensis, theologian, 639.
Remy, botanist at the Hawaiian Islands, 1069.
Renaudot, French orientalist, 997.
Renealmus, Paul, French botanist, 930.
Ren-sei, dairo of Japan, 656.
Rephah, 123.
Resanoff, Russian ambassador to Japan, 1055.
Resheph, 123.
Retzius, A. Io., botanist, 1036, 1042, 1048.
Reu, 98.
Reuchlin, 854.
Reyger, G. G., botanist, 1027.
Rezia Begum, sultana of Delhi, 724–25.
Rezin, last king of Damascus and Syria, 213.
Rezon, king of Syria, 180.
Rhazes, Arab medical writer, 586, 648.
Rheede, H. van, botanist in Hindustan, 973.
Rhegino, Abbas, historian, 647.
Rheticius, bishop of Augustodunum in Gaul, 544.
Rhianus, Greek poet, 389.
Rhinthon, Greek dramatic poet, 370.
Rhodon, early Christian writer, 534.
Rhys Grug, Welsh prince, 722.
Rhywallon, Welsh physician, 722.
Ribault, Jean, leader of a French colony, 893.
Ricardus of Cirencester, Brit. hist. and geogr., 797.
Ricci, Matteo, Jesuit missionary in China, 921.
Riccioli, astronomer, 948.
Riccoboni of Rovigo, critic, 897.
Richard, Claude Louis, French botanist, 1045, 1057.
Richard, prior of Dover, 714.
Richard, twenty-sixth king of England, 716.
Richard II., thirty-second king of England, 795.
Richard III, thirty-seventh king of England, 843.
Richard of Cornwall, emp. of Germany and Italy, 751.
Richardus Armachanus, scholastic theologian, 782.
Richardus de media Villa, scholastic theologian, 752.
Richardus de S. Victore of Scotland, scholastic theologian, 703.
Richer, scientific experimenter, 972.
Ridel, missionary in Corea, 1071.
Rinder, A., Russian botanist, 1027.
Rinsifée, Japanese geographer, 818, 1032.
Riothimus, king in Britain, 568.
Rishyasringa, Hindu king, 153.
Risso, A., zoölogist at Nice, 1064.
Ri-tsiou, eighteenth dairo of Japan, 559–60.
Ritter, Io. Iac., German botanist, 1027.
Ritter, Paul, of Vitezovich, Croatian writer, 997.
Rivera, Domingo, 863.
Rivinus, Aug. Quir., German botanist, 989.
Robbins, American botanist, 1065.
Robert, earl of Flanders, 683.
Robert, king of France, 672.
Robert II., king of Scotland, 792, 795.
Robert III., king of Scotland, 801.
Robert Bruce, king of Scotland, 774.
Robert Guiscard, 685.
Robertus de Monte, chronographer, 719.
Robertus Sorbona, see Sorbona.
Robespierre, F. J. M. I., French revolutionist, 1048.
Robin, Io., French botanist, 928, 936.
Robin, Vespasian, French botanist, 941.
Robins, Benjamin, English mathematician, 1012.
Robinson, Edw., bibl. geographer in Palestine, 1066.
Robinson, William, Quaker martyr in N. Engl., 960.
Robledo, Jorge de, 877.
Robson, Stephen, English botanist, 1036.
Roca, sixth inca of Peru, 711, 717, 740.
Roche, de la, marquis, French gov. in America, 914.
Rochefoucauld, author of The Maxims, 965.
Rodney, George B., British admiral, 1038.
Rodolph of Hapsburg, seventeenth emperor of Germany and Italy, 753, 755–56.
Rodolph of Swabia, elected king of Germany, 681.

Rodolph II., thirty-second emperor of Germany and Italy, 930.
Roe, Thos., first Brit. ambassador in Hindustan, 924.
Roemer, Io. Iac., German botanist, 1061.
Roger II., Norman king of Sicily, 689.
Roger of Normandy, 678.
Rogerius, P. Michael, earliest Jesuit missionary in China, 903.
Rogers, Woods, British admiral, 1005.
Roggeri, Iacobus, Italian botanist, 965.
Rohinda, Wahuma king of Karagué, 730.
Rohinda II., king of Karagué, 730.
Rohinda VI., king of Karagué, 730.
Rohunna, king of Ceylon, 532.
Roku-dsioo, dairo of Japan, 711–12.
Rolfinck, Guerner, German botanist, 965.
Rollin, Charles, critic and historian, 1012.
Roloff, C. L., botanist, 1027.
Romano, Gulio, Italian painter, 872.
Romanus, thirty-seventh Byzantine emperor, 655.
Romanus II., forty-first Byzantine emperor, 669, 675.
Romanus Lecapinus, 652.
Romulus, first king of Rome, 214, 220.
Romulus Augustus, last Rom. emp. of the West, 569.
Rondelet, French ichthyologist, 882.
Ronmokkha, king in Burmah, 469, 476.
Ronsard, Peter, French poet, 897.
Rook, admiral, 999.
Roquetaillade, Jean de, 782.
Roscelinus of Britany, scholastic theologian, 680.
Roscoe, Wm., English botanist, 1052.
Rosen, Eberh., Swedish botanist, 1020.
Rossi, As de, Jewish archæologist, 897.
Rostkow, F. G., German botanist, 1052.
Roth, Alb. Gul., German botanist, 1043, 1049.
Röttboll, Chr. F., Danish bot., 1030, 1033, 1036, 1042.
Rottler, botanist, 1049.
Routh, M. J., English hellenist, 1066.
Rouville, Hertel de, French officer, 999.
Roux, French orientalist, 1052.
Roxana, wife of Alexander, 338, 345.
Roxburgh, botanist in Hindustan, 1048.
Royen, Adr. van, Dutch botanist, 1025.
Royerus, Io., German botanist, 948.
Rubens, Peter Paul, Flemish painter, 948.
Rubruquis, Guillaume de, traveller in Central and Eastern Asia, 736, 742.
Rudbeck, Olaus, Swedish botanist, 960, 963, 981.
Rudbeck, Olaus fil., botanist in Lapland, 994, 997.
Rudge, Edw., English botanist, 1050, 1056.
Rudolphi, K. Arm., botanist, 1049.
Ruel, son of Esau, 119.
Ruellius, Io., French botanist, 876.
Rufinus, Roman patrician in Constantinople, 558.
Rufus Ephesius, Greek medical writer, 520.
Ruiz, Spanish botanist in Peru, 1037.
Rukn-u-din, fourth sultan of Delhi, 724.
Ruling, botanist, 1027.
Rumanika, king of Karagué, 730.
Rumford, Count (Benj. Thompson), Am. scient., 1049.
Rumphius, G. E., botanist in the East Indies, 966.
Runolfson, Thorlak, Icelandic bishop, 684
Rupertus de Russia, scholastic theologian, 752.
Rupertus of Worms, theologian, 619.
Rupertus Palatinus, twenty-third emperor of Germany and Italy, 801.
Rupertus Tutiensis, theologian, 684.
Ruppius, H. Bern., botanist, 1005.
Ruprecht, F. I., botanist among the Samojedes, 1069.
Rurik, founder of the Russian empire, 639.
Rusatira, king of Karagué, 730.
Rusbrochius, Joannes, theologian, 791.
Russel, Alexander, naturalist in Syria, 1023.
Russell, J. L., American botanist, 970.
Rutebeuf, Anglo-Norman French poet, 752.
Rutilius Numatianus, Roman poet, 560.
Rutilius Rufus, Roman orator, 434, 439.
Rutilus, C. Marcius, Roman plebeian censor and dictator, 319.
Ruysdael, Jacob, landscape painter, 965.
Ryp, John Cornelius, Dutch navigator, 918.
Rzaczynski, Gabr., Polish botanist, 1006.

SAAD BEN MANSSUR, see Ebn Kemunat.
Saadi, Persian poet, 758.
Saadja, Jewish writer, 645.
Saadja Gaon, Jewish liturgical writer, 651.
Saavedra, Alvaro de, Spanish navigator, 869–70.
Sabacon, see Shabak.
Sabatok, king of Egypt, 213, 215, 217.
Sabbati, L., Italian botanist, 1019.
Sabbatai Donolo ben Abr., Jewish astronomer, 650.
Sabellicus, M. A. C., 831.
Sabina, wife of Hadrian, 527.
Sabinianus, sixty-third bishop of Rome, 597.
Sacadas, Greek poet, 231.
Sachlekes, Stephanus, modern Greek writer, 831.
Sacrobosco, Jean de, astronomer, 718.
Sadyattes, king of Lydia, 227.
Saeberht, king of Essex and Christian convert, 597.
Saëd, Muslim general, 682.
Saemund, Icelandic poet and historian, 711.
Saewulf, English traveller in Palestine, 684.
Saga, fifty-second dairo of Japan, 626–27.
Saga II., or Go-Saga, dairo of Japan, 735, 740.
Sahili, Abu-Ishac-es, Arab poet, 787.
Sahl, or Rabban el Thaberi, Jew. writer of Arabic, 624.
Said, Oman chief, 612.
Said ben Batrik (Eutychius), Arab writer, 650.
Said Pasha, viceroy of Egypt, 1071.
Saint-Amans, J. F. B., French botanist, 1043.
Saint-Hilaire, Aug. J. de, botanist in Brazil, 1060.
Saint-Just, 863.
Saisin, introduced bullock-chariots into Japan, 667.
Sakuntala, Hindu poetess, 616.
Saladin, first Ayoubite sultan of Egypt, 713–14, 716.
Saladin d'Asculo, Italian medical writer, 799.
Salah, or Shelah, 94.
Salam, Arab traveller, 631.
Salamesch, Memluk sultan of Egypt, 756.
Salamewan, king of Ceylon, 630.
Salapar Wata, king of Java, 628.
Salatis, first Hyksos king of Egypt, 94.
Salazar, Alonso de, Spanish navigator, 868.
Salcamayhua, P. Y., Peruvian historian, 938.
Salini Kesari, king of Orissa, 684.
Salisbury, R. A., English botanist, 1046, 1050.
Salivahana, Hindu king, 515.
Sallustius, Roman historian, 446.
Salman ben Jerucham, Karaite Jewish writer, 645.
Salmana, Arab writer on hail, 655.

Salmasius of Burgundy, critic, 948.
Salmon, 152.
Salmoneus, Aeolic chief, 146.
Salt, Henry, traveller in Abyssinia, 1052.
Salvatore Rosa, Italian painter, 965.
Salvianus of Massilia, ecclesiastical writer, 570.
Salvius Julianus, jurist, 526.
Samatissa, king of Ceylon, 565.
Samgrama, king of Cashmere, 669, 677.
Samius, Greek poet, 389.
Samlah, king of Edom, 131.
Samoset, aboriginal American, 939.
Sampada, or Samgata, Hindu king, 399, 401.
Samson, or Hercules, 164.
Samson of Germany, Jewish lexicographer, 718.
Samuel, Abyssinian monk, 800.
Samuel, Jewish prophet, 170.
Samuel ben Samson of France, Jewish traveller, 718.
Samuel of Ania, 716.
Samuel of Edessa, Syriac ecclesiastical writer, 568.
Samuel Marochianus, convert from Judaism, 683.
Sancara, commentator on the Vedas, 663.
Sancho III. the Great, king of Spain, 664, 675.
Sanctia, wife of Ferdinand of Castile, 675.
Sancu, Sanscrit writer, 681.
Sandigamonal, king of Ceylon, 520–21.
Sandracottus, or Chandragupta, Hindu king, 337, 345, 369, 373.
Sandusio, dairo of Japan, 667.
Sangot, king of Ceylon, 565.
Sanjar, chief of the Seljuk Tartars, 708.
Sannazarius of Naples, poet, 858.
Sannyrion, Greek comic poet, 292, 299.
Santi, Georg., Italian botanist, 1048.
Sanutious, see Shenouda.
Saosduchinus, king of Babylon, 222, 226.
Sapor, or Shahpoor, Sasa. king of Persia, 538, 540, 542.
Sapor II., Sasanid king of Persia, 545, 548, 553
Sapor III., tenth Sasanid king of Persia, 554–55.
Sappho, Greek poetess, 232.
Sarac the Indian, see Charaka.
Sarai, 103.
Sardanapallus, see Nabopolassar.
Saris, John, British navigator, 932.
Sarmishta, wife of the Hindu king Yayati, 99.
Sarngi-Deva, Hindu writer on music and dancing, 823.
Sarpi, Paul, of Venice, historian, 921.
Sataspes, Persian navigator, 266.
Saturninus, bishop of Toulouse, 539.
Saturninus, Gnostic Christian, 525.
Satya, Hindu king, 244.
Satyrus, Greek biographer, 400.
Satyrus, Greek navigator on the Red Sea, 378.
Saughatissa, king of Ceylon, 538.
Saul, first Jewish king, 177, 178.
Saul, or Shaul, king of Edom, 137, 146.
Saulnier, Paul, botanist in North America, 1041.
Saussure, H. B., geologist in the Alps, 1027.
Sauvages, F. B. de, French botanist, 1021, 1025.
Savanarola of Ferrara, theologian, 857.
Savi, Gaetano, Italian botanist, 1050.
Savigny, I. C., French naturalist, 1052.
Saville, Henry, critic and mathematician, 921.
Sawela Chala, first king of Java, 597.
Sawira Gading, first Bugis prince, 664.
Saxo Grammaticus, historian, 718.
Sayle, British colonial governor, 970.
Scaliger, J. Cæs., critic, 892.
Scaliger, Joseph, chronographer, 897.
Scanderbeg, hereditary prince of Albania, 814.
Scarron, Paul, French burlesque poet, 948.
Scaurus, M. Aemilius, Roman orator, 407.
Scaurus, Terentius, Roman grammarian, 519
Scevole de St. Marthe, jurist and archæologist, 921.
Schaal, P. Adam, Jesuit missionary in China, 958.
Schaban-Aschraf, Memluk sultan of Egypt, 791, 795.
Schaban-Kamel, Memluk sultan of Egypt, 786–87.
Schaffer, Carol., German botanist, 965.
Schäffer, Iac. Christ., German botanist, 1027.
Schahabeddin, Memluk sultan of Egypt, 786.
Schanfara, Arab poet, 589.
Schelhammer, Gunth. Christ., German botanist, 997.
Scheuchzer, Ioan., botanist, 1002, 1005.
Scheuchzer, Io. Iac, botanist, 997.
Schiede, botanist in Mexico, 1065.
Schiera, Io. Mar., botanist, 1013.
Schkuhr, Chr., German botanist, 1052.
Schlagintweit, H. and R., travellers in Cent. Asia, 1070.
Schlechtendal, D. F. L. de, botanist, 1052.
Schleicher, J. C., Swiss botanist, 1052.
Schmidel, Casim. Christ., botanist, 1021.
Schmidt, Franc., botanist, 1049.
Schmidt, J. J., translator of Kalmuk and Mongol, 1052.
Schober, Theoph., traveller in Hyrcania, 1004.
Schoeffer, early European printer, 815.
Scholarius, Genn. Georg., scholastic Gr. writer, 814.
Scholler, F. A., botanist, 1035.
Schöpf, J. Dav., botanist in North America, 1042.
Schoubert, French botanist, 1052.
Schouten, William Cornelison, Dutch navigator, 933.
Schousboe, P. K. A., botanist in Morocco, 1046.
Schouw, J. Frederick, botanist, 1066.
Schrader, H. A., German botanist, 1049, 1056.
Schrank, Fr. P. von, German botanist, 1047.
Schreber, I. C. D., German botanist, 1029, 1033.
Schuebler, Gust., German botanist, 1052
Schultes, Jos. Aug., German botanist, 1061.
Schumacher, C. Fr., botanist, 1052.
Schürer, Chris., of Bohemia, glass manufacturer, 888.
Schwaegrichen, Ch. Fr., German botanist, 1052.
Schweigger, Aug. Fr., German botanist, 1052.
Schweinitz, L. D. von, N. Amer. botanist, 1055, 1060.
Schwenk, botanist, 1027.
Schwenkfeld, Casparus, German botanist, 920, 928.
Scipio, L. Cornelius, Roman general in Asia, 397.
Scipio, P. C. Africanus, Roman general, 395, 402.
Scipio Africanus the younger, Roman general, 407.
Scipio Barbatus, L. Cornelius, Roman consul, 373.
Scipio Nasica, 401.
Scopas, Aetolian prætor and general, 396.
Scopas, Greek sculptor and architect, 302.
Scopas II., king of Thessaly, 256.
Scopelianus of Clazomenae, Greek rhetor, 518.
Scopoli, Io. Ant., Italian botanist, 1023, 1025, 1042.
Scotus, John, 639.
Scribonius Curio, C., Roman general and consul, 444.
Scribonius Largus, Roman medical writer, 479.
Scultetus, Alexander, chronographer, 880.
Scylax, Greek navigator, 319.
Scymnus of Chios, Greek geographer, 433.
Scythianus, preceptor of Manes, 537.
Seba, Albertus, naturalist, 1014.

Sebakem-f, king of Egypt, 96.
Sebakhotep, king of Egypt, 91.
Sebakhotep II., king of Egypt, 92.
Sebakhotep III., king of Egypt, 92.
Sebakhotep IV., king of Egypt, 92.
Sebakhotep V., king of Egypt, 92.
Sebaknefru, or Skemiophris, queen of Egypt, 91.
Sebektegin, third ruler of Ghazni, 657–58, 664.
Sebercheres, king of Egypt, 70.
Sebosus, Statius, Roman geographer, 448.
Sechnuphis of Egypt, preceptor of Plato, 301.
Secondat, Charles de, 1012.
Secundus, Lombard historian, 597.
Seehewallie, queen of Ceylon, 520.
See-ma-kuang, Chinese poet, 682.
Seguier, Io. F, Italian botanist, 1019, 1025.
Sehura, king of Egypt, 70.
Seif bin Malik, imam of Muscat, 960, 994.
Seif-Eddin, see Melek-Adel.
Seif-Eddin Tattar, Memluk sultan of Egypt, 811.
Seif-u-din Ghori, sultan of Ghor and Ghazni, 708–9.
Sei-nei, twenty-third dairo of Japan, 569.
Seir the Horite, 103.
Seiwa, dairo of Japan, 634, 641.
Sejanus, L. Aelius, praetorian prefect and consul, 477.
Sekander Shah, founder of the city of Malacca, 750, 755.
Selden, John, jurist and critic, 948.
Seleucus, Greek king of Syria, 340, 345, 348, 372, 377.
Seleucus II. Callinicus, Greek king of Syria, 386, 389.
Seleucus III. Ceraunus, Greek king of Syria, 389–90.
Seleucus IV. Philopator, Greek king of Syria, 397, 399.
Seleucus, Greek poet, 395.
Seleucus of Babylon, Greek astronomer, 377.
Selim, eleventh Turkish sultan, 862, 864.
Selim II, thirteenth Turkish sultan, 897, 900.
Selim III., twenty-ninth Turkish sultan, 1043, 1056.
Selred, king of Essex, 615, 619.
Semedo, Alvarez, Jesuit missionary and author of a History of China, 933, 942.
Semempses, king of Egypt, 64.
Semiramis, Assyrian empress, 95.
Seneca, L., Roman philosopher and physicist, 471, 475, 483.
Seneca, M., Roman rhetor, 457.
Senefru, king of Egypt, 66.
Seng-houn-i, first baptized Corean, 1039, 1052.
Seng-ka, or Kieou-ma-seng-ka, Cambodian amb., 687.
Sennacherib, Assyrian emperor, 217.
Sennefelder, A., inventor of Lithography, 1048.
Seokouo, dairo of Japan, 802, 812.
Sequeira, James Lopes de, Portuguese navi., 833, 860.
Serano, Francisco, Portu. voy. to the Moluccas, 861.
Serapion, bishop of Thmuis in Egypt, 547.
Serapion, eighth bishop of Antioch, 532–34.
Serapion, Jahia-ebn, Arab medical writer, 612, 624, 679.
Serapion of Alexandria, Greek medical writer, 370.
Serenus Sammonicus, Roman writer, 535.
Serenus Sammonicus the younger, 538.
Sergius, nineteenth Roman archbishop, 613.
Sergius II., thirty-eighth Roman archbishop, 630–31.
Sergius III., fifty-fifth Roman archbishop, 647.
Sergius IV., eightieth Roman archbishop, 667.
Seringe, N. C., botanist, 1052.
Sertorius, Roman general, 442.
Serug, 99.
Servetus, Michael, of Spain, theologian, 888.
Servius, Roman grammarian, 552.
Servius Tullius, sixth king of Rome, 236, 244.
Sesochris, king of Egypt, 65.
Sesorthus, or Tosorthus, king of Egypt, 66.
Sesostris, see Sesurtesen II.
Sessè, botanist, 1052.
Sestini, Italian botanist, 1048.
Sesurtesen, king of Egypt, 83.
Sesurtesen II., or Sesostris, king of Egypt, 85.
Sesurtesen III., king of Egypt, 87.
Seth, 3.
Sethenes, king of Egypt, 65.
Seti, Ethiopian prince, 132.
Seti, or Saites, Hyksos king of Egypt, 99.
Severianus, Greek ecclesiastical writer, 552.
Severinus, sixth Roman archbishop, 602.
Severus, Aquilius, ecclesiastical writer, 552.
Severus, Cassius, Roman satirist, 467.
Severus, Septimius, twentieth Roman emp., 533–34.
Severus II. Alexander, twenty-fourth Roman emp., 536.
Severus III., Roman emperor of the West, 568.
Severus, Sulpicius, ecclesiastical historian, 560.
Severus of Antioch, ecclesiastical writer, 571.
Sextius, Greek philosopher, 467.
Sextus, early Christian writer, 534.
Sextus of Chaeronea, Stoic philosopher, 526.
Shabak, or Sabacon, king of Egypt, 212.
Shæmuas, son of Ramessu II., 130.
Shafra, or Chephren, king of Egypt, 68.
Shah Jehan, emp. of Hindustan, 939, 943, 948–49, 960.
Shah Rokh, sultan of Khorassan, 801, 817.
Shahab-u-din, Ghaznian general, 709, 714, 716–19.
Shahpoor, see Sapor.
Shakspear, William, English dramatist, 921.
Shallum, king of Israel, 210.
Shalmaneser, Assyrian emperor, 215, 217.
Shamgar, 155.
Sharp, English navigator, 977.
Shaw, Thomas, naturalist in Barbary, 1015.
Shays, Daniel, insurrectionist in Massachusetts, 1042.
Shecutt, N. American botanist, 1056.
Shekh Mahmoudi, Memluk king of Egypt, 802, 811.
Shemaiah, Jewish prophet, 186.
Shenouda, or Sanutious, Coptic patriarch, 641.
Shepard, American general, 1042.
Sherah, or Acherres, Jewish queen of Egypt, 121.
Sherard, William, botanist at Smyrna, 1006, 1009.
Sherman, W. T., American general, 1071.
Sheron, king of Southern Hindustan, 632.
Sheshet ha-Nassi, Jewish medical writer, 718.
Sheshonk, or Shishak, king of Egypt, 185, 190.
Sheshonk II., king of Egypt, 192.
Sheshonk III., king of Egypt, 194, 195.
Sheshonk IV., king of Egypt, 198, 203.
Shimei of Bahurim, 180.
Shirley, William, British colonial governor, 985.
Shishak, see Sheshonk.
Shishkof, Russian philologist, 1052.
Sholen, king of southern Hindustan, 632.
Shomu, 618.
Shonsi, Gorodayu, introduced porcelain art into Japan, 903.
Short, C. W., American botanist, 1067.
Shute, Samuel, colonial governor of Mass., 1007.
Siang, of the Hia, Chinese emperor, 85.
Siang-kong, first king of Tsin, 210.

Siang-koung, king of Lou in China, 239.
Siang-wang, of the Tcheou, Chinese emp., 226, 228.
Siang-wang II., of the Thsin, Chinese emperor, 383.
Siao-kia, of the Chang, Chinese emperor, 102.
Siao-sin, of the Chang, Chinese emperor, 124.
Siao-y, of the Chang, Chinese emperor, 126.
Sibawaih, Arab writer, 621.
Sibbald, Robert, English botanist, 981.
Sibley, John L., librarian of Harvard University, 1071.
Sibthorp, English botanist in Greece, 1025, 1040.
Sidney, Algernon, 965.
Sidney, Philip, English poet, 897.
Sidonius Apollinaris, Roman poet, 568.
Sidsio, dairo of Japan, 723, 725, 735.
Sie, of the Hia, Chinese emperor, 92.
Sieber, F. W., botanist, 1063.
Siebold, Ph. Fr. von, botanist in Japan, 1063.
Siegesbek, J. G., botanist, 1015.
Sieng-tsong, king of Corea, 831, 855.
Sievers, Joh., botanist, 1052.
Siffridus presbyter, chronographer, 767.
Sigeberht, king of Essex, 605.
Sigeberht II., king of Essex, 605, 607.
Sigebert, king of the French, 585, 589.
Sigebertus Gemblacensis, histor. and chronogr. 686.
Sigericus, or Singerichus, king of the Goths, 562.
Sigismund, king of Hungary and twenty-fifth emperor of Germany and Italy, 788, 796, 798, 803, 815.
Signorelli, Luca, Italian painter, 858.
Sigonius of Modena, critic and archæologist, 897.
Sigurd, admiral, 686.
Silco, king of the Ethiopians, 441.
Silenus, Greek historian, 396.
Silius Italicus, Roman writer, 498.
Silo, Albutius, Roman rhetor, 457.
Silverius, fifty-sixth bishop of Rome, 576, 577.
Silvester, see Sylvester.
Silvius, king of Alba in Italy, 193.
Silvoa, Pedro de, viceroy at Mombas, 951.
Simayé tsaghema, Japanese navigator, 972.
Simeon Metaphrastes, 639.
Simler, Josua, botanist in Switzerland, 900.
Simmias of Rhodes, Greek writer, 370.
Simon, or Simonides, Athenian archon, 234.
Simon, third Maccabee king, 402.
Simon de Cassia, theologian, 782.
Simon Magus, founder of the sect of Simonians, 477.
Simonides, Greek historian, 312.
Simonides of Amorgos, Greek iambic poet, 219.
Simonides of Ceos, Greek lyric poet, 256.
Simplicius, forty-fifth bishop of Rome, 568, 569.
Simplicius, Greek philosopher, 576.
Sims, John, English botanist, 1056.
Simylus, Greek comic poet, 312.
Sinchi Roca, second inca of Peru, 678, 683.
Sindbad, Arab voyager, 623.
Sinin, dairo of Japan, 959, 963.
Sinosikwo of Japan, 393.
Sintoku, dairo of Japan, 688, 704.
Sio-nei, king of the Loo-Choo Islands, 928.
Sioomu, forty-fifth dairo of Japan, 618–19.
Sio-tok (see Kooken).
Siouan-tsoung, of the Thang, Chinese emperor, 631.
Siouan-ti, of the Han, Chinese emperor, 446.
Siouan-wang of the Tcheou, Chinese emperor, 201.
Siou-zioun, thirty-third dairo of Japan, 590, 591.
Siptah, king of Egypt, 132.
Siricius, thirty-sixth bishop of Rome, 554.
Sirinaga, king of Ceylon, 532, 534.
Sirinaga II., king of Ceylon, 538.
Sirisanghabo, king of Ceylon, 538.
Siroes, Sassanid king of Persia, 600.
Sisenna, Cornelius, Roman historian, 434.
Sisibut, Gothic king of Spain, 599.
Sisinnius, Novatian bishop, 560.
Sisinnius, twenty-second Roman archbishop, 615.
Sisires, king of Egypt, 71.
Sisyphus, Æolian chief, 146.
Siu-kouang-ki, Chinese writer, 930.
Siukouo, dairo of Japan, 787, 789.
Siuntoku, dairo of Japan, 719, 721.
Siunwa, dairo of Japan, 627, 629.
Siusaku, dairo of Japan, 650–52.
Siva Swasa, Hindu king, 655.
Sixtus, or Xystus, sixth bishop of Rome, 518.
Sixtus, or Xystus, twenty-second bishop of Rome, 539.
Sixtus, or Xystus, forty-second bishop of Rome, 566.
Sixtus IV., fifty-eighth pope, 833, 842–43.
Siyan-siya-in, Japanese chief, 967.
Sledda, king of Essex, 590, 597.
Sleidan, John, German historian, 872.
Sloane, Hans, naturalist in Jamaica, 962, 982, 1004.
Smenthes, or Herhor-siamum, 169, 178.
Smith, James Edw., English bot., 1040, 1044–47, 1051.
Smith, or Smyth, John, voyager to Va., 926–27, 929, 933.
Smith, William, editor, 1069.
S-nefruka-annu, king of Egypt, 76.
So, or Sevihos, see Sabatok.
Sobhan, Deva, king of Orissa, 546.
Socinios, or Susneus, Abyssinian king, 947.
Socrates, ecclesiastical historian, 565.
Socrates, Greek philosopher, 285, 301.
Sodre, Vincent, 859.
Sogdianus, eighth Persian emperor, 385.
Sokolof, Nicetas, Russian botanist, 792, 1030, 1032.
Solander, English botanist, 1021, 1025, 1029.
Soliman, seventh Ommiad khalif, 616.
Soliman the merchant, Arab traveller in China, 624.
Solinus, Roman geographer, 536.
Solomon, Jewish king, 179, 185.
Solomon ben Isaac, or Rashi of Troyes, Jewish writer, 684.
Solon of Athens, lawgiver and poet, 233.
Solon Smyrnœeus, Greek botanist, 377.
Solvyns, author of illustr. Hindoo ethnology, 1052.
Somadeva, Sanscrit writer, 686.
Somapi, king of Magadha in Hindustan, 122.
Sonchis of Egypt, preceptor of Solon, 227.
Sonnerat, Pet., voyager to the East Indies, 1031.
Sonnetomo, third cubo of Japan, 719.
Sonnini, Chr. Sigis, botanist, 1052.
Sopater, Greek comic poet, 325.
Sopater, Greek voyager to Ceylon, 572.
Sopater of Apamea, Neo-Platonist, 544.
Sophilus, Greek comic poet, 312.
Sophocles, Greek tragic poet, 270.
Sophocles the younger, Greek tragic poet, 299.
Sophron, Greek mimographer and comic poet, 281.
Sophronius, Greek ecclesiastical writer, 552.
Sophronius the younger, last bishop of Jerusalem, 6
Soranus, Greek medical writer, 341.
Soranus Ephesius, Greek medical writer, 525.

Sorbona, Rob., founder of the college Sorbonne, 751.
Soris, king of Egypt, 67.
Sosares, Assyrian emperor, 145.
Sosarmus, Assyrian emperor, 155.
Sosibius of Laconia, Greek grammarian, 382.
Sosicrates of Rhodes, Greek historian, 400.
Sosigenes, Greek astronomer, 455.
Sosilus, Greek historian, 396.
Sosiphanes, Greek tragic poet, 370.
Sosippus, Greek comic poet, 325.
Sositheus, Greek tragic poet, 370.
Sossius, C., Roman general, 456.
Sostratus of Cnidus, Greek architect, 382.
Sotades, Greek comic poet, 312.
Sotades the younger, Greek dramatic poet, 370.
Soter, eleventh bishop of Rome, 529.
Sotion, Greek philosopher, 396.
Sotion the Peripatetic, Greek writer, 526.
Sotion the younger, Greek philosopher, 467.
Soui-ko, female dairo of Japan, 591, 600.
Soui sei, second dairo of Japan, 235.
Soujef, traveller in Siberia, 781, 1031, 1033.
Soun-ten-o, king of the Loo-Choo Islands, 711, 716.
Sous, second Proclid king of Sparta, 191.
Sousa, Gonzalo de, Portuguese navigator, 847.
Sousa, Jão de, author of Vestig. Arab. (Lisbon, 1789), 1027.
Sou-tsoung, of the Thang, Chinese emperor, 620.
Sowerby, James, artist and botanist, 1045.
Soyouti, Arab zoölogist, 858.
Sozomenus, Greek ecclesiastical historian, 565.
Sparaethus, Assyrian emperor, 120.
Sparmann, And., naturalist in Austral Africa, 1032.
Spelman, Henry, English archæologist, 948.
Spenser, Edmund, English poet, 897.
Sperlingius, Otho, German botanist, 948.
Speusippus, Greek philosopher, 320, 322.
Sphaerus, Assyrian emperor, 117.
Spigelius, Adrian, Belgian botanist, 926.
Spinosa, Benedict de, 965.
Spotswood, Alexander, lieut.-gov. of Va., 1004.
Sprengel, C., German botanist, 1064.
Spurina, L. Taruntius, Roman mathematician, 446.
Squanto, aboriginal American, 939.
Sreznefski, Russian historian, 1066.
Sri Boja, Hindu king, 702.
Sridharasena, Hindu king of Guzerat, 583.
Sridharasena II., Hindu king of Guzerat, 601.
Sridharasena III., Hindu king of Guzerat, 601.
Sri-Pulimana, king at Paitan, 527.
Sse-ma-kouang, Chinese historian, 680.
Sse-ma-thsien, Chinese historian, 431.
Stackhouse, John, cryptogamic botanist, 1027.
Stadius, Joannes, Portuguese voyager to Brazil, 887.
Standish, Miles, Puritan colonist, 939.
Starchii, J. L., Swedish botanist, 939.
Stasinus of Cyprus, Greek poet, 210.
Statius, Roman poet, 498.
Statius Ursulus, Roman rhetor, 477.
Staunton, S. G., traveller in China, 1047.
Stavrovates, emperor of Northern Hindustan, 95.
Steele, Richard, English critic, 997.
Stefani, Tommaso de, Italian painter, 753.
Stefano, il Fiorentino, Italian painter, 782.
Stefanone, Italian painter, 682, 791.
Steinschneider, Jewish bibliographer, 1066.
Steller, Georg. Guf., nat. in Kamtchatka, 1008, 1017.
Steno, or Stenson, Nicolaus, Danish geologist, 965.
Stephano, Hieronymo da Santa, voyager to Pegu, 856.
Stephanus, Carolus, botanist, 876.
Stephanus, Greek comic poet, 325.
Stephanus, king of Hungary, 664.
Stephanus, Robertus, 897.
Stephanus, twenty-first bishop of Rome, 539.
Stephanus II., twenty-seventh Roman archbishop, 620.
Stephanus III., twenty-eighth Roman archbp., 620-21.
Stephanus IV., thirtieth Roman archbishop, 621-22.
Stephanus V., thirty-third Roman archbishop, 626.
Stephanus VI., forty-sixth Roman archbishop, 643-44.
Stephanus VII., forty-ninth Roman archbishop, 645.
Stephanus VIII., sixtieth Roman archbishop, 650.
Stephanus IX., sixty-third Roman archbishop, 651.
Stephanus X., eighty-ninth Roman archbishop, 678.
Stephanus Asolnichius, Armenian chronicler, 663.
Stephanus mathematicus, 601.
Stephen, first Christian martyr, 477.
Stephen, twenty-fourth king of England, 703.
Stephens, Henry, French printer and critic, 897.
Stephens, Robert, French printer, 872.
Stephenson, Marmaduke, Quaker martyr in New England, 960.
Stephinates, king of Egypt, 221.
Sterbeek, Franc., Belgian botanist, 965.
Sternberg, Caspar, botanist, 1052.
Stesichorus, Greek poet, 231.
Stesimbrotus of Thasos, Greek historian, 281.
Steudel, Ernest, German botanist, 1062.
Stevam Affonso, Portuguese navigator, 820.
Steven, Christ., botanist, 1058.
Stewart, Capt., officer of the first American ship seen in Japan, 1049.
Sthenelas, Greek tragic poet, 281.
Sthenelas, king of Argos, 136.
Sthenelas II., king of Argos, 163.
Stieff, Io. Ern., botanist, 1027.
Stilicho, Roman general, 558, 560-61.
Stillingfleet, Edward, controversial theologian, 965.
Stilpo, Greek philosopher, 325.
Strabo, Greek geographer, 464.
Strabus, Walafridus, theologian, 630.
Strabus Fuldensis, disciple of Rabanus Maurus, 629.
Strachey, Wm., author of Travaile into Virginia, 929.
Strada, Famianus, historian and critic, 948.
Stratocles, Greek orator, 325.
Straton, Aristotelian philosopher, 377.
Straton, Greek comic poet, 325.
Strattis, Greek comic poet, 292.
Stremonius, first bishop of Arvernis in Gaul, 539.
Strobelberger, Io. Stephan., botanist, 921.
Strom, Io., Norwegian botanist, 1027.
Sturm, Jac., German botanist, 1051.
Stuyvesant, Dutch colonial governor, 957, 959, 963.
Suantana, chief of the Hindu colony on Java, 570.
Subala, Hindu king, 403.
Suchi, Hindu king, 644.
Suckow, Geo. Adol., botanist, 1052.
Sucra, Hindu king, 647.
Sucriti, Hindu king, 240.
Sucshetra, Hindu king, 228.
Sudharma, Hindu king, 438.
Sudraka, or Aditya, Hindu king, 532.
Suen-ouang, see Siouan-wang.

Sueno II., king of Denmark, 667.
Suero de Costa, Portuguese navigator, 825.
Suetonius Paulinus, Roman general in Britain, 483.
Suetonius Tranquillus, Roman historian, 519.
Suidas, Greek historian, 655.
Suinin, see Synin.
Suinthila, Gothic king of Spain, 600.
Sujan Kesari, king of Orissa, 684.
Sujin, dairo of Japan, 436, 457.
Suleiman, Oman chief, 612.
Suliman, fifth Turkish sultan, 800–1.
Suliman II., twelfth Turkish sultan, 864, 866, 869, 870–71, 882, 897.
Suliman III., twenty-first Turkish sultan, 982, 989.
Sulla, L. Cornelius, Roman dictator, 439, 441, 444.
Sullivant, American botanist, 1068.
Sulpicius, see Severus.
Sultan Aly, Persian medical writer, 782.
Sultan Seif, imam of Muscat, 994.
Sultan Shujar, governor of Behar, &c., 952.
Sumers, George, admiral of Virginia, 928–29.
Suphis, king of Egypt, 66.
Suphis II., or Cheops, king of Egypt, 67.
Suphis III., king of Egypt, 67.
Surajah Dowla, Hindu nabob, 1023.
Surakawa, dairo of Japan, 680, 682.
Susanaga, Hindu king, 267, 270.
Susrutas, Hindu medical writer, 612, 690–91.
Sutapa, Hindu king, 547.
Suter, J. R., botanist, 1053.
Sutherland, Jacob, English botanist, 980.
Suvarna Kesari, king of Orissa, 702.
Suyasas, Hindu king, 391, 395.
Suyudana, ruler of the Hindu colony on Java, 572, 586.
Swartz, Olaus, bot. in the W. Indies, 1038, 1043, 1056.
Sweertius Emanuel, Dutch botanist, 930.
Swift, Jonathan, English humorist, 1012.
Swithhelm, king of Essex, 607.
Sydenham, Thomas, English physician, 965.
Sylburg, Frederic, 897.
Sylvaticus, Matthaeus, Italian medical writer, 774.
Sylvester, bishop of Perejaslavl, Russian annalist, 684.
Sylvester, thirty-first bishop of Rome, 546.
Sylvester II., or Gerbert, orientalist and seventy-seventh Roman archbishop, 664–65.
Symeon magister, Greek writer, 655.
Symeon Sethus, 675.
Symes, Mich., ambassador to Ava, 1050.
Symmachus, forty-ninth bishop of Rome, 570–72.
Symmachus, Q. Aurelius, Roman orator, 552, 555.
Symon Januensis, see Cordo.
Symphorianus Campegius of Lyons, botanist, 877.
Syncellus, Georgius, Greek chronographer, 624.
Synesius, early Christian ambassador, 559.
Synin, or Suinin, eleventh dairo of Japan, 457.
Synmu, or Jinmu, first emperor or dairo of Japan, 235.
Syphax of Carthage, 395.
Syrianus, Greek grammarian, 564.
Syrus, Publius, Roman writer, 446.
Szkolny, John, Polish navigator, 834.
Szu-ma-thsian, Chinese writer, 398.

TABERNÆMONTANUS, IA. THEO., botanist, 913.
Tachos, see Teos.
Tacitus, M. C., thirty-sixth Roman emperor, 542.
Tacitus, Roman historian, 519.
Tæpah, king in Burmah, 423, 438, 448.
Taffi, Andrea, Italian painter, 753.
Tahan, 125.
Tai-kang of the Hia, Chinese emperor, 85.
Tai-keng, of the Chang, Chinese emperor, 100–1.
Tai-kia, of the Chang, Chinese emperor, 99.
Tai-pe, ancestor of the emperors of Japan, 146.
Tai-soquan, Japanese sculptor, 615.
Tai-ting, of the Chang, Chinese emperor, 150.
Tai-ting II., of the Youan, Chinese emperor, 776, 779.
Tai-tsou, Chinese general and emperor, 647.
Tai-tsou, II., of the later Tcheou, Chinese emp., 653.
Tai-tsou III., of the Soung, Chinese emperor, 655.
Tai-tsou IV., of the Ming, Chin. emp., 791–92, 798, 920.
Tai-tsou, Tartar chief of the Kin, 686, 789.
Tai-tsoung, of the Thang, Chinese emperor, 600, 601.
Tai-tsoung II., of the Thang, Chinese emperor, 621.
Tai-tsoung III., of the Soung, Chinese emp., 657, 663.
Tai-tsoung, of the Kin, ruler of Northern China, 687.
Tai-wou, of the Chang, Chinese emperor, 102–3.
Takakura, dairo of Japan, 712, 715.
Takaudsi, cubo of Japan, 781, 789, 790.
Takelet or Tiglath, king of Egypt, 191.
Takelet II., king of Egypt, 192.
Talvi, historian of Slavonic literature, 1066.
Tamamar, or Tamoura-maro, Japanese general, 623.
Tamerlane, see Timur.
Tame-tomo, founder of a new dynasty on the Loo-Choo Islands, 711.
Tan, king of Corea, 797–98.
Tanaus, Scythian king, 88.
Tancheres, king of Egypt, 71.
Tangiia, leader of a Polynesian colony, 680.
Tantalus, father of Pelops, 451.
Tao-kouang, three hundred and fifth Chinese Emperor, 1062, 1066–67.
Tapaswi, Hindu king, 545.
Tapomurti, Hindu king, 251.
Tapovati, Hindu king, 551.
Tarafa, Arab poet, 597.
Tarasius, Greek writer, 621.
Targioni-Tozetti, Antonio, Italian botanist, 1066.
Targioni-Tozetti, Giov., Italian botanist, 1028.
Targioni-Tozetti, Ottav., Italian botanist, 1048.
Targitaus, the first Scythian, 116.
Tarquinius Priscus, fifth king of Rome, 228, 236.
Tarquinius II., Superbus, seventh king of Rome, 244, 252.
Tasesurt, wife of king Siptah, 132.
Tasman, Abel Jansen, navigator, 953.
Tasso, Italian poet, 897.
Tatianus, founder of the sect of Encratites, 531.
Tatkara-ma, king of Egypt, 76.
Taulerus, Joannes, theologian, 791.
Taurus Berytius, Greek philosopher, 526.
Tchang-kiao, Chinese traveller, 408.
Tchang-ti, of the Han, Chinese emperor, 503.
Tchang-tsoung, of the Kin, ruler of Nor. China, 716.
Tchao-heou, Chinese prince, 212.
Tchao-hioüan-ti, of the Thang, Chinese emperor, 646.
Tchao-lie-ti, nominal Chinese emperor, 536
Tchao-tsoung, of the Thang, Chinese emp., 644–46.
Tchao-wang, of the Tcheou, Chinese emperor, 178.
Tcheou-koung, Chinese astronomer, 164.
Tchhang, king of Corea, 791, 797.

Tchhĕ, king of Corea, 721, 723.
Tching, of the later Liang, Chinese emperor, 647.
Tching-tang, of the Chang, Chinese emperor, 98.
Tching-ti, of the Han, Chinese emperor, 457.
Tching-ti II., of the Tcin, Chinese emperor, 547.
Tching-ting-wang, of the Tcheou, Chinese emp., 768.
Tching-tsou, of the Ming, Chinese emperor, 800.
Tching-tsoung, of the Youan, Chinese emperor, 762.
Tching-wang, of the Tcheou, Chinese emp., 161, 164.
Tching-wang, of the Thsin, see Chi-hoang-ti.
Tchin-tsoung, of the Soung, Chinese emperor, 664.
Tchi-ti, of the Han, Chinese emperor, 528.
Tchi-tsoung, of the Soung, Chinese emperor, 682.
Tchou, of the Hia, Chinese emperor, 90.
Tchouang-kiang, queen of Ouei, 213.
Tchouang-sfang-wang, of the Thsin, Chinese emp., 383.
Tchouang-tsoung, of the later Thang, Chin. emp., 648.
Tchouan-hiu, Chinese emperor, 81.
Tchou-liang, of the Kin, ruler of Northern China, 707.
Tchoung-chan, king of the Loo-Choo Islands, 798.
Tchoung-kang, of the Hia, Chinese emperor, 85.
Tchoung-ti, of the Han, Chinese emperor, 528.
Tchoung-ting, of the Chang, Chinese emperor, 111.
Tchoung-tsoung, of the Thang, Chinese emp., 612, 614.
Tchoung-wang, of the Tcheou, Chinese emperor, 219.
Tchou-pao-kiouan, of the Thsi, Chinese emperor, 570.
Tchou-pe-tsoung, of the Tchin, Chinese emperor, 586.
Tchou-tching, of the later Liang, Chinese emp. 647.
Tchou-tchoung-kouei, of the later Tsin, Chinese emperor, 651.
Tchou-young-ki, of the Kin, ruler of Nor. China, 719.
Tchou-yu, of the Northern Soung, Chinese emp. 568.
Teatumoana, leader of a Polynesian colony, 704.
Tecla Haimanout, Abyssinian monk, 747.
Tectamus, leader of a Greek migration, 146.
Tecum-Umam, fifteenth king of Guatemala, 866.
Teesdal, Rob., English botanist, 1052.
Teggia, Angi. del, voyager to the Canary Islands, 785.
Teias, ninth and last Gothic king of Italy, 584.
Teige, Irish chief, 631.
Telah, 123.
Telchis, third king of Sicyon, 113.
Teleclides, Greek comic poet, 281.
Teleclus, eighth Agid king of Sparta, 207.
Telemachus, son of Ulysses, 176.
Telephus, Greek grammarian, 526.
Telephus, king of Mysia, 170.
Teles, Greek philosopher, 370.
Telesilla of Argos, Greek poetess, 244.
Telesphorus, seventh bishop of Rome, 518.
Telestes, eleventh king of Corinth, 204, 211.
Telestes, Greek poet, 299.
Tememi, Arab medical writer, 655, 658.
Temenus, Heraclid chief, 180
Temim, founder of an Arab tribe, 525.
Temple, William, critic and historian, 965.
Teniers, David, the younger, Flemish painter, 965.
Tenmu, fortieth dairo of Japan, 610, 613.
Tenore, Michel, Italian botanist, 1058.
Tent-sii, "thirty-ninth" dairo of Japan, 608, 610, 614.
Teofilo, or Ruggiero, painter in oil, 682.
Teos, or Tachos, king of Egypt, 312, 318.
Terah, 100, 103.
Teraraku, New Zealand chief, 1017.
Terentius, Roman dramatist, 400.
Ternström, G., botanist in the East Indies, 1019.
Terpander, Greek poet and musician, 218.
Tertullianus, Latin Christian writer, 534. 536.
Tesauro, Filippo, Italian painter, 682.
Tetmes, or Thothmosis, king of Egypt, 108.
Tetmes II., king of Egypt, 108.
Tetmes III., king of Egypt, 111.
Tetmes IV., king of Egypt, 118.
Tetricus, fourth king of the Gauls, 541–42.
Te-tsoung, of the Thang, Chinese emperor, 623–24.
Teucer, Greek warrior, 175.
Teuta, queen of Illyria, 389.
Teutamus, Assyrian emperor, 165, 174.
Teutomal, Ligurian chief, 409.
Thabet, Arab medical writer, 629.
Thaka, Burmese king, 483.
Thalassius, bishop, 565.
Thaleba, the grammarian, 629.
Thales of Miletus, Greek philos. and astronomer, 231.
Thaletas, Greek lyric poet, 220.
Thalius, Io., botanist, 911.
Thameinparau, Talaing general, 842.
Thampthis, king of Egypt, 70.
Thamugdareet, king in Burmah, 519.
Thamyris, Greek poet, 177.
Than-chy-houai, first king of the Ainos, 531.
Than-kiun, founder of the Corean kingdom, 82.
Thathee, Burmese king, 483.
Theagenes of Rhegium, Greek writer, 244.
Thebit ben Corah, Arab astronomer, 761.
Themison, Greek medical writer, 454.
Themistius, Greek rhetor, 552.
Themistocles, Greek admiral, 265.
Theoclus of Messenia, Greek bard, 219.
Theoclymenus, Dionysian prophet, 154.
Theocritus, Greek pastoral poet, 378.
Theocritus of Chios, Greek writer, 325.
Theodahad, fourth Gothic king of Italy, 576.
Theodectes, Greek tragic poet, 312.
Theoderic, Gothic king of Italy, 569, 570, 572, 574.
Theoderic, or Theodores, king of the Goths, 562, 566.
Theoderic II., king of the Goths, 567–68.
Theoderic, second Chr. king of the French, 572, 576.
Theodocus, Greek medical writer, 612.
Theodora, mother of Michael III., 630.
Theodora Porphyrogeneta, Byzant. empress, 677–78.
Theodoretus, ecclesiastical historian, 565.
Theodoricus Leodiensis, theologian and poet, 684.
Theodorus, Abyssinian king, 800.
Theodorus, bishop of Heraclea in Thrace, 547.
Theodorus, eighth Roman archbishop, 603–5.
Theodorus II., fiftieth Roman archbishop, 645.
Theodorus, Greek painter, 382.
Theodorus Gaza, see Gaza.
Theodorus Lascares, fifty-eighth Byzantine emperor, 719–21.
Theodorus of Gadara, Greek rhetor, 456.
Theodorus of Mopseusta, ecclesiastical writer, 560.
Theodorus Ptochoprodromus, modern Gr. poet, 704.
Theodorus Studita, Greek theologian, 624.
Theodosius, fiftieth Roman emperor, 552, 555, 558.
Theodosius II., second Byzant. emp. 561, 564, 566.
Theodosius III., twenty-second Byzantine emp., 616.
Theodosius acroaseis, Greek writer, 659.
Theodosius of Alexandria, ecclesiastical writer, 576.
Theodosius of Tripoli, Greek mathematician, 433.
Theodotus, Greek king of Bactria, 383, 388.

Theodotus II., second Greek king of Bactria, 388, 391.
Theodotus, Greek rhetor, 529.
Theodulphus of Orleans, theologian, 624.
Theodulus, ecclesiastical writer, 568.
Theofilus, grammarian at Constantinople, 564.
Theognetus, Greek comic poet, 370.
Theognis, Greek tragic poet, 281.
Theognostus, early Christian writer, 541.
Theognostus, Greek writer, 621.
Theon of Smyrna, Greek astronomer, 519.
Theon the younger, Greek astronomer, 552.
Theonas, fifteenth bishop of Alexandria, 543–44.
Theophanes, Greek chronographer, 626.
Theophanes Byzantius, Greek historian, 586.
Theophanes ō graptōs, Greek writer, 629.
Theophanes Nonnus, Greek medical writer, 652.
Theophanes of Lesbos, Greek historian, 446.
Theophilus, bishop of Caesarea, 533.
Theophilus, Greek comic poet, 325.
Theophilus, Indian bishop, 549.
Theophilus, sixth bishop of Antioch, 532.
Theophilus, thirty-second Byzantine emp., 628–30.
Theophilus Corydaleus, scholastic Greek writer, 1012.
Theophilus of Alexandria, ecclesiastical writer, 561–62.
Theophilus Protospatharius, 601.
Theophrastus, Greek botanist, 348, 841.
Theophylactus, bishop of Bulgaria, scholastic Greek writer, 684.
Theopompus, eighth Proclid king of Sparta, 211, 214.
Theopompus, Greek comic poet, 299.
Theorianus, theologian, 711.
Theotimus, Greek ecclesiastical writer, 552.
Theras, regent at Sparta, 186.
Therereet, Burmese king, 411, 423.
Thersander, Cadmean chief, 168.
Theseus, king of Athens, 164, 169.
Thespis, founder of Greek tragedy, 244.
Thespieus, Athenian archon, 204.
Theucles, leader of a Greek colony, 213.
Theudibald, sec. Chr. king of the French, 583, 584.
Theudibert, first Chr. king of the French, 579, 583.
Thevenot, traveller in Persia, 965.
Thian-ming, founder of the Tai-thsing or Mantchou dynasty, 934, 942.
Thian-tsoung, ruler of Northern China, 943.
Thomas, John, aboriginal American, 1008.
Thomas, Syrian bishop, 599.
Thomas Aquinas, scholastic theologian, 753.
Thomas Argentinensis, scholastic theologian, 782.
Thomas Cantipratensis, encyclopædic writer, 722.
Thomas Magister, scholastic Greek writer, 765.
Thomas Valdensis, scholastic theologian, 799.
Thompson, John V., English botanist, 1052.
Thomson, James, English poet, 1012.
Thorfinn Karlsefni, Scandinavian navigator, 666.
Thorwald, Scandinavian navigator, 664.
Thot, or Thoth, inventor of writing, 13, 62.
Thou, James Auguste, historian, 921.
Thou-fou, Chinese poet, 619.
Thouin, Andr., French botanist, 1052.
Thou-yeou, Chinese archæologist, 620
Thrasyas of Mantinea, Greek herbalist, 291.
Thrasybulus, Greek general and statesman, 298.
Thrasybulus of Colyttus, Greek orator, 299.
Thrasyllus, Greek writer, 467.
Threlkeld, Caleb, botanist in Ireland, 1008.
Thsan-liei-phao-pi-sie-kan-phou-tche, king of Cambodia, 796.
Thsan-liei-pho-pi-ya, king of Cambodia, 801.
Thsan-liei-tchao-phing-ya, king of Cambodia, 801, 819.
Thsan-tha-kan-wou-tche-the-tha-tchi, king of Cambodia, 795.
Thsao-thsao, founder of a Chinese dynasty, 532.
Thucydides, Greek historian, 285.
Thuillier, I. L., French botanist, 1045.
Thunberg, botanist in Japan, 603, 1030, 1035.
Thuoris, see Pehor Siamun.
Thurneysser, Leon, German botanist, 902.
Thurstan, archbishop of York, 676.
Thyestes, king of Argos, 165.
Thyillus, Greek poet, 442.
Thymoetes, king of Athens, 185.
Tiaduk, see Theodocus.
Tiberius, second Roman emperor, 463, 468, 471, 478.
Tiberius Constantinus, eleventh Bazantine emp., 589.
Tibullus, Roman poet, 457.
Tiburtus, son of Amphiarius, 174.
Tichonius, Latin ecclesiastical writer, 552.
Tiglath, see Takelet.
Tiglath-pileser, Assyrian emperor, 213.
Tigranes, king of Armenia and Syria, 442, 446.
Ti-hien, of the Soung, Chinese emperor, 755.
Tii, wife of Amenhotep III., 119, 120.
Ti-kou, Chinese emperor, 82.
Tilden, botanist at Hudson Bay, 1009.
Til-lands, Elias, Swedish botanist, 972.
Tilli, Michael Angel., Italian botanist, 1007.
Tillotson, John, archbishop of Canterbury, 965.
Timaeus, Greek historian, 370.
Timaeus, seventeenth bishop of Antioch, 542, 543.
Timagenes, Greek historian, 456.
Timagenes of Alexandria, Greek rhetor, 456.
Timar Bogha, Memluk sultan of Egypt, 831.
Timaus, king of Egypt, 91, 94.
Timkofsky, Russian traveller, 1052.
Timm, Joach. Chr., German botanist, 1043, 1049.
Timocharis of Alexandria, Greek astronomer, 372, 377.
Timocles, Greek comic poet, 325.
Timocreon of Rhodes, Greek poet, 255.
Timoleon, king of Syracuse, 321, 322.
Timon, Greek philosopher, 370.
Timosthenes, Greek writer, 382.
Timotheus, bishop of Alexandria, 554.
Timotheus, Greek comic poet, 312.
Timotheus of Gaza, Greek grammarian, 568.
Timotheus of Miletus, Greek poet, 293.
Timur, or Tamerlane, Tartar chief, 796, 798, 801.
Ting-wang, Chinese emperor, 230.
Tintoretto, Italian painter, 897.
Tiphernas, Gregoras, of Umbria, 834.
Ti-ping, of the Soung, Chinese emperor, 756.
Tippo Saib, ruler in Hindustan, 1043.
Tirhakah, king of Egypt, 217, 221.
Tiro, Tullius, Roman writer, 457.
Tiryns, founder of the city of Tiryns, 121.
Tisamenus, Cadmean chief, 168, 179.
Tisamenus, king of Argos, 179.
Tisio, Benvenuto, called Garofalo, Italian painter, 858.
Tissa, or Vyewahara-tissa, king of Ceylon, 534, 536.
Tita, Anton., botanist, 997.
Titian of Venice, Italian painter, 858.
Titus, bishop of Bostra, 551.

Titus, Roman emperor, 499, 515–16.
Ti-y, of the Chang, Chinese emperor, 150.
Ti-y II., of the Tcin, Chinese emperor, 552.
Ti-youan, of the Han, Chinese emperor, 476.
Tizoc, seventh Mexican emperor, 842.
Tlas, king of Egypt, 65
To-ba, dairo of Japan, 684, 688.
Toba II., or Go-Toba, dairo of Japan, 715–16, 718.
Toghlak, Abubekr, eighteenth sultan of Delhi, 797.
Toghlak, Firuz, sixteenth sultan of Delhi, 789, 796.
Toghlak, Gheias-u-din, fourteenth sultan of Delhi, 775, 778.
Toghlak, II., Gheias-u-din seventeenth sult. of Delhi, 796–97.
Toghlak, Mahmud, twenty-first and last sultan of Delhi, 798.
Toghlak, Mohammed, fifteenth sultan of Delhi, 778, 787, 789.
Toghlak, Nasir-u-din, nineteenth sult. of Delhi, 797–98.
Toghral Beg, chief of the Seljuk Tartars, 676.
Toledo, Francisco de, viceroy in Peru, 900.
Toman-Bay, Memluk sultan of Egypt, 858.
Toman-Bay II., last sultan of Egypt, 862.
Tonapa, apostle of the Peruvians, 580.
Tooloon, governor of Egypt, 640–41, 646.
Toorandokht, Sassanid queen of Persia, 600.
Topiltzin, eighth Toltec king of Mexico, 672.
Toren, Olaus, traveller in Hindustan, 1021, 1025.
Torismond, or Thorismus, king of the Goths, 566–67.
Torres, Bernado de, navigator, 884, 925.
Tosertasis, king of Egypt, 66.
Totepéub, fourth Toltec king of Mexico, 627.
Totilas, eighth Gothic king of Italy, 580, 583, 584.
Touan-tsoung, of the Soung, Chinese emperor, 755.
Tournefort, J. P., botanist and traveller in Greece, 995–96, 998, 1001.
Tou-tsoung, of the Soung, Chinese emperor, 751.
Townsend, American botanist, 1067.
Tozetti, see Targioni.
Tradescant, botanist in N. America, 959.
Tragus, Hieronymus, botanist, 870, 878.
Trajanus, thirteenth Roman emperor, 518–20, 525.
Tranggana, sultan of Java, 855.
Trattenik, Leop. von, botanist, 1049, 1055.
Trelawney, Edward, British colonial governor, 1015.
Treveris, English botanist. 868.
Treviranus, L. C., botanist, 1052.
Trevise, Bernard de, 831.
Trew, C. J., botanist, 1020.
Triboles, Iacobus, modern Greek versifier, 858.
Tribonianus, jurist, 576.
Trinius, C. Bernhard, botanist, 1063.
Triopas, seventh king of Argos, 127.
Triphyllius, bishop in Cyprus, 547.
Triptolemus, 148.
Trissino of Vicenza, poet, 872.
Tristan da Cunha, Portuguese navigator, 860.
Trithemius, Joannes, biographer, 858.
Tritresta, see Aji Saka.
Triumfettus, Io. Bapt., Italian botanist, 981.
Troilus, Greek rhetor, 560.
Trondad, French navigator, 1002.
Trophimus, first bishop of Aretalensibus in Gaul, 539.
Tros, father of Ilus, 150.
Truber, Vindish writer, 897.
Truxton, Thomas, American admiral, 1051.
Tryon, British colonial governor, 1029.
Tryphon, disciple of Origen, 537.
Tsao-fang, king of Wei in China, 538.
Tsatsi-mikaddo, dairo of Japan, 718–19.
Tsinajos, cubo and emperor of Japan, 976.
Tsiou, P. Jacques, first Christian priest in Corea, 1048.
Tsou-keng, of the Chang, Chinese emperor, 137.
Tsou-kia, of the Chang, Chinese emperor, 137, 146.
Tsoung-te, of the Tai-thsing, Chinese emp., 949, 956.
Tsou-pa-wang, usurping Chinese emperor, 394.
Tsou-sin, of the Chang, Chinese emperor, 116.
Tsou-ting, of the Chang, Chinese emperor, 119.
Tsou-y, of the Chang, Chinese emperor, 114.
Tuaa, grandmother of Amunhotep IV., 119.
Tubal-cain, son of Lamech, 3.
Tubero Aelius, Roman historian, 446.
Tucca, Plotius, Roman editor, 457.
Tuckerman, Edward, American botanist, 970.
Tudor, Frederic, founder of the ice traffic, 1066.
Tulakutchi, see Calasoka.
Tupac, Sayri, inca of Peru, 871.
Tupac Amaru, last inca of Peru, 894.
Tupac Yupauqui, eleventh inca of Peru, 327, 668, 815, 824–25, 834.
Turan Schah, Ayoubite sultan of Egypt, 741.
Turis, king of Egypt, 66.
Turlough, Irish chief, 631.
Turnebus, Adrian critic, 872.
Turner, Dawson, cryptogamic botanist, 1053.
Turner, William, English botanist, 886.
Turpilius, Roman painter, 477.
Turpilius, Sextus, Roman dramatic poet, 407.
Turpin, J., French artist and botanist, 1056–57.
Turra, Anton., Italian botanist, 1037.
Turre, Georg a, Italian botanist, 961.
Turvasa, Hindu king, 99.
Tuscianus, Greek rhetor, 547.
Tussac, F. R. de, botanist in the West Indies, 1057.
Tuticanus, Roman writer, 467.
Tycho Brahe, astronomer, 905.
Tydeus, Greek warrior, 164.
Tyler, Watt, 795.
Tynnichus, Greek poet, 150.
Tyrannion, Greek grammarian, 446.
Tyrannion the younger, Greek grammarian, 456.
Tyrannus, nineteenth bishop of Antioch, 545.
Tyro, daughter of Salmoneus, 150.
Tyrtaeus, Greek elegiac poet, 219.
Tzathus, king of the Lazi in Persia, 573.
Tzetzes, John, scholastic Greek writer, 703.

Uaphres, see Hophra.
Ubhatta of Cashmere, medical writer, 691.
Uda, dairo of Japan, 644–45.
Udalric, earliest canonized saint, 663.
Udalricus Argentinensis, scholastic theologian, 752.
Udayibhadra, Hindu king, 251, 254.
Uggasenah-Nandeya, Hindu king, 298.
Uguitio, or Hugo of Pisa, lexicographer, 718.
Ukemochi-no-kami, introduced agriculture into Japan, 146.
Ulfilas, bishop among the Goths, 553.
Ulloa, Francisco de, Spanish navigator, 880.
Ulloa, Georg. J. and Anton., naturalists in Peru and Chili, 1020.

Ulpianus, Domitius, Roman jurist, 536.
Ulstan, bishop of Worcester, 681.
Ulugh Beg, astronomer and sult. of Samarcand, 815.
Ulysses, son of Laertes, 174, 176.
Umapatidharas, Sanscrit poet, 711.
Una, Egyptian priest, 75.
Unger, German botanist, 88.
Ung-kan, or Prestor Johan, Tartar chief, 716.
Upadeva, Hindu king, 539.
Upatissa, king of Ceylon, 552, 561.
Urbanus, fifteenth bishop of Rome, 536.
Urbanus II., third pope, 682–84.
Urbanus III., sixteenth pope, 715–16.
Urbanus IV., twenty-sixth pope, 751.
Urbanus V., forty-fourth pope, 791.
Urbanus VI., forty-sixth pope, 795, 797.
Urbevetanus, Bartholem., botanist, 885.
Uri, son of Hur, 131.
Ursacius, bishop in Spain, 555.
Ursinus, opposing bishop of Rome, 552.
Uru, Hindu king, 623.
Urzedowa, Marcus, Polish botanist, 918.
Usana, or Ushana, Sanscrit poet, 420.
Userkan, see Osorkon.
Useserkef, or Usercheres, king of Egypt, 70.
Usher, James, chronographer and critic, 948.
Usteri, Paul, German botanist, 1047, 1049.
Usuardus the monk, author of a Martyrology, 624.
Utkarsha, king of Cashmere, 686.
Uttungadewa, king of Java, 762.
Uzzi, Jewish high-priest, 164.
Uzziah, or Azariah, king of Judah, 203, 212.

VABALATHUS, colleague of Queen Zenobia, 541.
Vahl, Martin, botanist, 1036, 1042, 1046, 1049, 1055.
Vahram, Armenian historian, 752.
Vaillant, Sebast., French botanist, 1003, 1006.
Valarsace, king of Armenia, 401.
Valens, colleague of Valentinianus, 552–53.
Valentinianus, forty-seventh Roman emperor, 552–53.
Valentinianus II., forty-ninth Roman emperor, 554–55.
Valentinianus III., Roman emp. of the West, 564, 567.
Valentinus, gnostic Christian, 527.
Valentinus, thirty-sixth Roman archbishop, 628.
Valentyn, Franz, naturalist in the East Indies, 1007.
Valerianus, thirty-second Roman emperor, 539–40.
Valerius Maximus, Roman historian, 472.
Valla, Laurentius, 814.
Valla Placentinus, Georgius, botanist, 831.
Valle, F., Italian botanist, 1013.
Valle, Robertus de, botanist, 858.
Vallet, Pet., French botanist, 928.
Vallot, Antonius, botanist, 948.
Valmiki, Sanscrit poet, 592, 616.
Vana-raja, king of Guzerat, 619.
Van Braam, traveller in China, 1048.
Vancouver, British navigator, 1046, 1048.
Vandelli, Dom., botanist in Brazil, 1031.
Vanderdonck, Adrian, writer on New Netherland, 957.
Vandyck, Anthony, portrait painter, 948.
Van Eyck, Hubert and John, Flemish painters, 799.
Van Ghistele, Josse, traveller, 688, 843.
Van Noort, Oliver, Dutch navigator, 921.
Van Vleck, American botanist, 1060.
Varaha Mihira, Hindu astronomer, 571, 681, 684.
Vararam, fourth Sasanid king of Persia, 542.
Vararam II., Sasanid king of Persia, 542, 544.
Vararam III., Sasanid king of Persia, 544.
Vararam IV., eleventh Sasanid king of Persia, 555, 559.
Vararam V., Sasanid king of Persia, 564, 566.
Varela, Andia y, Spanish navigator, 1034.
Vargaraya, Hindustanee poet and historian, 717.
Vargas, Alphonsus, scholastic theologian, 782.
Varin, scientific experimenter, 972.
Varius Rufus, Roman poet, 457.
Varro, Roman historian and agricultural writer, 456.
Varro Atacinus, Roman poet, 446.
Vartan, Armenian historian, 753.
Varthema, Ludovico, Italian voyager to the Malayan archipelago, 860–1.
Varus, Quintilius, Roman governor, 469–70.
Varus of Perga, Greek rhetor, 526.
Vasishtha, and other Sanscrit poets, 592, 616.
Vatablus, Franciscus, professor of Hebrew, 870.
Vater, A., German botanist, 1012.
Vattagamani, king of Ceylon, 441.
Vauquelin, French chemist, 1050.
Vaux, W. S. W., historian, 1066.
Vayer, Mothe le, of Paris, critic, 965.
Vaz, Tristan, Portuguese navigator, 803.
Veccus, Joannes, patriarch of Constantinople, 755, 757.
Vega, Lopez de, Spanish dramatist, 921.
Velasquez, Diego, Spanish colonizer on Cuba, 861.
Velasquez, Diego, Spanish painter, 948.
Velez, botanist, 1025.
Vellia, P. Dionys., Italian botanist, 948.
Velloso de Miranda, Brazilian botanist, 1065.
Venantius Fortunatus, ecclesiastical writer, 586.
Venegas, Miguel, traveller in California, 1023.
Ventenat, E. P., French botanist, 1052–54.
Verbiest, Jesuit missionary in China, 964.
Vernet, Horace, French painter, 1066.
Vernon, British admiral, 1017.
Vernon, William, English botanist, 961.
Veronese, Paul, Italian painter, 897.
Verrazanus, Janus, Italian navigator, 866.
Verrier, Jean le, traveller in the Canary Islands, 800.
Vertot of Normandy, historian, 997.
Verus, Lucius, colleague of Aurelius Antoninus, 529.
Vesalius of Brussels, anatomist, 872.
Vesling, botanist in Egypt, 936.
Vespasianus, Roman emperor, 479, 498, 515.
Vichitra, Hindu king, 567.
Vichitrasena, Hindu king, 565.
Vicrama, Hindu king, see Raja Boja.
Vicramaditya, Hindu king, 453.
Victor, Aurelius, Roman historian, 549.
Victor, thirteenth bishop of Rome, 532, 534.
Victor II., eighty-eighth Roman archbishop, 677–78.
Victor III., second pope, 682.
Victor Emmanuel, first king of United Italy, 1072.
Victor Vitensis, ecclesiastical writer, 568.
Victor Tununensis, chronog. and eccles. writer, 586.
Victoria, Franciscus, scholastic theologian, 858.
Victorinus, Roman rhetor, 548.
Victorinus, second king of the Gauls, 541.
Victorius Aquitanus, inventor of the Paschal cycle, 568.
Vida of Cremona, poet, 872.
Vigilantius of Barcelona, early Christian reformer, 561.
Vigilius, fifty-seventh bishop of Rome, 577, 583–84.
Vigraha, Hindu king of Delhi, 711.

Villalobos, Ruy Lopez de, Spanish navigator, 884.
Villars, D., French botanist, 1042.
Villehardouin, Geoffrey de, historian, 719.
Vincentius Bellovacensis, encyclopedic writer, 741.
Vincentius Lirinensis, ecclesiastical writer, 565.
Vinci, Leonardo da, Italian painter and physicist, 858.
Viracocha, or Ripac, eighth inca of Peru, 760, 783.
Virgil, Polydor, historian, 872.
Virgil, Roman poet, 458.
Virginia, daughter of the Roman centurion L. Virginius, 270.
Viriathus, chief of the Numantians, 403.
Viridomar, leader of the Gaels, 390.
Visal, Hindu king of Ajmir, 676.
Viswamitra, Hindu king, 112.
Viswamitra, Hindu poet, 420, 616.
Vitalianus, eleventh Roman archbishop, 607, 609–10.
Vitalianus, Gothic invader of Constantinople, 572–73.
Vitalis de Furno, medical writer and cardinal, 773.
Vitellius, eighth Roman emperor, 478, 499.
Vitello, writer on Optics, 645.
Vitred, king of Kent, 613.
Vitruvius, Roman writer on Architecture, 457.
Vives of Valentia, critic, 872.
Viviani, Domin., botanist in North Africa, 1063.
Vladimir, V. Monomach, Russian writer, 684.
Vladimir the Great, first Christian king of Russia, 663.
Vlaming, Willem de, Dutch navigator, 992.
Vochenberg, Io. Tollat von, botanist, 831, 856.
Voight, Fr. Sigism, botanist, 1052.
Voiture, Vincent, French poet, 948.
Volckamer, botanist, 990.
Volkof, author of a Tartar dictionary, 1052.
Vologesus, king of the Parthians, 529.
Volta of Pavia, physicist, 1046.
Volusianus, colleague of the emperor Trebonianus Gallus, 539.
Von Frankenau, Georg Frank, botanist, 971.
Von Wisin, Russian dramatist, 1027.
Vopiscus, Roman historian, 544.
Vorstius, Adolph., Dutch botanist, 948.
Vortigern, king of South Britain, 566.
Vossius, Gerard John, critic, 948.
Vrichasena, Hindu king, 424.
Vries, M. G., Dutch navigator, 953.
Vrihaspati, Hindu king, 401, 424.
Vrishaparvan, Hindu king, 98.
Vyasa, or Beyauss, collector of the Vedas, 419.
Vytullya, Braminical writer, 534.

Wachendorf, Ev. Iac., botanist, 1012, 1025.
Wahlenberg, Georg., botanist in Lapland, 1052, 1054, 1058, 1060.
Wai-jen, of the Chang, Chinese emperor, 112.
Walafridus, Strabo, 630.
Walakan-abha, king of Ceylon, 433.
Walckendorf, col. of documents on Greenland, 862.
Waldstein, Fr., botanist, 1053.
Waldus of Lyons, founder of the Waldenses, 709.
Walid, sixth Ommiad khalif, 614–16.
Walid II., eleventh Ommiad khalif, 619.
Waller, Edmund, English poet, 965.
Wallia, or Vallia, king of the Goths, 562.
Wallich, Nathaniel, botanist at Calcutta, 1061.
Wallis, British navigator, 1028.
Wallis, John, mathematician, 965.
Walter, Thom., N. American botanist, 1039.
Walter of Coventry, historian, 718.
Walther, A. F., German botanist, 1014.
Wamba, king in Spain, 612.
Wang-'an-chi, Chinese philosopher, 680.
Wangenheim, Fr. Adol., botanist in N. Amer., 1036.
Wang-mang, usurping Chinese emp., 468, 470–71, 475.
Wang-tching, see Chi-hoang-ti.
Warka, translator of Hebrew into Arabic, 598.
Washington, George, American general and president, 1022, 1035, 1037–38, 1043, 1047, 1050–51.
Waterhouse, Benjamin, introducer of vaccination into America, 1051.
Wathek, ninth Abbassid khalif, 630–31.
Wathil, fifth Cahtan ruler of Yemen, 227.
Watson, H. C., English botanist, 1069.
Watson, William, English botanist, 1027.
Watu Gunung, gov. of a Hindu colony on Java, 546.
Webb, Rev. John, English archæologist, 948, 1052.
Wedel, Io. Wolfg., botanist, 1012.
Wedemeyer, botanist, 1054.
Weigel, C. E., botanist, 1027.
Wei-lie-wang, of the Tcheou, Chinese emp., 285, 288.
Wei-man, founder of the Yan dynasty in Corea, 390.
Weinmann, Io. Gul., botanist, 1012.
Weis, F. G., botanist, 1027.
Wemala, king of Pegu in Burmah, 591.
Wernischek, Iac., botanist, 1027.
Wenceslaus, twenty-second emperor of Germany and Italy, 795.
Wendland, Joh. Christ., German botanist, 1051.
Wendt, W. German navigator, 1066.
Wen-ti, king of Wei in China, 536.
Wen-ti, of the Han, Chinese emperor, 398, 400.
Wen-ti II., of the Northern Soung, Chinese emp., 564.
Wen-ti III., of the Soui, Chinese emperor, 589.
Wen-tsoung, of the Thang, Chinese emperor, 628.
Wen-tsoung II, of the Youan, Chinese emperor, 779.
Wen-wang, founder of the Tcheou dynasty, 154, 156.
Wernerus, chronographer, 843.
Wernerus, Irnerius, jurist, 707.
Wesselus, John, of Groningen, 831.
Weymouth, George, British navigator, 923.
Whalley, English regicide, 960.
Wheeler, George, traveller in Greece, 978.
White, John, leader of an English colony, 913.
White, Peregrine, first white child born in N. Eng., 939.
Whitefield, George, preacher in North America, 1017.
Wickramabahoo, king of Ceylon, 657, 664.
Wiclef, translator of the Bible, 791, 795, 802.
Wigandus, Joannes, German botanist, 914.
Wiggers, F. H, German botanist, 1027.
Wijaya, king of Ceylon, 538.
Wilcke, S. G., botanist, 1027.
Wilde, archæologist, 1070.
Wilkie, D., Scotch painter, 1052.
Wilkinson, J. Gardner, archæologist in Egypt, 1066.
Willdenow, botanist, 1049, 1051–52, 1054–55, 1057.
Willebald, 618.
Willemet, P. R., botanist, 1043.
William, king of Scotland, 715.
William of Malmsbury, historian, 703.
William of Newburgh, historian, 718.
William of Normandy, king of England, 679.

William II., Rufus, twenty-second king of England, 682.
William III., British king, 985, 986, 991, 997.
William of Piacenza, medical writer, 752.
William of Spires, mathematician, 680.
Williams, George, English writer, 1066.
Williams, Roger, clergyman in New England, 948–49, 953, 956.
Willich, C. L., botanist, 1027.
Willoughby, Hugh, English navigator, 888, 965.
Wilson, John, English botanist, 1018.
Wilson, missionary among the Polynesians, 1050.
Wimpheling, Jacob, 831.
Winckler, Emil, German botanist, 1070.
Wingfield, Edward Maria, first governor of Va., 926.
Winslow, Edward, early writer on New England, 942.
Winthrop, John, governor of Connecticut, 965.
Winthrop, John, second gov. of Mass., 943, 946.
Wipacher, David, botanist, 997.
Withering, William, English botanist, 1036.
Witholt, duke of Lithuania, 802.
Witichindus Corbeiensis, theologian, 650.
Witiges, fifth Gothic king of Italy, 576–77, 580.
Wolfe, British general in N. America, 1023.
Wolfius, H., hellenist, 897.
Wolph, Casp., botanist, 897.
Wo-nin, a Chinese who introd. writing into Japan, 543.
Wood, William, early resident in New Eng., 943–44.
Woods, Jos., English botanist, 1052.
Woodville, William, English botanist, 1027.
Woodward, T. J., cryptogamic botanist, 1047.
Wormskiold, botanist, 1052.
Wotan, a Toltec leader, 983.
Wou, king of Corea, 652.
Wou-heou, usurping Chinese empress, 612, 614.
Wou-kia, of the Chang, Chinese emperor, 118.
Wou-ti, of the Han, Chinese emperor, 403.
Wou-ti II., of the Tcin, Chinese emperor, 540, 544.
Wou-ti III., of the Nor. Soung, Chinese emperor, 564.
Wou-ti IV., of the Thsi, Chinese emperor, 569.
Wou-ti V., of the Liang, Chinese emp., 571, 575, 581.
Wou-ti VI., of the Tchin, Chinese emperor, 584.
Wou-ti VII., of the Souï, Chinese emperor, 597.
Wou-ting, of the Chang, Chinese emperor, 100.
Wou-ting II., of the Chang, Chinese emperor, 127.
Wou-tsoung, of the Thang, Chinese emperor, 630.
Wou-tsoung II., of the Ming, Chinese emperor, 860.
Wou-tsoung, of the Youan, Chinese emperor, 767.
Wou-wang, of the Cheou, Chinese emperor, 156, 159.
Wou-y, of the Chang, Chinese emperor, 150.
Wren, Christopher, English architect, 965, 973.
Wright, Thomas, English archæologist, 1066.
Wulff, I. C., German botanist, 1026.
Wulffen, F. X., botanist on the Carinthian Alps, 1027.
Wulfstan, northern navigator, 643.
Wycliffe, John de, see Wiclef.
Wyeth, N., botanist, 1066.

XANTHIPPUS, Spartan gen. of the Carthaginians, 383.
Xanthus, Greek historian and geologist, 269.
Xanthus, Greek lyric poet, 227.
Xanthus, leader of a Greek colony, 128.
Xavier, François, jesuit missionary in Japan, 887–88.
Xenarchus, Greek mimographer, 299.
Xenarchus the younger, Greek comic poet, 312.
Xenocles, Greek tragic poet, 281.
Xenocrates, Greek medical writer, 322, 503.
Xenocrates, Greek philosopher, 340.
Xenomedes of Chios, Greek historian, 268.
Xenophanes, Greek philosopher, 250.
Xenophanes of Adramyttium, Greek rhetor, 434.
Xenophon, Greek comic poet, 299.
Xenophon, Greek historian, 285, 299.
Xerxes, or Baleus, Assyrian emperor, 100.
Xerxes, Persian emperor, 259, 268.
Xerxes II., Persian emperor, 285.
Xiphilinus, scholastic Greek writer, 711.
Xisuthrus, king of Babylon, 83.
Xiuhtlato, Toltec agriculturist, 741.
Xiutzatlzin, Toltec queen of Mexico, 658.
Xystus, see Sixtus.

YACER-YOUNIN, Cahtan ruler of Yemen, 468.
Yacob, Abyssinian king, 923.
Yadu, Hindu prince, 99.
Yahuarhuacac, seventh inca of Peru, 740, 760.
Yakoob, king of Persia, 842.
Yakut, Arab geographer, 651.
Yama, Hindu legislator, 532.
Yang-kia, of the Chang, Chinese emperor, 122.
Yang-ti, of the Souï, Chinese emperor, 597, 599.
Yao, Chinese emperor, 82.
Yao, king of Corea, 797.
Yarob, Cahtan ruler of Yemen, 212.
Yasovarman, Hindu king, 616.
Yayati, Hindu king, 99.
Yayati kesari, king of Orissa, 569.
Yeardly, Sir George, fourth gov. of Va., 933, 935.
Yei-so, king of the Loo-Choo Islands, 741.
Ye-lou-thsou-tsai, Chinese astronomer, 723.
Yeou-wang, of the Tcheou, Chinese emperor, 207, 209.
Yesdejerd, Sasanid king of Persia, 559, 564.
Yesdejerd II., Sasanid king of Persia, 566, 568.
Yesdejerd III., 601, 602.
Yeshuyabus Adiebenus, Nestorian Christian, 605.
Yezid, second Ommiad khalif, 612.
Yezid II., ninth Ommiad khalif, 616, 618.
Yezid III., twelfth Ommiad khalif, 619.
Y-hang, Chinese astronomer and geographer, 616.
Ying-yagg-wang, of the Northern Soung, Chinese emperor, 564.
Y-kong, king of Ouei, 225.
Ynal, Memluk sultan of Egypt, 823, 825.
Yng-tsoung, of the Soung, Chinese emperor, 678.
Yng-tsoung II., of the Youan, Chinese emperor, 774.
Yng-tsoung III., of the Ming, Chi. emp., 814, 822–23.
Yn-ti, of the later Han, Chinese emperor, 652.
Yoonas, Arab grammarian, 621.
Yori-tomo, first cubo, or military governor of Japan, 708, 715–16, 718.
Yoshi-masa, 818.
Yosi-tsoune, brother of Yori-tomo, 716.
Youan-ti, of the Han, Chinese emperor, 455.
Youan-ti II., of the Wei, Chinese emperor, 540.
Youan-ti III., of the Tcin, Chinese emperor, 546.
Youan-ti IV., of the Liang, Chinese emperor, 584.
Youan-Wang, of the Tcheou, Chinese emperor, 266.
You-mei, thirty-second dairo of Japan, 590.
Young, Edward, English poet, 1012.
Young-ki, of the Chang, Chinese emperor, 102.

Young-tching, three hundred and second Chinese emperor, 1006–7.
You-riak, twenty-second dairo of Japan, 568–69.
Ypsilanti, Alexander, Greek revolutionist, 1062.
Y-tsoung, of the Thang, Chinese emperor, 634.
Yu, of the Hia, Chinese emperor, 83.
Yukino Murazi, Corean traveller, 607.
Yupanqui, tenth inca of Peru, 798–99, 801, 811, 815.
Y-wang, of the Tcheou, Chinese emperor, 191.

Za-Adgaba, Abyssinian king, 483, 499.
Za-Agba, Abyssinian king, 499.
Za-Awtet, Abyssinian king, 519.
Za-Bæsi, Tsawesa, Abyssinian king, 542.
Za-Bæsiserk, Abyssinian king, 531.
Za-Bazen, Abyssinian king, 464, 469.
Za-Demahé, Abyssinian king, 517–19.
Za-Denghel, Abyssinian king, 923.
Za-Elasguaga, Abyssinian king, 531, 539.
Za-Elawda, Abyssinian king, 526.
Za-Gafale, Abyssinian king, 530–31.
Za-Les, Abyssinian king, 477, 481.
Za-Malis, Abyssinian king, 499, 503.
Za-Maseuh, Abyssinian king, 481.
Za-Senatu, Abyssinian king, 469, 477.
Za-Sutuwa, Abyssinian king, 481, 483.
Za-Zigen, Abyssinian king, 526, 530.
Zabdas, thirty-eighth bishop of Jerusalem, 544.
Zachariah, king of Israel, 210.
Zacharias, twenty-sixth archbishop of Rome, 619–20.
Zacharias Chrysopolitanus, theologian, 684.
Zacuto ben Samuel, prof. of Astron. at Saragossa, 831.
Zafe-Casimanbour, Arab, 821.
Zai-to, king of the Loo-Choo Islands, 788.
Zainalabdin, first Muslim king of Ternate, 855.
Zaleucus, Greek lawgiver, 225.
Zalikoglous, author of modern Greek lexicon, 1052.
Zaluzanius, Adamus, Bohemian botanist, 915.
Zannichellius, Io. Hieron., botanist, 1009.
Zanoni, Jac., Italian botanist, 972.
Zarah, son of Judah, 120.
Zarco, John Gonzales, Portuguese navigator, 803, 810.
Zebinus, or Zebennus, eleventh bp. of Antioch, 536.
Zechariah, Jewish prophet, 204.
Zechariah the younger, Jewish prophet, 251.
Zedekiah, or Mattaniah, governor of Jerusalem, 232.
Zeimoto, Francis, Portuguese navigator, 882.
Zelophehad, 136.
Zemarchus (Zemarkh), 586.
Zeno, Caterino; traveller in Persia, 833.
Zeno, Nicolo, voyager to the Faroe Islands and Greenland, 798.
Zeno, sixth Byzantine emperor, 569–70.
Zenobia, queen of Palmyra, 541–42.
Zenodotus of Ephesus, Greek grammarian, 370, 382.
Zenon, Epicurean philosopher, 433.
Zenon of Citium, Stoic philosopher, 377.
Zenon of Elea, philosopher and inventor of Logic, 269.
Zenon of Rhodes, Greek historian, 396.
Zenon of Tarsus, Greek philosopher, 389.
Zenus, Demetrius, translator into modern Greek, 858.
Zephaniah, Jewish prophet, 227.
Zephyrinus, fourteenth bishop of Rome, 534.
Zerah, grandson of Esau, 120.
Zerah, see Osorkon.
Zet, king of Egypt, 207.
Zethus, colleague of Amphion in ruling Boeotian Thebes, 154.
Zeuxis of Heraclea, Greek painter, 299.
Zeyathura, king of Toungoo in Burmah, 844.
Zeyher, botanist, 1052.
Zeyneddin, Memluk sultan of Egypt, 787.
Zibeon, 106.
Zillah, wife of Lamech, 3.
Zimri, king of Israel, 192.
Zin-qua, twenty-ninth dairo of Japan, 576, 580.
Zinn, Io. Gottfr., German botanist, 1023, 1025.
Zio-mei, thirty-fifth dairo of Japan, 600, 603.
Zohair, Arab poet, 597.
Zoilus, Greek grammarian, 325.
Zonaras, Joannes, Greek historian, 684.
Zopyrus, Greek poet, 239.
Zopyrus, Greek medical writer, 434.
Zoroaster, king of Bactria, 84, 95.
Zoroaster of Proconnesus, or Zaravast, prophet of the Persians, 252.
Zosimus, thirty-ninth bishop of Rome, 562, 564.
Zosimus Panopolitanus, 566.
Zoskales, or Zahekale, Abyssinian king, 503, 517.
Zuccagni, Attil., botanist, 1052.
Zuheyr, Arab poet, 571.
Zunz, German hebraist, 1066.
Zwingger, Theod., botanist, 897.
Zwinglius, earliest Orthodox theologian, 863.

INDEX TO NAMES OF PLANTS, ETC.

THE NAMES OF PLANTS AND OF VEGETABLE PRODUCTS ARE PRINTED IN ITALICS.

AARON'S ROD, 303.
Ababdeh, Ethiopian tribe, 1068.
Abbassid family, in Egypt, 747.
Abenaquis, abor. N. Am. tribe, 1007.
Abies alba, 875, 920.
alkokiana, 621.
balsamea, 875, 920, 935, 940, 942, 965.
bifida, 621.
Canadensis, hemlock, 809, 874–75, 928.
Douglassii, 830.
excelsa, 134, 367, 451.
Fraseri, 1039.
Menziesii, 582.
Mertensiana, 582.
nigra, 899, 866, 874–75, 924, 929, 935, 940.
picea, 123, 451.
thuga, 621.
Veitchii, 621.
yesoensis, 418.
Abildgaardia monostachya, 982.
Aboriginal Americans, 708, 767, 803, 926, 944, 953–956, 970, 972, 992, 1003–4.
Aborigines, a people of Italy, of Greek origin, 132, 154, 157.
Abronia arenaria, 582.
umbellata, 1043.
Abrus precatorius, 373.
Absinth, 99.
Abu Simbel, in Egypt, 129, 131.
Abutilon Americanum, 987.
angulosum, 383.
Avicennæ, 670.
crispum, 987.
Indicum, 647.
polyandrum, 725.
Abu Zelimah, harbour in the Sinai peninsula, 74.
Abydos, city in Upper Egypt, 126.
Abyssinia, 185, 322, 407, 439, 469, 576, 599, 747, 843, 947.
Abyssinian Race of man, 115.
Acacia, 4.
amara, 727.
catechu, 412.
Acacia cineraria, 1000.
concinna, 740.
elata, 245.
Farnesiana, 660.
ferruginea, 412.
filicina, 1012.
fistula, 322.
glauca, 1005.
gummifera, 203.
heterocarpa, 602.
horrida, 431.
kuk-ko, 240.
intsia, 974.
latisiliqua, &c. 987.
leucophloea, 523.
longifolia, 1050.
mollissima, 1055.
nemu, and *julibrissin*, see *Albizzia*.
Nilotica, 48, 72.
niopo, 783.
odoratissima, 578.
pedunculata, 1007.
pennata, 970.
Portoricensis, 915.
reticulata, 1000.
rugata, 423.
seyal, 270.
sp., 378.
sp., 731.
(*Stachychrysum*), *pterosperma*, 384.
Stephaniana, 275.
stipulata, 737.
stricta, 1050.
sundra, 744.
tamariscina, 1000.
tortilis, 648.
Academies of Sciences, 923, 956, 964, 1049.
Acadia, or Nova Scotia, colonized by Europeans, 923, 930, 947, 965, 1020.
Acaena argentea, 1002.
Acalypha betulina, 966.
Caroliniana, 1039.
cuspidata, 915.
fruticosa, 737.
Acalypha Indica, 461.
mappa, 966.
sp., 732.
Virginica, 982.
Acanthus Dioscoridis, 900.
edulis, see *Blepharis*.
illicifolius, see *Dilivaria*.
mollis, 302.
spinosus, 302.
Acarus scabiei, itch insect, 725.
Acer barbatum, 1040.
campestre, 353.
circinatum, 580.
Creticum, 271.
dasycarpum, 1003.
fusini, 418.
macrophyllum, 580.
Monspessulanum, 912.
negundo, 640.
nigrum, 1038.
opalus, 456.
pictum, 905.
platanoides, 354.
polymorphum, 622.
rubrum, 803, 925, 942.
saccharinum, 925, 940, 942.
sp., 418, 451, 632.
spicatum, 1031.
striatum, 1020.
Tartaricum, 780.
Aceras alpinum, 937.
anthropophora, 890.
anthropomorpha, 961.
Acerates connivens, 1059.
viridiflora, 1056.
Acetosa acetosa, 969.
acetosella, 969, 1031.
pratensis, 953.
Achaean League, or Republick, 377, 397, 402.
Achania mollis, 915.
Achillea Aegyptiaca, 890.
ageratum, 669.
Clavennae, 907.
Cretica, 905.
filicifolia, 1008, 1013.
Gerberi, 1013.
herba rota, 931.

Achillea impatiens, 1013.
macrophylla, 937.
magna, 488.
millefolium, 170, 935, 944, 958, 969.
moschata, 997.
nana, 894.
nobilis, 878.
odorata, 973.
ptarmica, 488.
(*Ptarmica*) *alpina*, 994.
tanacetifolia, 921.
tomentosa, 170.
umbellata, 488.
Achlys triphylla, 580.
Achnodonton tenue, 971.
Achras dissecta, 974.
sapota, see *Sapota*.
Achyranthes argentea, 972.
aspera, 423.
brachiata, 999.
sanguinolenta, 966.
radicans, 1011.
Acidoton urens, 983.
Acioa dulcis, 950.
Acmella repens, 931.
Acnida cannabina, 940.
(*Montelia*) *ruscocarpa*, 1041.
Acolhue Mexicans, 717.
Aconite, the drug, 160, 640.
Aconitum album, 236.
anthora, 556.
cammarum, 907.
cernuum, 907.
ferox, 640.
heterophyllum, 735.
Kamtchaticum, 607.
luridum, 735.
lycoctonum, 484.
napellus, 160.
Neubergense, 907.
palmatum, 735.
Pyrenaicum, 889.
Tauricum, 907.
uncinatum, 1025.
variegatum, 907.
volubile, 889.
Acorus calamus, 142, 818, 969.
Acrocarpus fraxinifolius, 744.
Acropolis, 137, 280.
Aerostichum alcicorne, 1000.
aureum, 990.
auritum, 966.
bifurcatum, 1000.
citrifolium, &c. 987.
heterophyllum, 974.
huacsaro, 717.
inequale, 997.
marantæ, 176.
sorbifolium, 1000.
speciosum, 997.
velleum, 1000.
Actæa Americana, 747, 949.
spicata, 503.
Actinella acaulis, 1057.
lanata, see *Trichophyllum*.
Actinidia arguta, 622.
Actinomeris alata, 1033.
alba, 1040.
alternifolia, 962.
helianthoides, 1044.
Actinospermum angustifolium, 1033.
Aculan, in Central America, 867.
Adansonia, 814.
Adansonia digitata, 819.
Adders tongue, 513.
Aden in Southern Arabia, 259, 549, 711, 714, 778, 860–61.
Adenanthera aculeata, see *Prosopis spicigera*.
falcata, 966.
pavonina, 699.
Adenorachis arbutifolia, 804, 929.
Adenostemma viscosum, 428.
Adenostemum nitidum, 660.
Adiantum aculeatum, 987.
Aethiopicum, 1000.
capillus veneris, 37.
caudatum, 970.
denticulatum, 1000.
lanceum, 1014.
pallens, 1000.
pedatum, 938, 958.
Philippense, 997.
pumilum, 1000.
radiatum, 1000.
reniforme, 1000.
serrulatum, 983.
tenerum, 1000.
trapeziforme, 987.
"Adi Granth," Sacred book of the Sikhs, 877.
Adjunta, in Hindustan, artificial caves there, 277.
Adlumia cirrhosa, 1043.
Adonis æstivalis, 23.
autumnalis, 382.
dentata, 23.
marginata, 997.
vernalis, 780.
volgensis, 779.
Adoxa moschatellina, 884.
Adulë, on the Abyssinian coast, 439.
Adze, 12.
Ægiceras majus, 966.
minus, 966.
Ægilops ovata, 349.
squarrosa, 1007.
triuncialis, 1006.
Aeginetia Indica, 974.
Aegle marmelos, 370.
Aegopodium podagraria, 685.
Aeolic Greeks, 137, 179.
Aerides arachnites, 989.
multiflorum, 693.
Aerolites, 226.
Aerua lanata, 465.
tomentosa, 851.
Aeschynomene Americana, 983.
aspera, 274.
hispida, 1016.
Indica, 974.
Aeschynomene paludosa, 240.
pumila, 974.
Schimperi, 730.
sensitiva, 987.
sesban, see *Sesbania*.
viscidula, 1048.
Aesculapius, worship of, 372, 395.
Aesculapius' rod, 372.
Aesculus Californica, 582.
flava, 1039.
glabra, 1059.
hippocastanum, 892.
parviflora, 1040.
Pavia, 777.
Aethusa cynapium, 719.
Aetna, mount, 285, 525.
Africa, Equatorial and Southern, 829, 842.
Afzelia Petersiana, 426.
Aganosma Roxburghii, 712.
Agapanthus umbellatus, 977.
Agaricus alutaceus, 514.
campestris, 407.
dryinus, 496.
eburico, 499.
integer, 514.
ostreatus, 496.
sp. of Hindustan, 532.
Agasyllis galbanum, 999.
Agates, 536.
Agathis loranthifolia, 370.
Agathophyllum aromaticum, 707.
Agathotes chirayta, 694.
Agati, see *Sesbania*.
Agave Americana, 649.
Virginica, 777, 1023.
vivipara, 998.
Agawam, or Ipswich, town in Massachusetts, 947.
Ageratum ciliare, 1000.
conyzoides, 428.
Aglaia spectabilis, 244.
Agrarian laws, 292, 449.
Agriculture, 13, 67, 78, 105, 145, 148, 154.
Agrigentum, or Girgenti, city in Sicily, 235, 279, 298.
Agrimonia agrimonoides, 934.
eupatoria, 440, 958, 969.
parviflora, 1043.
suaveolens, 1055.
Agropyrum imbricatum, 1013.
prostratum, 1029.
repens, 940.
Agrostemma coeli-rosa, 232.
githago, 451, 733.
coronaria, 215.
flos-Jovis, 232.
Agrostis alba, 725.
alpina, 1002.
canina, 836.
pungens, 933.
spica-venti, 638, 840.
stolonifera, 725.
vulgaris, 849.
Agyneia impubes, 588.

Ailanthus excelsa, 691.
Malabarica, 726.
Ainos, people of Northern Japan, 417, 499, 531, 542, 552, 597, 607, 623, 716, 818, 897, 932, 936, 953, 1008, 1032.
Aira aquatica, 1066.
Bottnica, 1012.
cæspitosa, 638.
canescens, 840.
caryophyllea, 937.
flexuosa, 940.
triflora, 1063.
Air-plant, 901.
Airopsis brevifolia, 1054.
præcox, 836.
Aitonia Capensis, 1016.
Aix, in Provence, 411, 432.
Aizoon Canariense, 990.
Hispanicum, 1011.
Ajmir, city in Hindustan, 667.
Ajnadin, battle of, 601.
Ajuga alpina, 930.
chamæpitys, 549.
Chia, 405.
Genevensis, 930.
iva, 339.
Orientalis, 1011.
pyramidalis, 837.
reptans, 347.
Akhmin, or Panopolis, in Egypt, 391.
Alabama, North American State, 1062.
Alabama river, 1021.
Alabaster, 68, 107.
Alafia Thouarsii, 707.
Alalia, city in Corsica, 237.
Alangium decapetalum, 692.
hexapetalum, 692.
Alans, 553.
Albania, country near Greece, 600, 814, 1058.
Albanians, see Albania.
Albany, city in North America, 963.
Albemarle, in North America, 963.
Albigenses, 711, 715, 719.
Albinoes, race of, 569, 924.
Albizzia lebbek, 453.
nemu and *julibrissin*, 688.
sp. 578, 731.
Albuca major, 230.
minor, 991.
Alca impennis, 154.
Alcaçer, city in Africa, 824.
Alcea acaulis, 308.
ficifolia, 188.
rosea, 187.
Alchemilla alpina, 264.
arvensis, 599.
pentaphylla, 937.
vulgaris, 264.
Alcoholic distillation, 83.
Alcyonidium nemalion, 368.
Alder, 167, 175, 460, 790, 807, 953.
Aldrovanda vesiculosa, 990.
Alectoria Arabum, 672.
jubata, 367.
Aletris aurea, 1039.
farinosa, 999.
fragrans, 993.
Aleurites laccifera, 712.
triloba, 216, 846.
Aleutian Islands, in the North Pacific, 937, 1006, 1048.
Alexandria, city in Egypt, 326, 348, 599, 603, 613, 641, 843, 1050, 1056.
Algiers, 1060, 1065.
Algonquins, a North American tribe, 927, 930.
Alhagi Maurorum, 75.
pseudalhagi, 487.
Alisanders, 250.
Alisma cordifolia, 976.
damasonium, 903.
flava, 986.
plantago, 450, 493, 969.
ranunculoides, 903.
trinervium, 961.
Alkanet dye, 405.
Allamanda cathartica, 987.
Alleghany mountains, 1004.
Allium album, 1048.
ambiguum, 1040.
ampeloprasum, 144.
angulosum, 813.
Askalonicum, the *shallot*, 68.
Canadense, 808, 927, 947, 968
carinatum, 903.
Caucasicum, 1013.
cepa, the *onion*, 104.
cernuum, 929.
chamae-moly, 827.
Clusianum, 922.
coeruleum, 1031.
descendens, 896.
Dioscoridis, 138.
fistulosum, 582.
flavum, 923.
guttatum, 1058.
junceum, 1040.
lineare, 1013.
magicum, 905.
margaritaceum, 1040.
moly, 894.
montanum, 996.
moschatum, 919.
mutabile, 1041.
narcissiflorum, 919.
nigrum, 896.
nutans, 779.
obliquum, 813
oleraceum, 921.
pallens, 934.
paniculatum, 922.
pilosum, 1040.
ramosum, 1013.
reticulatum, 605.
rotundum, 827.
roseum, 188.
sativum, the *garlic*, 145.
Allium schœnoprasum, 375, 927.
scorodoprasum, 145.
senescens, 907.
Sibericum, 1007.
Siculum, 972.
sphærocephalon, 753.
staticiforme, 1040.
Stellerianum, 1013.
striatum, 1021.
subhirsutum, 827.
tenuissimum, 1013.
tricoccum, 1043.
triflorum, 1056.
triquetrum, 945.
uliginosum, 418.
ursinum, 512.
Victoriale, 890.
vineale, 879.
Allosorus atropurpureus, 995.
gracilis, 1044.
Allspice, or *pimento*, 609.
Almalik, city in Central Asia, 751.
Almond, 116, 304, 909, 917.
Alnus crispa, 1064.
firma, 622.
glauca, 807.
glutinosa, 167, 175, 451.
incana, 419, 790, 1010.
jeja kene, 419.
maritima, 1060.
oblongata, 460.
serrulata, 807.
undulata, 807.
Aloe arachnoides, 998.
arborescens, 998.
brevifolia, 998.
Commelyni, 998.
dichotoma, 230.
echinata, 1001.
glauca, 385.
Indica, 392.
littoralis, 392.
mitraeformis, 998.
picta, &c., 993.
rhodacantha, 998.
sahundra, 385.
Socotrina, 391, 816.
spicata, 998.
variegata, 1001.
vulgaris, 469.
Aloes wood, 816.
Aloexylum, see *Aquilaria*.
Alopecurus agrestis, 940.
aristulatus, 1040.
geniculatus, 840.
Indicus, 999.
pratensis, 980.
utriculatus, 349.
Aloysia citriodora, 1039.
Alphabet, 106, 150, 157, 163, 725, 776, 801, 920.
Alphabet, Arabic, 583, 652, 821.
Armenian, 561.
Chinese, 393.
Corean, 553.
Japanese, 716.

Alphabet, Kawi, or ancient Javan, 543, 626.
Alpinia allughas, 832.
galanga, 570.
magnifica, 707.
Malaccensis, 966.
Alps, of Switzerland, 402, 900.
Alsine biflora, 1012.
glabra, 1040.
Groenlandica, 1048.
Michauxii, 1041.
patula, 1044.
segetalis, 1006.
squarrosa, 1040.
stricta, 1052.
Alstonia? let-htuk, 322.
scholaris, 396.
Alstroemeria hæmantha, 661.
ligtu, 661.
pelegrina, 1002.
revoluta, 661.
salsilla, 1002.
versicolor, 661.
Altai, range of mountains in Central Asia, 582, 753.
Altars for sacrifice, 74.
Alternanthera achyrantha, 1011.
frutescens, 986.
sessilis, 702.
Althæa cannabina, 486.
hirsuta, 912.
Ludwigii, 850.
officinalis, 392, 935, 958, 969.
rosea, 969.
Altingia excelsa, see *Liquidamber*.
Alysicarpus vaginalis, 970.
Alyssum calycinum, 910.
campestre, 903.
Creticum, 905.
densiflorum, &c., 998.
halimifolium, 994.
hyperboreum, 1018.
incanum, 922.
maritimum, 894.
minimum, 995.
montanum, 937.
saxatile, 994.
spinosum, 903.
Amancaes lily, 711.
Amanita aurantiaca, 392.
muscaria, 482.
Amaracus dictamnus, 290.
Amaranthus albus, 750.
blitum, 282.
campestris, 739.
caudatus, 468.
cruentus, 1009.
flavus, 1025.
frumentaceus, 595.
hypochondriacus, 996.
retroflexus, 749.
spinosus, 709.
tricolor, 511, 917.
tristis, 609.
viridis, see *Euxolus*.
Amarna, sculptures at, 122.
Amaryllis atamasco, 776, 936.
belladonna, 991.
bicolor, 1002.
Caspica, 1030.
Chilensis, 1002.
equestris, 991.
falcata, 947.
flammea, 1002.
formosissima, 915.
latifolia, 974.
longifolia, 991.
Orientalis, 930.
Sarniensis, 688.
Tartarica, 1033.
tubiflora, 1002.
Zeylanica, 993.
Amazons, 186, 207.
Amazons, or Maranon, river, 880, 1018.
Amber, 133, 305, 326, 884, 965.
Ambergris, 599, 752.
Amblogyna polygonoides, 984.
Amboise, city in France, 892.
Ambrosia artemisiæfolia, 709, 968.
bidentata, 1044.
hispida, 1005.
maritima, 206.
paniculata, 1000.
tenuifolia, 1064.
trifida, 978.
Ambrosinia Bassii, 972.
Amelanchier botryapium, 804.
oligocarpa, 804, 1064.
vulgaris, 356.
Amellus spinulosus, 1055.
villosus, 1057.
Amera-Cosha, Sanscrit dictionary, 813.
America, 19, 448, 572, 860, 887, 908, 923.
America, Northwest, 19, 604, 905.
American commerce, 1039.
American commerce with India and China, beginning of, 1039.
American gum-animi, 901.
American navy, 1051.
American ship, first, in Japan, 1049.
American wormseed, 710.
Amherstia nobilis, 590.
Ammania Ægyptiaca, see *A. verticillata*.
auriculata, 374.
baccifera, 999.
humilis, 1040.
latifolia, 982.
ramosior, 1016.
verticillata, 846.
vesicatoria, 523.
Ammi acaule, 998.
majus, 307.
visnaga, 358.
Ammon, the Egyptian god, 130.
Ammoniacum, gum, 152, 724.
Amomum angustifolium, 821.
aromaticum, 579.
Amomum cardamomum, 776.
echinatum, 966.
grana-paradisi, 675.
grandiflorum, 842.
melegueta, 842.
sp., 732.
sylvestre, 855.
villosum, 966.
Amoora rohituka, 691.
Amorium, in Phrygia, 629.
Amorpha canescens, 1057.
fruticosa, 1015.
herbacea, 1040.
microphylla, 1054.
Ampalis Madagascarensis, 707.
Ampelopsis bipinnata, 992.
hederacea, 968.
quinquefolia, 942.
Amphicarpaea monoica, 1006.
Amphicarpum Purshii, 1055.
Amphictyonic League, 233, 241.
Amphitheatre, 476, 516.
Amsinckia intermedia, 1066.
Amsonia ciliata, 1040.
latifolia, 999.
salicifolia, 1053.
Amsterdam and St. Paul, islands in the Indian Ocean, 865.
Amulets, 137.
Amygdalus communis, the *almond*, 116.
nana, 980.
Persica, the *peach*, 327.
Sinensis, 192.
Amyris balsamifera, 891.
commiphora, see *Balsamodendron agallocha*.
elemifera, 1005.
heptaphylla, 514.
kaful, see *Balsamodendron*.
opobalsamum, see *Balsamodendron*.
protium, 974.
toxifera, 1005.
Anaa, or Chain coral-island, 1029.
Anabaptists, sect of Christians, 869.
Anabas scandens, 755.
Anabasis aphylla, 2.
cretacea, 587.
monandra, 1033.
Anacardiaceæ, 425.
Anacardium Occidentale, 784.
Anacharis Canadensis, 1044.
Anacyclus aureus, 898.
Creticus, 998.
pyrethrum, 390.
Valentinus, see *Anthemis*.
Anagallis alternifolia, 1002.
arvensis, 200.
latifolia, 201.
linifolia, 960.
Monelli, 885.
parviflora, 960.
tenella, 201.
Anagyris fœtida, 286.
Anahuac, 604.

Anarrhinum bellidifolium, 906.
crassifolium, 971.
Anas boschas, 87, 136, 453.
mollissima, 154.
moschata, 665.
querquedula, 136, 453.
sp., 875.
Anastatica Hierochuntica, 516.
Anatherum bicorne, 982.
Anatomy, 63, 346, 372.
Anchiale, city near Tarsus, 198.
Anchusa lutea, 998.
officinalis, 509, 935.
paniculata, 263.
parviflora, 998.
rosea, 998.
saxatilis, 1032.
sempervirens, see *Caryolopha*.
stylosa, 971.
tinctoria, 405.
undulata, 993.
Andaman Islands, near the Malayan Archipelago, 240.
Andersonia rohitaka, see *Amoora*.
Andra dynasty of Hindu kings, 498, 519, 566.
Andromeda (*Leucothoe*) *acuminata*, 761.
(*Oxydendron*) *arborea*, 1003.
(*Leucothoe*) *axillaris*, 1043.
buxifolia, 1067.
(*Cassandra*) *calyculata*, 1009.
(*Leucothoe*) *Catesbaei*, 1003.
ferruginea, 1040.
floribunda, 1053.
(*Cassiope*) *hypnoides*, 991, 1011, 1031.
(*Lyonia*) *ligustrina*, 1038.
Mariana, 995.
nitida, 1022.
polifolia, 930.
(*Leucothoe*) *racemosa*, 1016.
salicifolia, 1067.
speciosa, 1029.
tetragona, 970.
Andropogon alopecuroides, see *Erianthus*.
angustifolius, 260.
argenteus, 1061.
arundinaceus, 999.
caricosus, 966.
dissitiflorus, 1039.
distachyos, 972.
furcatus, 1055.
ischæmum, 260.
iwarancusa, 498.
macrourus, 1039.
Martini, 336.
muricatus, 387.
nardus, see *A. Martini*.
nutans, 1016.
pachnodes, 336.
schoenanthus, see *Cymbopogon*.
scoparius, 1041.
serratus, 698.
sp., 499.
Andropogon ternarius, 1041.
virginicus, 982.
Androsace carnea, 934.
chamæjasme, 912.
elongata, 919.
Gmelini, 1013.
lactea, 907.
Occidentalis, 1057.
septentrionalis, 919.
villosa, 894.
vitaliana, 934.
Androsæmum officinale, 468.
Andryala cheiranthifolia, 937.
integrifolia, 912.
Ragusina, 982.
Anegada, an island, 924.
Anethum graveolens, 232, 969.
sowa, 790.
Angelica carvifolia, 898.
lucida, 909, 949.
montana, 961.
Pyrenaica, 912.
Razoulii, 993.
sylvestris, 828.
triquinata, 967.
Aneilema tuberosum, 729.
Anemone alpina, 897.
Appenina, 906.
Baldensis, 890.
Caroliniana, 1040.
cernua, 146.
coronaria, 245.
hortensis, see *stellata*.
narcissiflora, 889.
nemorosa, 351.
palmata, 894.
parviflora, 419.
(*Pulsatilla*) *patens*, 780.
Pennsylvanica, 1025.
pratensis, 246.
pulsatilla, 246
ranunculoides, 882.
stellata, 245.
sylvestris, 780.
trifolia, 906.
vernalis, 937.
Virginica, 982.
Anglo-Saxon, or ancient English, 566, 612–13.
Angostura bark, 709.
Angræcum pectinatum, 385.
sp., 732.
Anguilla, eel, 154.
Anguria pedata, 987.
trifoliata, 987.
trilobata, 987.
Anhalwara, capital of Guzerat, 619, 669.
Animal-worship, 64, 82, 555, 796.
Anise, 248, 618.
Anisochilus carnosum, 739.
Anisomeles Malabarica, 524.
ovata, 739.
Annapolis, once Port Royal, in Nova Scotia, 1003.
Annelids, or worms, 752.
Ann. mus. d'hist. nat., 1054.
Anona Asiatica, 986.
cherimolia, 887.
glabra, 1005.
muricata, 754, 882.
Senegalensis, 69.
squamosa, 867.
reticulata, 867.
Ansellia sp., 732.
Anser Canadensis, 875.
chenalopex, Egyptian goose, 28.
segetum, 87, 453.
Ant, the insect, 25.
Antelopes, 12, 25, 264, 818.
Antennaria margaritacea, 903.
plantaginifolia and *dioica*, 844, 993.
Anthemis alpina, 1007.
altissima, 937.
arvensis, 704.
Barrelieri, 971.
Chia, 294.
cota, 1000.
cotula, see *Maruta*.
discoidea, 295.
fuscata, 961.
maratima, 898.
mixta, 937.
nobilis, 516.
pyrethrum, see *Anacyclus*.
rosea, 294.
tinctoria, 404.
tomentosa, 964.
Valentina, 310.
Anthenanthia villosa, 1041.
Anthericum aloides, 1011.
elatum, 1024.
frutescens, 1011.
liliago, 884.
ramosum, 494.
serotinum, 988.
Anthistiria arguens, 966.
ciliata, 733.
imberbis, 733.
Antholyza Aethiopica, 947.
cunonia, 1021.
plicata, 977.
ringens, 977.
Anthospermum Aethiopicum, 1000.
ciliare, 1000.
Anthoxanthum odoratum, 912.
Anthriscus cerefolium, 272, 969.
nemorosa, 1013.
sylvestris, 247.
vulgaris, 247.
Anthyllis barba-jovis, 505.
Cretica, 306.
cytisoides, 921.
erinacea, 921.
hamosa, 961.
Hermanniæ, 905.
lotoides, 906.
sp., 230.
tetraphylla, 910.
vulneraria, 173.

Antiaris saccidora, 369.
toxicaria, 422.
Anticosti Island, 664, 874–75.
Antidesma bunias, 740.
diandrum, 746.
paniculata, 84.
pubescens, 746.
sylvestris, 974.
Zeylanica, 970.
Antigua, settlement on Darien, 860, 965.
Antilopa rupicapra, 452.
sp., 54, 58.
Antimony, 108, 318.
Antinoe, city in Egypt, 526.
Antinomian sect of Christians, 877.
Antioch, city in Syria, 478, 602, 655.
Antioquia, inland city S. A. 877.
Antirrhinum asarina, 492.
cirrhosum, 1007.
glaucum, 1007.
majus, 257.
meonanthum, 961.
molle, 994.
orontium, 257.
triornithophorum, 991.
triste, 1009.
Antwerp, city of, 909.
Anublada, island in the Pacific, 884.
Anychia Canadensis, 1016.
capillacea, 1061.
Apactis Japonica, 976.
Apargia dubia, 919.
hirta, see *Thrincia*.
incana, 921.
taraxaci, 994, 1021.
tuberosa, 107.
Ape, 442.
Apeiba tibourbou, 950.
Aphyllanthes Monspeliensis, 898.
Aphyteia hydnora, 229.
Apicra albicans, 1001.
arachnoides, 1006.
imbricata, 998.
patula, 998.
spiralis, 998.
tricolor, 998.
viscosa, 998.
Apios tuberosa, 768, 923, 929.
Apis, the bee, 106.
Apium dulce, the *celery*, 864, 902.
graveolens, 175, 969.
seri, 418.
Aplectrum hyemale, 1039.
Apocynum androsæmifolium, 794.
cannabinum, 794, 866, 881, 929, 940, 945.
hypericifolium, 794.
reticulatum, 966.
sp., 572, 875, 903.
Venetum, 419.
Apollo, worship of, 132, 150, 282.
Aponogeton distachyon, 230.
monostachyum, 609.
Apple, 134, 181, 451, 581, 788, 909, 951.
Apricot, 403, 469.
Apulia, in So. Italy, 659, 672, 842.
Apurimac, river in Peru, 705.
Aquamarine, 573.
Aqueducts, subterranean, 641.
Aquila fulva, 453.
haliætus, 453.
Aquilaria agallochon, 189.
Aquilegia alpina, 937.
Canadensis, 903.
formosa, 580.
viscosa, 937.
vulgaris, 352, 935.
Arabis albida, 1050.
alpina, 907.
arenosa, 937.
aspera, 1007.
bellidifolia, 907.
Canadensis, 1000.
Halleri, 937.
hirsuta, 847.
hispida, 1004.
laevigata, 1052.
lyrata, 1016.
patens, 1068.
pendula, 1013.
reptans, 1000.
runcinata, 1000.
stricta, 1025.
Thaliana, see *Sisymbrium*.
turrita, 854.
Arabs, 274, 439, 461, 538, 613, 615, 630, 821, 937.
Arab Voyages, 632, 642.
Aracan, province of Burmah, 1063.
Aracarets, tribe in the West Indies, 964.
Arachis hypogea, 736.
Aralia arborea, 986.
Chinensis, 974.
edulis, 418.
hispida, 927.
Japonica, 989.
nudicaulis, 805, 830, 927, 935.
racemosa, 805.
spinosa, 923.
Aramaic, or Chaldee language, 117.
Araucaria imbricata, 812.
Arbor-vitæ, 604, 866, 886.
Arbutus alpina, see *Arctostaphylos*.
andrachne, 102.
laurifolia, 1037.
Menziesii, 1046.
tomentosa, 1046.
unedo, 101.
Arch, in building, 51, 108, 233, 616.
Arch, pointed, 638, 641, 665, 721.
Archangelica atropurpurea, 948.
officinalis, 824.
Archemora rigida, 926, 977.
Archers, 151.
Archal, or *orchil*, 236, 467.
Architecture, 68, 666.
Muslim, 641.
Arctium lappa, 451, 458, 969.
tomentosum, 625.
Arctomys Marilandica, 948.
Arctopus echinatus, 1016.
Arctostaphylos alpina, 780.
glauca, 582.
uva-ursi, 529.
Arctotis acaulis, 1001.
anthemoides, 1016.
aspera, 993.
calendulacea, 1001.
dentata, 1016.
hypochondriaca, 990.
paleacea, 1016.
paradoxa, 1000.
pilifera, 1000.
Ardea, small white egret, 41.
cinerea, 136, 453.
nycticorax, night heron, 16, 869.
Ardisia humilis, 970.
serrulata, 986.
tinifolia, 982.
Areca catechu, 331, 517, 846.
Dicksonii, 746.
Madagascariensis, 385.
oleracea, 853.
spicata, *glandiformis*, and *globulifera*, 966.
Arenaria Bavarica, 918.
ciliata, 995.
fasciculata, 1033.
graminifolia, 1000.
holostea, 998.
juniperina, 937.
Labradorica, 1060.
lanuginosa, 1041.
laricifolia, 988.
(*Moeringia*) *lateriflora*, 1025.
ligericina, 1070.
macrocarpa, 1058.
multicaulis, 1028.
peploides, 918.
saxatilis, 919.
serpyllifolia, 451.
striata, 931.
tenuifolia, 931.
tetraquetra, 937.
trinervis, 931.
verna, 894.
Arenga saccharifera, 335.
Arethusa bulbosa, 1000.
Aretia alpina, 1028.
Helvetica, 1028.
Argania sideroxylon, 678.
Argemone Mexicana, 742.
Argonautic Expedition, 162.
Argos, city in Greece, 107, 194, 1063.
Arguin, castle of, 825.
Argyreia sp., 731.
Argythamnia candicans, 983.
Arian Christians, 548–59, 553–54, 564–66.
Arimaspi, 202.
Aristea cyanea, 999.
Aristida Adscensionis, 982, 994.
dichotoma, 1041.
gracilis, 1061.
hystrix, 999.

Aristida oligantha, 1040.
purpurascens, 1050.
ramosissima, 1044.
stricta, 1041.
tuberculosa, 1060.
Aristolochia anguicida, 978.
arborescens, 915.
bætica, 886.
bilabiata, &c., 987.
bracteata, 524.
clematitis, 447.
Cretica, 998.
fragrantissima, 705.
glauca, 921.
hirta, 996.
Indica, 696.
Kaempferi, 989.
longa, 455.
lutea, 998.
Maurorum, 900.
odoratissima, 983.
pallida, 307.
parvifolia, 308.
Pontica, 1008.
ringens, 950.
rotunda, 307.
sempervirens, 512.
serpentaria, 748, 919, 958.
sipho, 1039.
tomentosa, 1053.
Aristotelia macqui, 660.
Aristotelian philosophy, 705.
Arithmetic, among the people of Hindustan, 64, 76.
Arkansas, N. American State, 1062.
Armenia, 87, 218, 401, 434, 454, 566, 600, 786.
Armeniaca Siberica, 480.
Sinensis, 403.
vulgaris, 469.
Armenian history and language, 87, 561, 566, 681, 753.
Armeria cephalotes, 961.
fasciculata, 961.
humilis, 961.
scorzoneraefolia, 894.
vulgaris, 510.
Armoracia, see *Horse-radish*.
Army, American revolutionary, disbanded, 1038.
Arnica bellidiastrum, 894.
Claytoni, 1016.
crocea, 1000.
doronicum, 907.
gerbera, 1016.
glacialis, 894.
mollis, 1064.
montana, 724.
nudicaulis, 1016.
plantaginea, 1059.
pyrolaefolia, 1016.
scorpioides, 358.
Tubularis, 1016.
Wulfeniana, 890.
Arnopogon Dalechampii, 912.
picroides, 33.
Arnotto, 672.
Arracacha esculenta, 689.
Arrack, an ardent spirit, 323, 630.
Arragon, kingdom in Spain, 675.
Arrhenatherum avenaceum, 836.
bulbosum, 903.
Arrouagues, tribe in the West Indies, 964.
Arrows, 55, 57, 161, 665.
Arrow-head, 771, 847.
Arrow-root, 416, 579, 761, 985.
Arrow-wood, 769.
Artedia squamata, 779.
Artemisia, abrotanum, 358, 969.
absinthium, 99, 935, 969.
anethifolia, 1013.
annua, 1013.
arborescens, 280.
Arragonensis, 971.
Austriaca, 892.
biennis, 1037.
Borealis, 1031.
campestris, 488.
camphorata, 733.
Canadensis, 1044.
caudata, 1044.
cernua, 1055.
Chinensis, 1000.
coerulescens, 889.
Columbiensis, 1055.
dracunculus, 283, 958.
Gallica, 910.
glacialis, 894.
gnaphalodes, 1055.
inculta, 75.
Indica, 210.
inodora, 1013.
integrifolia, 1013.
Judaica, 1.
laciniata, 1013.
Lercheana, 1013.
Lippii, 997.
longifolia, 1057.
Ludoviciana, 1057.
maritima, 508.
moxa, 210.
mutellina, 894.
nitrosa, 1013.
palmata, 475.
palustris, 1013.
pauciflora, 586.
pectinata, 1032.
Pontica, 358.
procera, 470.
rupestris, 1019.
santonica, 587.
scoparia, 907.
sericea, 1014.
spicata, 489.
spithamæa, 1059.
tanacetifolia, 793.
tenuifolia, 1011.
vallesiaca, 557.
vermiculata, 975.
vulgaris, 82.
Arteries, 288, 515.
Artichoke, 71, 310, 749.
Artillery, 862.
Artocarpus chaplasha, 735.
echinatus, 112.
hirsuta, 463.
incisa, 437, 917.
integrifolia, 330.
lakoocha, 697.
myouk-loke-ngay, 112.
pubescens, 974.
Arts and trades of the ancient Egyptians, 87.
Arum arisarum, 344.
campanulatum, 697.
crinitum, 499.
Dioscoridis, 346.
divaricatum, 974.
dracontium, 982, 1000.
dracunculus, 308.
esculentum, see Colocasia.
furfuraceum, 423.
hederaceum, 987.
Italicum, 314.
lingulatum, 950.
lyratum, 746.
maculatum, 314.
montanum, 746.
pentaphyllum, 973.
proboscideum, 889.
ringens, 976.
tenuifolium, 888.
(*Typhonium*) *trilobatum*, 524.
triphyllum, 808.
(*Peltandra*) *Virginicum*, 1015.
Arundinaria macrosperma, 757, 869, 909.
Schomburgkii, 715.
sp., 659.
Arundo donax, 57, 72.
festucoides, 397.
karka, 595.
Arungana mollusca, 1000.
Arzina, in Lapland, 888.
Asafœtida, 328, 342.
Asarum arifolium, 1039.
Canadense, 808.
Europæum, 264.
Virginicum, 777.
Ascalon, 125, 227.
Ascension Isl. in Pacific, 858, 1068.
Asclepiadean, medical sect, 446.
Asclepias alexicaca, 974.
amœna, 952.
Cornuti, 908, 927, 945.
crispa, 998.
Curassavica, 983.
Dioscoridis, 339.
(*Calotropis*) *gigantea*, 596.
fruticosa, see *Gomphocarpus*.
incarnata, 794, 949.
nivea, 986.
obtusifolia, 1038.
parviflora, 1043.
paupercula, 1038.
phytolaccoides, 1016.
procera (*Calotropis*), 330.

Asclepias pubescens, 999.
purpurascens, 991.
quadrifolia, 1049.
rubra, 1016.
spiralis, 390.
Sullivanti, 1068.
tuberosa, 982.
undulata, 998.
variegata, 918.
verticillata, 999.
Ascyrum crux-Andreæ, 1016.
hypericoides, 987.
mutilum, 1016.
pumilum, 962.
setosum, 1016.
villosum, see *Hypericum*.
Ash, see *Fraxinus*.
Asimina grandiflora, 1033.
triloba, 881.
parviflora, 1041.
pygmæa, 1033.
Asp, or cobra, 17.
Aspalathus araneosa, 1000.
astroites, 1000.
callosa, 1000.
capitata, 1000.
ericaefolia, 1000.
Indica, 1000.
quinquefolia, 1000.
thymifolia, 1000.
uniflora, 1000.
Asparagus acerosus, 476.
acutifolius, 165.
albus, 902.
amarus, 884.
aphyllus, 165.
ascendens, 736.
Asiaticus, 999.
Capensis, 999.
falcatus, 970.
officinalis, 397, 969.
racemosus, 698.
retrofractus, 999.
sarmentosus, 698.
sp., 442.
tenuifolius, 468.
verticillatus, 525.
Aspen, 133.
Asperugo procumbens, 503.
Asperula arvensis, 887.
cynanchica, 850.
incana, 998.
laevigata, 937.
lutea, 998.
nitida, 998.
odorata, 654.
Pyrenaica, 937.
Taurina, 904.
tinctoria, 824.
Asphodelus albus, 921.
Creticus, 998.
fistulosus, 269.
luteus, 273.
prolifer, 1087.
ramosus, 106.
Aspidium aculeatum, 480.
Aspidium alpinum, 918.
(*Cibotium*) *baromez*, 646.
cicutarium, 1000.
coriandrifolium, 1000.
cristatum, 979.
falcatum, 1008.
filix-mas, 123.
fontanum, 551.
Halleri, 894.
invisum, 983.
lobatum, 1000.
lonchitis, 496.
marginale, 1020.
Martinicense, &c., 987.
montanum, 1000.
mucronatum, 983.
Noveboracense, 1020.
obovatum, 564.
patens, 983.
regium, 1006.
spinulosum, 878, 969.
thelypteris, 849, 969.
trifoliatum, 1000.
unitum, 1000.
Asplenium adiantum-nigrum, 367.
ambiguum, 974.
angustifolium, 978.
auritum, 983.
Breynii, 975.
cuneatum, 983.
ebenum, 978.
falcatum, 970.
furcatum, 1000.
Germanicum, 892.
lanceolatum, 906.
marinum, 904.
montanum, 1041.
nidus, 975.
palmatum, 902.
polypodioides, 978.
proliferum, 983.
ruta muraria, 367.
Septentrionale, 880.
serratum, &c., 987.
thelypteroides, 1044.
trichomanes, 251.
Assiente, the, French Company for transporting Negroes to Spanish-American settlements, 997.
Assuan, 603, 711.
Assyrian, or cuneiform writing, 195.
Assyrians, 90, 113, 146, 218.
Astacus, or Nicomedia, city in Asia Minor, 217.
Aster acuminatus, 1041.
æstivus, 1043.
alpinus, 940.
amellus, 286.
angustifolius, 990.
bifidus, 1014.
canescens, 1055.
Carolinianus, 1040.
Chinensis, see *Callistephus*.
concolor, 1016.
cordifolius, 949.
Aster corymbosus, 1043.
dumosus, 991.
ericoides, 1011.
flexuosus, 1055.
foliolosus, 1011.
fruticulosus, 993.
glandulosus, 985.
graminifolius, 1060.
grandiflorus, 1009.
hispidus, 989.
(*Galatella*) *hyssopifolia*, 1028.
laevigatus, 973.
laevis, 1019.
linifolius, 979.
macrophyllus, 1003.
miser, 1011.
multiflorus, 1011.
mutabilis, 982.
Novae Angliae, 991.
Novi Belgii, 982.
paludosus, 1043.
peregrinus, 1058.
prenanthoides, 1052.
puniceus, 982.
radula, 1043
reticulatus, 1055.
rubricaulis, 990.
sagittifolius, 1054.
salicifolius, 1043.
sericeus, 1044.
simplex, 1057.
spectabilis, 1043.
squarrosus, 1040.
surculosus, 1041.
tardiflorus, 1003.
tenellus, 1000.
tenuifolius, 992.
Tradescanti, 952.
tripolium, 449.
undulatus, 991.
uniflorus, 1044.
Asteracantha longifolia, 695.
Astina, Hindu seat of government on Java, 554, 586.
Astragalus adsurgens, 1013.
alopecuroides, 995.
ammodytes, 1031.
ampullatus, 1032.
arenarius, 587.
aristatus, 327.
asper, 907.
Austriacus, 907.
Baeticus, 952.
Baicalensis, 1013.
brachycarpus, 1007.
Canadensis, 973, 995.
carnosus, 1057.
Carolinianus, 973.
caudatus, 1030.
Christianus, 900.
cicer, 587.
coluteoides, 900.
contortuplicatus, 1008.
Creticus, 325.
cymbaecarpos, 961.
dalguricus, 1032.

Astragalus densifolius, 900.
echioides, 905.
epiglottis, 982.
erianthus, 894.
exscapus, 937.
galegiformis, 1007.
glaber, 1042.
glaux, 399.
glyciphyllus, 720.
grandiflorus, 781, 1029.
gummifer, 118.
hamosus, 889.
hypoglottis, 939.
incanus, 937.
laguroides, 1032.
Laxmanni, 1013.
leptophyllus, 1032.
longiflorus, 1013.
melilotoides, 1005.
Mexicanus, 1061.
microphyllus, 911.
Missouriensis, 1055.
Monspessulanus, 931.
montanus, 912.
muricatus, 1032.
oxyphyllus, 1032.
pauciflorus, 1013.
pentaglottis, 982.
pilosus, 931, 1029.
polyphyllus, 1032.
poterium, 302.
racemosus, 1057.
Robbinsii, 1065.
secundus, 1044.
sesameus, 934.
stella, 903.
tenellus, 1055.
tragacanthoides, 1029.
uliginosus, 1013.
uralensis, 988, 1029.
varius, 1007.
verus, 327.
viciaefolius, 894.
villosus, 1041.
Astrakan, city on the Caspian, 889.
Astrantia epipactis, 889.
heterophylla, 998.
major, 870.
minor, 937.
Astraphaxis spinosa, 1007.
Astrea, asteroid, 1069.
Astrocaryum tucum, 791.
Astrolabes, 738.
Astronomical Observations, 83, 164, 372, 407, 643, 680, 829.
Astronomical Tables, the Alphonsian, of Ulugh Beg, 743, 815.
Astronomy, 67, 164, 301, 312, 323, 377, 576, 616, 762.
Atalanta serrulata, 1054.
Atalantia monophylla, 726.
Athamantha annua, 910.
Cretensis, 471.
libanotis, 885.
Matthioli, 889.
panacifolia, 902.
Athamantha Sicula, 972.
verticillosa, 961.
Athanasia annua, 982.
capitata, 975.
dentata, 1001.
parviflora, 997.
pubescens, &c., 993.
punctata, 997.
Athens, 233, 239, 265–66, 280, 337, 348, 541, 576, 822.
Athyrium filix-fœmina, 914, 969.
Atractylis cancellata, 359.
gummifera, 310.
humilis, 971.
Atragene Americana, 1056.
Atraphaxis undulata, 1011.
Atriplex angustifolia, 904.
canescens, 1054.
coriacea, 236.
glauca, 971.
halimus, 12.
hastata, 511, 958.
hortensis, 248, 958, 969.
laciniata, 904.
littoralis, 1004.
microsperma, 1053.
nitens, 1047.
patula, 904.
portulaccoides, 887.
Tatarica, 1013.
veneta, 888.
Atropa arborescens, 950.
belladonna, 184.
frutescens, 971.
mandragora, see *Mandragora*.
Atskesi, village of the Ainos, 1006
Attar of rose, 150, 304.
Attica, in Greece, 126.
Auaris, city in Egypt, 94, 103.
Aubergine, see *Egg-plant*.
Aubrietia deltoidea, 486.
Auchomenes Hookeri, 733.
Aucklandia costus, 320.
Aucuba Japonica, 774.
Augsburg, 870, 888.
Augury, an ancient superstition, 132, 554.
Augustan Confession, 870.
Augustinian monks, 863, 866.
Auk, the bird, 154, 619.
Aulax pinifolia, 1006.
Auricular confession, 720.
Aurora borealis, 940, 1004–5.
Australia, 564, 933, 945, 985.
Australians, 933, 945.
Austria, and the Austrians, 1057, 1059.
Avadana Asoka, Budd. writing, 554.
Purana, Buddhist writing, 814.
Avena fatua, 398.
fragilis, 971.
nuda, 903, 969.
Orientalis, 1023.
pallens, 960.
fratensis, 638.
sativa, 340, 451, 969.
Avena strigosa, 1031.
versicolor, 1005.
Avenastrum striatum, 1044.
Avens, 506.
Averrhoa bilimbi, 334.
carambola, 690.
Avicennia tomentosa, 324.
Avignon, city in France, 767.
Avocado, 824.
Axum, city in Abyssinia, 548, 573, 680, 800.
Axyris amarantoides, 1013.
hybrida, 1013.
prostrata, 1014.
Aydendron laurel, 709.
Ayenia pusilla, 982.
Aymaras, around Lake Titicaca, 665.
Azadiracta Indica, 545.
Azalea arborescens, 1020.
calendulacea, 1033.
canescens, 1041.
Indica, 632.
nudiflora, 995.
pontica, 299.
procumbens, see *Loiseleuria*.
viscosa, 923.
Azcapozalco, city in Mexico, 831.
Azolla Magellanica, 1002.
Azores Islands, 791, 813, 819, 822, 1058.
Aztec Mexicans, 709, 717, 720, 736, 776, 790.
Aztlan, ancient home of the Aztecs, 709.

BABYLON, city of, 74, 231, 243, 345, 479, 483, 626.
Baccharis angustifolia, 1041.
genistelloides, 717.
glomeruliflora, 1041.
halimifolia, 962.
ivaefolia, 1002.
scandens, 668, 799.
sp., 661, 665.
venosa, 717.
Bacchus, worship of, 145, 150, 154, 442.
Bachelor's button, 879.
Bactra, city in Central Asia, 326–27.
Bactria, 383, 388, 391, 408.
Bactris minor, 859.
Baden, city in Germany, 997.
Badger, 136, 452.
Baeomyces deformis, 1012.
Baffin's Bay, discovered, 933.
Bagdad, city on the Tigris, 621, 711, 747.
Bahama Islands, discovered, 861.
Bahrite, Memluk dynasty, 741, 795.
Bajee, 701.
Balæna mysticetus, 323.
Balambangan, Java, 597.
Balanites Aegyptiaca, 658, 819.
Balasor, town in the East Indies, 981.

Balbeck, in Syria, temple there, 528, 1069.
Baldeyabrow, 703.
Baldwinia uniflora, 1058.
Balearic Islands, in the Mediterranean near Spain, 201, 411.
Ballabi dynasty of kings in Guzerat, 528, 574.
Balloon voyages, 1070.
Balloon-vine, 567.
Ballota alba, 910.
nigra, 206.
Balm, garden, 363.
Balm of Gilead, 118, 812.
Balm-tree, 115.
Balsam, 652.
copaiva, 783–84.
of Acouchi, 673.
of Peru, 717.
of Tolu, 889.
Balsam-apple, 87.
Balsam-fir, 920.
Balsam-flower, 556.
Balsamita ageratifolia, 898.
vulgaris, 549.
Balsamodendron Africanum, 2.
agallocha, 2.
kafal, 410.
mukul, 333.
myrrha, 142.
opobalsamum, 115.
Baltimore, city in Maryland, 1035, 1042, 1070.
Bamboo, 88, 95, 217, 264, 407, 431, 630, 659, 787.
Bambusa arundinacea, 88, 217.
(*Melocanna*) *baccifera*, 95.
(*Dendrocalamus*) *ballcooa*, 95.
Polynesian, 438.
sp., 431.
(*Dendrocalamus*) *strictus*, 95.
(*Dendrocalamus*) *tulda*, 88.
verticillata, 966.
Bamia, see *Hibiscus esculentus*.
Banabe, or Ascension, island in the Pacific, 752, 1068.
Banana, 277, 779.
Banda, island in the Moluccas, 933.
Bandolier fruit, 745.
Banians, Hindu merchants, 424.
Banian tree, 329.
Banisteria dichotoma, &c., 986.
fulgens, 982.
Banks and banking, 388.
Banksia integrifolia, 985.
Baobab, 819.
Baptisia alba, 1009.
coerulea, 1025.
lanceolata, 1040.
perfoliata, 1011.
tinctoria, 943, 958.
villosa, 1040.
Baptism, 476, 597, 599, 630.
Baptistery, 708, 751.
Barabra, or Nubians, 789, 817.
Barbadoes, island in W. Indies, 943.
Barbarea præcox, 988.
vulgaris, 175.
Barbary, 442, 901.
Barberry, 500, 830.
Barilla, 518, 646.
Barkal, see Gebel Barkal.
Barleria bispinosa, 721.
buxifolia, 702.
ciliata, 702.
coerulea, 696.
cristata, 419.
hystrix, 1000.
longifolia, see *Asteracantha*.
noctiflora, 589.
prionitis, 701.
solanifolia, 986.
Barley, 34, 451, 935, 944.
Barnacles, 335.
Barnevelt's Islands, near Terra del Fuego, 933.
Barringtonia acutangula, 593.
racemosa, 593.
speciosa, 437.
Bartonia nuda, 1057.
ornata, 1054.
Bartsia alpina, 518.
maxima, 961.
pallida, 1013.
spicata, 971.
tenuifolia, 1055.
trixago, 934.
viscosa, 971.
Basella alba, 696.
tuberosa, 678.
Bashee Islets, near Luzon, 981.
Basil, 624, 654, 695, 701, 935.
Basra, or Bassora, city and seaport at the mouth of the Euphrates, 601.
Bassia butyracea, 603.
latifolia, 421.
longifolia, 523.
Parkii, 426.
Bastile, fortress and prison in Paris, 791, 1043.
Bat, 52.
Batatas edulis, 917, 976, 1017.
Bathenians, or Hassassins, 688, 751, 779.
Batinda, city in India, 664.
Batschia canescens, 767.
Carolinensis, 767.
longiflora, 1057.
Battering ram, engine of war, 198.
Battle-axe, 676.
Bauhinia aculeata, 986.
acuminata, 561.
aurita, 1024.
diphylla, 734.
divaricata, 1015.
porrecta, 986.
purpurea, 423.
racemosa, 593.
scandens, 372.
sheen-byat, 112.
tomentosa, 632.
Bauhinia Vahlii, 593.
variegata, 334.
Bayberry, 771.
Bdellium, 1, 2, 472, 545.
Beach-pea, 873.
Beacons, on shoals, 981.
Bean, see *Faba* and *Phaseolus*.
Bear, 45, 114, 136, 452, 753.
Bear Island, discovered, 918.
Bearberry, 529.
Beaver, 125, 452, 752, 1010.
Beckmannia erucaeformis, 971.
Bedouins, 3, 87, 212, 226.
Beech, 134, 451.
Bee-flower, 827.
-nettle, 685.
Beefwood, 113.
Beer, 92, 818.
Beet, 109, 909, 960.
Befaria racemosa, 1043.
Begonia acutifolia, 983.
grandis, 620.
macrophylla, 987.
rotundifolia, 987.
tuberosa, 966.
sp., 620.
Belal dynasty of Carnata, 773.
Belgium, 892, 919.
Belgrade, in Hungary, 866.
Belis jaculifolia, 1000.
Belleisle cress, 988.
Bellis integrifolia, 1044.
perennis, 507.
sylvestris, 258.
Bellium bellidioides, 507.
Bells, invention of, 29, 758, 800.
Belonia aspera, 986.
Benares, city on the Ganges, 555, 669, 716.
Benedictines (Monastic Order), 589, 655.
Bengal, 783, 897, 948, 1026.
Bengal rose, 817.
Beni-hassan, 85.
Benincasa cerifera, 606.
Benjamin, 884.
Bent, or sea-weed, 605.
Benzoin, 551.
odoriferum, 893, 923.
Berberis aquifolium, 830.
aristata, 708.
Canadensis, 1029.
Cretica, 393.
Japonica, 632.
lycium, 446.
nervosa, 1055.
Siberica, 1031.
vulgaris, 500, 969.
Berchemia volubilis, 881.
Berckheya ciliaris, 1000.
incana, 1000.
setosa, 993.
Bergamot, 686.
Bergera Kœnigii, 521.
Bergia verticillata, 974.
Berkhampsted, 613.

Berlandiera tomentosa, 1033.
Berlin, city in Germany, 1056.
Bermudas Isls., 866, 915, 928, 930.
Berne, in Switzerland, 869.
Berrya ammonilla, 244.
Besleria melittæfolia, &c., 986.
Beta maritima, 366.
vulgaris, 109.
Betel, 331, 517, 588.
Beth-horon, two cities in Palestine, 122.
Bethlehem, town in Pennsylvania, 1017.
Betonica alopecurus, 470.
hirsuta, 919.
officinalis, see *Stachys*.
Orientalis, 734.
stricta, 870.
Betony, 340.
Betula alba, 134, 451, 622.
asada, 418.
beitats, 418.
bhojputra, 713.
excelsa, 1043.
fruticosa, 1014.
lenta, 807, 925.
nana, 951, 1017.
nigra, 962.
papyracea, 666, 875, 924, 940, 942, 1010.
populifolia, 808.
pubescens, 911.
pumila, 1019.
sp., 830.
ulmifolia, 622.
Beurreria succulenta, 982.
Bezoars, 323, 799.
Bhasvati, Sanscrit writing, 684.
Bhering's Straits, 1008.
Bible, first printed in Hebrew, 867.
manuscripts and translations of, 553, 565, 598, 613, 684, 756, 791, 795, 901, 960, 963.
Bich-balik, or Ouroumtsi, city in Tartary, 602.
Bidens bipinnata, 748.
cernua, 988.
Chinensis, 966.
chrysanthemoides, 1038.
connata, 1052.
frondosa, 785, 978.
nodiflora, 1011.
pilosa, 428.
tripartita, 785.
Bigelowia nudata, 1041.
Bighorn, see Ovis.
Bignonia Aequinoctialis, &c., 986.
alba, 950.
capreolata, 962.
(*Stereospermum*) *chelonoides*, 738.
chica, 715.
chrysantha, 950.
(*Arthrophyllum*) *Comorense*, 380.
(*Colea*) *floribunda*, 384.
Bignonia grandiflora, 989.
(*Calosanthes*) *Indica*, 694.
leucoxylon, 1000.
(*Arthrophyllum*) *Madagascariense*, 385.
orbiculata, 950.
radiata, 1002.
(*Tecoma*) *radicans*, 942.
(*Spathodea*) *Rheedii*, 462.
(*Spathodea*) *Roxburghii*, 728.
(*Tecoma*) *stans*, 984, 986.
(*Spathodea*) *stipulata*, 112.
suberosa, 739.
(*Colea*) *Telfariæ*, 385.
(*Spathodea*) *tenuifolia*, 380.
tomentosa, 571.
xylocarpa, 739.
Bills of credit, 986, 1010, 1020, 1035.
Bindweed, 206.
Bintara, city in Java, 829.
Birch, 134, 713, 807–8, 830, 872.
Bird-eggs, gigantic fossil, 762.
Birdlime, 187, 247.
Bird's-nest, 848.
Biscuit-root, 604.
Biscutella apula, 485.
coronopifolia, 894.
lævigata, 485.
longifolia, 971.
montana, 1015.
picridifolia, 907.
raphanifolia, 972.
sempervirens, 994.
Biserrula pelecinus, 341.
Bismuth, the metal, 756.
Bistort, see *Polygonum bistorta*.
Bithynia, in Asia Minor, 377, 445.
Bitter-cress, 848.
Bitter-sweet, 530.
Bitumen, 125.
Bixa Orellana, 672.
Blackberry, 134, 177, 777, 869.
Black dammer, 744.
Black death, a pestilence, 787.
Blackhole, prison at Calcutta, 1023.
Black walnut, 778.
Blackwood, 463.
Bladder fern, 850.
wort, 599.
Bladhia crispa, 976.
Japonica, 976
Blaeria ericoides, 997.
glabella, 1014.
Blatta Germanica, 482.
Blazing stars, 927.
Blechnum Australe, 1000.
Boreale, 760.
Occidentale, 987.
serrulatum, 1043.
Blechum Brownei, 983.
Blemyes, Nubian tribe, 441.
Blepharis boerhaaviaefolia, 1000.
edulis, 425.
Blephilia ciliata, 999.
hirsuta, 1041.
Bletia verecunda, 1009.
Blitum capitatum, 940.
virgatum, 882.
Blockading of ports, 1070.
Block Island, murder at, 949.
Bloodroot, 767.
Bloodwort, 638, 848.
Blue-bell, 828.
Blueberry, 806.
Bluebottle, 434.
Blue dye, 590.
Blue earth, 114.
Blue-eyed grass, 776.
Blue-fish, 1026
Blumea balsamifera, 745.
grandis, 788.
Boar, 322, 452.
Bocconia frutescens, 915.
Boebera glandulosa, 1044.
Boehmeria cylindrica, 983.
frondosa, 385.
interrupta, 974.
urticæfolia, 1067.
Boeotia, 128.
Boerhaavia diffusa, 701.
hirsuta, 999.
paniculata, 1045.
scandens, 999.
sp., 732.
Bogomiles, sect of, 685.
Bohemia, in central Europe, 658, 669, 935–36.
Bohemian glass, 888.
poems, 618.
Boii (Bohemians ?), 376, 583.
Bolbophyllum sunipia, 589.
Boletus edulis, 155.
igniarius, 187.
kuruma, 418.
laricis, 440.
luridus, 279.
polycephalus, 971.
umbellatus, 971.
Boleros, a sling-like implement, 875.
Bolgari, city on the Lower Volga, 710, 784, 902.
Bolivia, or Upper Peru, 1064.
Bolt, 556.
Boltonia asteroides, 1021.
diffusa, 1061.
glastifolia, 1041.
Bombax (*Eriod.*) *anfractuosum*, 783.
ceiba, 853.
erianthus, 985.
(*Salmalia*) *insigne*, 278.
(*Salmalia*) *Malabaricum*, 253.
Bombay, 855.
Bombs, invention of, 913.
Bombus, 878.
Bonin Islands, 846, 884, 972.
Bontia daphnoides, 1000.
Bonzessas, Bud. priestesses, 792.
Booby bird, 573.
Book of the Dead, a work in hieroglyphic writing, 81.
Book of Nature, an encyclopedic work by Conrad, 787.

Books, 393, 396, 399, 539, 649, 689.
Boots, 576, 759.
Booza, 92.
Borage, 263.
Borago Africana, see *Trichodesma*.
Cretica, 972.
officinalis, 263.
Orientalis, 996.
Borassus Aethiopicus, 125.
dichotomus, 1.
flabelliformis, 515.
Madagascariensis, 385.
Borax, 612.
Borbonia cordata, 975.
crenata, 975.
lanceolata, 1000.
trinervia, 1000.
Borgite, Memluk dynasty, 796.
Borneo, island of, 788, 814, 846.
Boro Budur, Buddhist temple, 782.
Borodino, city in Russia, 1059.
Borrichia frutescens, 962.
Borysthenes, city at the mouth of the Dnieper, 226.
Bos bubalus, 277.
Americanus, American bison, 864, 869, 878, 880–81.
bison, 135, 452.
Caffer, African buffalo, 564.
grunniens, yak, 527.
taurus, 67, 154, 424, 452.
urus, 135.
Boscia sp., 730.
Bosea yermavora, 1014.
Bosporus, or Panticapæum, Greek city in the Crimea, 265.
Boston, city and seaport in New England, 947–48, 951, 981, 985, 994, 1004, 1028, 1035, 1070.
Boston Massacre, the, so-called, 1030.
Boswellia glabra, 110.
papyrifera, 346.
sp., 346.
thurifera, 110.
Bosworth, battle at, 843.
Botanic gardens, 472, 885, 919, 1004, 1027, 1032, 1045, 1066.
one established in Egypt, 1066.
Botanical nomenclature, improvement in, by Linnæus, 1013.
Botrychium dissectum, 1000.
lunaria, 849.
matricarioides, 978.
rutaceum, 921.
Virginicum, 987.
Zeylanicum, 966.
Bouca oppositifolia, 112.
Bourbon or Mascareigne Island, 953, 957.
Bouriates, of Siberia, 759.
Bouro, one of the Molucca Islands, 299, 338, 925.
Bouteloua curtipendula, 1044.
hirsuta, 1055.
oligostachya, 1058.
Bouton, island in the East Indies, 960, 981.
Bows, metallic, 120, 789.
Bow-string hemp, 95.
Box-elder, 641.
Box-wood, 171–72.
Boykinia aconitifolia, 1060.
Brabejum stellulifolium, 229, 766.
Brachychaeta cordata, 1067.
Brachyelytrum aristatum, 1033.
Brachyris sarothræ, 1055.
Brachystelma sp., 731.
Bradleia Philippensis, 990.
Sinica, 1000.
Bragantia Wallichii, 774.
Brakes, or *bracken*, 97.
Brambanan, first capital of Java, 597, 752.
Bramble, 177.
Bramins, 330, 369, 444, 482, 557, 560.
Brasenia peltata, 1000.
Brassavola cucullata, 987.
Brassica arvensis, 556.
Chinensis, 417.
Cretica, 352.
eruca, 281.
erucastrum, 883.
incana, 434.
napus, 320.
oleracea, 242, 960.
rapa, or *campestris*, 276.
Richerii, 919.
Brata Yudha, Javan poem, 586, 622.
Braya alpina, 1042.
Brayera anthelmintica, 185.
Brazen Age, 118.
Brazil, 791, 858, 1063.
Brazil wood, 526, 857.
Bread, 741.
Breadfruit tree, 437, 441, 697.
Bread-root, 748.
Breakstone, 599.
Bretagne, in France, 325.
Bricks, sun-dried, or adobes, 32, 591.
Bridges, 519, 675, 705, 709.
Briedelia spinosa, 522.
Brimstone, 794.
Britain, 325, 454, 478, 516, 525, 531, 536, 544, 564, 566, 568, 1038.
Briza humilis, 971.
maxima, 907.
media, 880.
minor, 996.
Brizopyrum spicatum, 1016.
Brodiæa grandiflora, 605.
Bromelia acanga, 950.
ananas, 674.
bracteata, 950.
caraguata, 858.
humilis, 950.
lingulata, 986.
pinguin, 999.
Bromus alopecuroides, 1007.
arvensis, 905.
asper, 978.
Bromus catharticus, 662.
ciliatus, 1019.
confertus, 1007.
erectus, 971.
giganteus, 1005.
inermis, 1007.
Kalmii, 1019.
lanceolatus, 1007.
Ligusticus, 1005.
Madritensis, 978.
mollis, 852.
pinnatus, 841.
racemosus, 976.
rubens, see *Festuca*.
secalinus, 979.
sterilis, 704.
squarrosus, 1005.
tectorum, 841.
velutinus, 940.
Bronze, 80, 106, 612, 618–19.
Age, 167.
Brooklime, 502.
Broom, 447.
Broom corn, 724.
Brossaea coccinea, 986.
Broussonetia ? ats'ni, 499.
kaji-no-ki, 601.
papyrifera, 591, 846.
Browallia elata, 1015.
Brownwort, 206, 637.
Brucea antidysenterica, 185.
(*Nima*) *quassioides*, 497.
Bruchus pisi, 283.
Bruges, city in Belgium, 799.
Brugmansia candida, 1003.
Bruguiera eriopetala, 423.
gymnorhiza, 390.
Brunella grandiflora, 907.
laciniata, 907.
vulgaris, 419.
Brunfelsia Americana, 986.
Brunia lanuginosa, 999.
nodiflora, 975.
Brunnichia cirrhosa, 1026.
Brunsvigia toxicaria, 766.
Bryonia alba, 474.
Americana, 987.
callosa, 745.
Cretica, 309.
dioica, 309.
epigaea, 745.
ficifolia, 1011.
laciniosa, 731.
racemosa, 987.
rostrata, 523.
scabrella, see *Mukia*.
Bryophyllum calycinum, 384.
Bubastis, or Pi-beseth, city of, 402.
Bubon gummifer, 993.
Macedonicum, 466.
Siculus, 972.
Buceros, the Abyssinian hornbill, 322.
Buchanania angustifolia, 729.
lancifolia, 734.
latifolia, 333.

Buchnera Americana, 1016.
Asiatica, 1000.
elongata, 986.
Bucida buceras, 982.
Buckthorn, 386.
Buckwheat, 841, 904.
Buda, city in Hungary, 869.
Buddhism, the religion, 347, 383, 421, 444, 453, 476, 483, 497, 533, 541, 560, 568, 575, 584, 591, 619, 625, 645.
Buddhist cave-temples, 103, 277, 383, 395, 560.
councils, 277, 347, 386, 408, 667.
Scriptures, 559, 753, 1062.
Buddleia Americana, 982.
coriacea, 665.
diversifolia, 385.
globosa, 1002.
incana, 799.
Madagascarensis, 707.
Occidentalis, 999.
Budua, city in Illyria, 150.
Buenos Ayres, colonized by the Spanish, 875, 1064.
Bufo vulgaris, toad, 453.
Buffalo, 277, 880.
Buffoons, 758.
Bugis of Celebes, Malayans, 664.
Bugle, 347.
Bugloss, 509, 935.
Bulbocodium autumnale, 902.
Bulbophyllum pusillum, 1067.
Bulgarians, Slavonic and European nation, 571, 600, 611, 656, 787.
Bullace, 219.
Bullock, 14, 42, 64, 67, 571, 667, 985.
Bullocks-heart, 867.
Bulls, the Pope's nunciamentos, 676, 678, 684, 714, 735, 801, 817.
hornless, 67.
the Indian, 85.
Bulrush, 388.
Bumelia decandra, or *oblongifolia*, 1028.
lanuginosa, 1040.
lycioides, 1006.
reclinata, 1041.
salicifolia, 982.
serrata, 1057.
tenax, 1024.
Bunias erucago, 485.
Orientalis, 781.
spinosa, 903.
Syriaca, 910.
Tartarica, 1033.
Bunium aromaticum, 903.
bulbocastanum, see *Sium*.
Copticum, 888.
ferulaceum, 196, 961.
Bunker Hill, battle of, 1035.
Buphthalmum aquaticum, 973.
durum, 1000.
flosculosum, 973.
maritimum, 907.
? sagittatum, 1055.
Buphthalmum salicifolium, 921.
spinosum, 889.
sp., 764.
Bupleurum angulosum, 937.
aristatum, 90.
Baldense, 972.
falcatum, 878.
fruticosum, 371.
graminifolium, 918.
junceum, 342.
longifolium, 909.
odontites, 934.
petraeum, 937.
protractum, 337.
Pyrenaicum, 930.
ranunculoides, 937.
rigidum, 906.
rotundifolium, 170.
stellatum, 937.
tenuissimum, 934.
Burdock, 451, 458.
Bur grass, 430, 962.
Burgundians, 552, 562, 577, 579, 834.
Burmah, 112–13, 322, 448, 588, 590, 1063, 1069.
Burmannia biflora, 1015.
disticha, 970.
Burnet, 487, 626.
Burning of widows, 330, 651, 787.
the dead, 647, 763, 802.
Bur-marigold, 988.
Bursa, city in Turkey, 779.
Bursera acuminata, 855.
gummifera, 855.
Bur-weed, 976.
Bustard, 26.
Butcher's broom, 316.
Butea frondosa, 420.
superba, 606.
Butomus umbellatus, 163.
Butter, 107.
Buttercup, 451, 653, 786.
Butterflies, 60.
Butternut, 807.
Butter-tree, 603.
wort, 653.
Buttonwood, 961.
Buxus Balearica, 171.
sempervirens, 172.
Buzzard, Buteo vulgaris, 132.
Bystropogon Canariense, 993.
Byzantium, or Constantinople, 222, 621, 814.

CABA, temple at Mecca, 448.
Cabbage, 242, 915.
Cabinet furniture, 137.
Cacalia albifrons, 894.
alpina, 889.
anteuphorbium, 906.
atriplicifolia, 979.
ficoides, 1001.
hastata, 1013.
Kleinii, 915.
papillaris, 1011.
Cacalia reniformis, 1052.
sonchifolia, see *Emilia*.
suaveolens, 1020.
Cachrys alata, 357.
Cretica, 272.
dichotoma, 909.
lævigata, 294.
libanotis, 272.
microcarpa, 975, 998.
odontalgica, 1033.
Sicula, 498.
Cactus, see *Cereus Opuntia*, and *Mamillaria*.
glomeratus, 986.
melocactus, 932.
paniculatus, 986.
phyllanthoides, 1000.
(*Epiphyllum*) *Phyllanthus*, 915.
viviparus, 1057.
Cadaba farinosa, 585.
Cadis, Muslim judges, 797.
Cadiz, city in Spain, 918.
Cadmæans from Phœnicia, 150, 167, 186.
Caenopteris cicutaria, 987.
rhizophylla, 983.
Cænotus divaricatus, 1044.
Cæsalpinia coriarea, 674.
crista, 986.
digyna, 744.
echinata, 857.
mimosoides, 974.
nuga, 208.
sappan, 526, 642.
sepiaria, 737.
vesicaria, 982.
Cairo, founded, 656.
Cajanus flavus, 443.
Cajuput oil, 444.
Cakile maritima, 679, 968.
Calabash tree, 677.
Calabria, in Southern Italy, 658.
Caladium, see *Colocasia*.
arborescens, 950.
auritum, 987.
bicolor, 950.
pinnatifidum, 987.
(*Xanthosoma*) *sagittifolium*, 909.
Calais, city in France, 787, 892.
Calamagrostis arundinacea, 792.
calamagrostis, 379.
Canadensis, 1044.
confinis, 1049.
epigeios, 495.
Pickeringi, 1063.
Plinii, 1003.
speciosa, 1005.
stricta, 1043, 1064.
Calamintha acinos, 654.
clinopodium, 419, 654.
grandiflora, 1033.
nepeta, 520.
officinalis, 263.
Calamus draco, 514.
equestris, 966.
erectus, 735.

Calamus extensus, 369.
fasciculatus, 304.
rotang, 369.
rudentum, 758.
scipionum, 1018.
usitatus, 917.
verus, 966.
Calanchoe laciniata, 952.
Calceolaria cuneiformis, 678.
pinnata, 1002.
salicifolia, 1002.
trifida, 678.
Calcutta, city in India, 1023.
Calea Jamaicensis, 983.
lobata, 983.
Caledonia, see Scotland.
Calendar, Chinese, 391, 400, 797.
Gregorian, 905.
Calendars, 65, 66, 81, 124, 140, 154, 159, 186, 199, 228, 293, 455, 461, 614, 683, 924.
Calendula arvensis, 223.
fruticosa, 1021.
graminifolia, 993.
hybrida, 977.
nudicaulis, 993.
officinalis, 419, 550, 969.
pluvialis, 982.
Calepina Corvini, 931.
Calicut, city in Southern Hindustan, 573, 817, 857.
California, 1002, 1029.
admitted as one of the U. S., 1069.
Californians, aboriginal, 880.
Cali Yug of the Hindus, 180, 211.
Calinjer, city in Hindustan, 667.
Calla Æthiopica, 993.
Orientalis, 900.
palustris, 847.
Callao, in Lima, 924, 1019.
Callicarpa Americana, 999.
lanata, 579.
Callicocca Mutisii, 950.
Calligonum Pallasii, 587.
polygonoides, 996.
Callirrhoe alcæoides, 1044.
Callistephus Chinensis, 507.
Callitriche aquatica, 636.
Callitris quadrivalvis, 151.
Calmuk Tartars, 1030.
Calochortus elegans, 582.
Calomelissa glabella, 1044.
Calophyllum calaba, 521.
elatum, 727.
inophyllum, 300.
longifolium, 245.
Calopogon pulchellus, 915.
Calpidia macrophylla, 385.
Caltha palustris, 352, 419.
Calumba root, 1027.
Calycanthus floridus, 1003.
glaucus, 1040.
laevigatus, 1022.
Calycocarpum Lyoni, 1053.
Calypso borealis, 981.
Calysaccion longifolium, 712.
Calystegia ochroleuca, 381.
paradoxa, 995.
sepium, 297.
soldanella, 419, 490.
spithamaea, 1016.
tomentosa, 902.
Camarina, city in Sicily, 232, 240.
Cambodia, or Tchin-la, 618, 625, 687, 690, 762, 863.
Cambridge, in England, 685.
in Massachusetts, 951, 1062.
Camel, 105, 264, 542, 669.
two-humped, 195.
Camelina sativa, 352.
Camellia drupifera, 787.
Japonica, 622.
sasanqua, 632.
Camelopard, 115.
Camelus Bactrianus, 195.
dromas, 105.
Cameraria angustifolia, 986.
latifolia, 986.
Campanula Alpini, 930.
Americana, 973.
aparinoides, 1038.
barbata, 937.
Bononiensis, 930.
caespitosa, 937.
Capensis, 993.
cochlearifolia, 971.
collina, 998.
diffusa, 971.
divaricata, 1041.
ensifolia, 1067.
flexuosa, 1041.
glauca, 976.
glomerata, 835.
Gmelini, 1013.
graminifolia, 915.
grandiflora, 1013.
hederacea, 930.
heterophylla, 996, 998.
hybrida, see *Specularia*.
laciniata, 996.
lamiifolia, 1007.
lilifolia, 793, 918.
linifolia, 930.
medium, 490.
mollis, 972.
patula, 912.
persicifolia, 889.
petraea, 918.
planiflora, 973.
ptarmicifolia, &c, 998.
pulla, 919.
punctata, 1013.
ramosissima, 337.
rapunculoides, 897.
rapunculus, 685.
rhomboidea, 930.
rigidula, 993.
rotundifolia, 828.
Ruthenica, 998.
saxatilis, 890.
Siberica, 1013.
Campanula spicata, 930.
stylosa, 937.
thyrsoidea, 911.
trachelium, 637.
uniflora, 1011.
versicolor, 288.
verticillata, 1065.
vesula, 919.
Campeachy, in Cent. America, 960.
Campelia Zanonia, 982.
Camphor, 598, 623, 788.
Camphorosma glabra, 912.
Monspeliaca, 433.
Camptosorus rhizophyllus, 978.
Campuleia coccinea, 381.
Campus Florum vocabulary, 790.
Canaanites, 123.
Canada, 875, 920, 947, 957, 981, 986, 1023, 1046.
Canada thistle, 360.
Canal Bahr Yusuf, to the Red Sea, 621.
Bahr Scherkieh, 796.
Great, of China, 758.
Canarina campanula, 764.
Canarium album, 865, 917.
balsamiferum, 966.
Bengalense, 734.
commune, 670.
decumanum, 950.
geniculatum, 245.
harami, 706.
hirsutum, 966.
minimum, 966.
strictum, 744.
sylvestre, 966.
Canary bird, 891.
Canary grass, 734.
Islands, 161, 443, 448, 467, 764, 795, 800, 813, 823, 842, 852, 856.
Canavalia ensiformis, 686.
obtusifolia, 300.
Cancer sp., 154.
Candles, 788.
Candy-tuft, or *Candy-mustard*, 888.
Cane, 57, 757.
Canebrakes, 757.
Canella alba, 854.
Canis lupus, wolf, 25, 452, 875.
familiaris, dog, 19, 452.
Canna angustifolia, 429.
edulis, 717.
flaccida, 1046.
glauca, 1011.
Indica, 430.
lutea, 945.
Cannabis sativa, 77, 419, 526, 944.
Cannibals, 787.
Cannon, 756, 787.
Canoes, in navigation, 311, 337, 862, 955, 1010.
Canoe birch, 666.
Canon of proportions, Egyptian, 70, 92, 224.
Law, 708.

Canonization, 663.
Canouj, city in Hindustan, 667, 716.
Cantharellus cibarius, 521.
Canthium corymbosum, see *Stylocoryne Webera*.
parviflorum, 693.
Canton, seaport in China, 482, 528, 618, 621, 636, 641, 863, 958, 1039.
Cantua uniflora, 799.
Caoutchouc, or India-rubber, 594, 822, 1018.
Capac-Urcu, volcano in Peru, 827.
Cape Ann, 942.
Bojador, discovered by Europeans, 814, 817, 820.
Breton, island near Nova Scotia, 876, 905, 1004, 1018, 1020, 1023.
Cod, 923, 928, 939.
Comori, 527, 859.
de la Vela, 858.
Enganho, 880.
Galera, 880.
Hatteras, 913.
Horn, 933.
of Good Hope, discovered, 845, 857, 1039.
Sable, 923.
Santa Maria, 953.
St. Augustin, discovered, 858.
St. Catherine, discovered, 833.
Verd, discovered by Europeans, 267, 819.
Verd Islands, 823.
Caper bush, 139.
Capital letters, in writing, 667.
Capparis amplissima, 986.
aphylla, 690.
baducca, 830.
Breynii, 977.
cynophallophora, 1000.
spinosa, 139.
Capra hircus, 17, 154, 452.
ibex, the capricorn, 23, 452.
Capraria biflora, 991.
Capricorn, 23.
Capromys, 852.
Capsella bursa-pastoris, 419, 969.
Capsicum frutescens, 560, 976.
Capuchin, monastic order, 870.
Caragana arborescens, 793.
frutescens, 1013.
halodendron, 812.
pygmea, 793.
spinosa, 793.
Carallia lucida, 423.
Caranna, 673.
Carapa Guayanensis, 715.
Caras, South American tribe, 623, 659.
Carats, 80.
Caraway, 451, 474.
Cardamine Africana, 1000.
amara, 848.
asarifolia, 919.
bellidifolia, 940.
Cardamine chelidonia, 971.
Graeca, 972.
hirsuta, 910.
impatiens, 930.
latifolia, 902.
macrophylla, 1013.
nivalis, 1031.
parviflora, 937.
Pennsylvanica, 945.
pratensis, 634.
resedifolia, 937.
rhomboidea, 1016.
rotundifolia, 1041.
spathulata, 1041.
trifolia, 907.
Virginica, 1000.
Cardamoms, 321, 776, 821.
Cardinal-flower, 945.
Cardiospermum helicacabum, 567.
Cardoon, 261.
Cards, playing, 765.
Carduus acanthoides, 899.
crispus, 931.
defloratus, 921.
erisithales, see *Cirsium*.
leucographus, 508.
Marianus, see Silybum.
nutans, 792.
Pannonicus, 907.
personata, 474.
pycnocephalus, 359.
tenuiflorus, 827.
Carex acuta, 458.
agastachys, 1023.
alba, 1005.
ampullacea, 941.
aquatilis, 1054.
arenaria, 790.
atrata, 991.
Baldensis, 937.
bicolor, 1040.
brachystachys, 1005.
bromoides, 1053.
Buxbaumii, 1008.
canescens, see *curta*.
capillaris, 1023.
capitata, 980
chordorhiza, 1042.
clandestina, 1005.
collina, 1005.
comosa, 1061.
crinita, 1045.
curta, 959.
curvula, 1005.
Davalliana, 1005.
decomposita, 1060.
depauperata, 996.
digitalis, 1055.
digitata, 839.
distachya, 1050.
distans, 980.
divulsa, 1010.
elongata, 839.
exilis, 1063.
filiformis, 1005.
flacca, 980.
Carex flava, 940, 969.
flexuosa, 1044.
foenea, 1060.
foetida, 1005.
folliculata, 1000.
Fraseri, 1039.
fulva, 1047.
heleonastes, 1037.
hirta, 839.
incurva, 1036.
intermedia, 1029.
intumescens, 1044.
laevigata, 1051.
lagopina, 1052.
lagopodioides, 1044.
lanuginosa, 1044.
lenticularis, 1044.
leporina, 839.
limosa, 1005.
livida, 1054.
lobata, 1005.
loliacea, 1019.
maritima, 1036.
miliaris, 1044.
muricata, 838.
oblongifolia, 485.
Oederi, 1024.
oligosperma, 1044.
ornithopoda, 937.
ovalis, 904.
ovata, 894, 1050.
pallescens, 838.
paludosa, 790.
panicea, 835.
paniculata, 705.
pauciflora, 1036.
paupercula, 1044.
Pennsylvanica, 1045.
Persoonii, 1052.
pilulifera, 1001.
plantaginea, 1045.
polymorpha, 1060.
polytrichoides, 1044.
praecox, 1029.
pseudocyperus, 904.
remota, 996.
rigida, 1047.
riparia, 979.
rostrata, 1044.
salina, 1054.
scabrata, 1064.
scirpoidea, 1044.
secalina, 1008.
sepiaria, 1000.
serrulata, 1056.
sp., 450, 1047.
sp., rare in Egypt, 4.
squarrosa, 1019.
stellulata, 1035.
striata, 1044.
striatula, 1044.
stricta, 1047.
subulata, 1044.
Sullivanti, 1038.
sylvatica, 980.
tenuiflora, 1054.

Carex teretiuscula, 1045.
tomentosa, 426.
triceps, 1044.
tripartita, 1040.
ustulata, 1052.
Vahlii, 1046.
vesicaria, 828.
Virginiana, 1045.
vulgaris, 1047.
vulpina, 839.
vulpinoidea, 1044.
Willdenovii, 1053.
Careya arborea, 421.
sphærica, 278.
Caria, in Asia Minor, 193, 213, 312.
Carians, or Leleges, 193, 213, 222.
Caribbean Islands, 1024.
Caribbes, a West Indian tribe, 854, 964.
Carica papaya, 677.
spinosa, 956.
Carissa arduina, 766.
carandas, 409.
diffusa, 333.
edulis, 239.
spinarum, 676.
sp., 425.
Carlina acanthifolia, 359.
acaulis, 870.
corymbosa, 231.
lanata, 359.
racemosa, 921.
vulgaris, 623.
Carlovingian dynasty of French kings, 620.
Carnata, country in Hindustan, 773, 783.
Carnation, 585.
Carnea, musical contests, 227.
Carob-tree, 141.
Carolina, one of the original North American colonies, 963, 965, 970, 981, 986, 995, 1005, 1009.
Caroline coral-archipelago, 884.
Carolinea insignis, 915.
Caroxylon salsola, 766.
Carp, the fish, 136.
Carpesium cernuum, 934.
Carpets, manufacture of, 757.
Carpet-weed, 737, 747.
Carphalea corymbosa, 957.
Carphephorus bellidifolius, 1040.
tomentosus, 1040.
Carpinus Americana, 958.
betulus, 388, 451.
sp., 622.
Carrier-pigeons, 136.
Carrot, 190, 451, 929, 935, 944.
Cartago, in South America, 877.
Carthage, 196, 231, 243, 252, 267, 292, 322, 389, 395, 402, 411, 448, 559, 562, 566, 576.
Carthagena, city in South America, 871, 918, 1017.
Carthamus cardunculus, 898.
coeruleus, 921.
Carthamus corymbosus, 315.
Creticus, 295.
dentatus, 359, 742.
lanatus, 231.
leucocaulos, 324.
mitissimus, 919.
tinctorius, 161, 526.
Tingitanus, 978.
Carthusians, Monastic Order, 681.
Carum carui, 451, 474.
nigrum, 497.
Carya alba, 768, 908.
amara, 768.
aquatica, 1053.
glabra, 768, 946.
myristicæformis, 1053.
olivæformis, 749, 869, 881.
sp., 877–78, 928.
sulcata, 768, 908–9, 1016.
tomentosa, 768.
Caryocar butyrosum, 909.
Caryolopha sempervirens, 898.
Caryophyllus aromaticus, *cloves*, 574.
Caryota urens, 336.
Casearia anavigna, 737.
esculenta, 727.
parviflora, 982.
Cashew-nut, 784.
Cashmere, country in Northern Hindustan, 193, 408, 615.
Caspian Sea, 736.
Cassava, or *tapioca*, 575, 576, 1045.
Cassia absus, 417.
acutifolia, 602.
alata, 720.
arborescens, 974.
aschrek, 179.
auriculata, 727.
bicapsularis, 1004.
biflora, 986.
(*Chamæcrista*) *brevifolia*, 384.
falcata, 783.
(*Chamæcrista*) *fasciculata*, 1041.
(*Chamæcrista*) *filipendula*, 384.
(*Cathartocarpus*) *fistula*, 329.
flexuosa, 975.
florida, 445.
glandulosa, 975.
grandis, 975.
hirsuta, 783.
(*Cathartocarpus*) *Javanicus*, 993.
ligustrina, 1009.
linearis, 1041.
longisiliqua, 950.
Marilandica, 923.
mollis, 975.
(*Chamæcrista*) *nictitans*, 992.
(*Cathartocarpus*) *nodosa*, 113.
obtusifolia, 984.
occidentalis, 752.
planisiliqua, 986.
(*Chamæcrista*) *pulchella*, 380.
(*Cathartocarpus*) *Roxburghii*, 734.
senna, 139.
Cassia sericea, 950.
sophera, 822.
sp., 730.
stipulacea, 1002.
tora, 628.
Cassia, the spice, 143, 394.
Cassia-buds, 776.
Cassine Capensis, 928.
maurocenia, 997.
Cassiopea, constellation of, 900.
Cassumanar, 833.
Cassyta filiformis, 729.
Castanea Americana, 771, 881, 928, 940.
Martabanica, 816.
Morgai, 917.
pumila, 770.
tribuloides, 816.
vesca, 77, 419.
Castanospermum Australe, 1065.
Castillon, battle at, in France, 822.
Castilleia coccinea, 962.
sessiliflora, 1057.
Castor-bean, 225.
Castoreum, the drug, 125.
Castor fiber, beaver, 125, 452, 752, 875.
Casuarina distyla, 985.
equisetifolia, 416.
lateriflora, 381.
muricata, 113.
quadrivalvis, 985.
Cat, the domestic, 111, 224, 453.
Catabrosa aquatica, 840.
Catalpa bignonioides, 749.
Catananche coerulea, 890.
lutea, 905.
Catania, or Catana, city in Sicily, 213.
Catapult, an engine of war, 204.
Catch-fly, 849.
Catechu, 415.
Catesbaea parviflora, 982.
spinosa, 1005.
Catha edulis, see *Celastrus*.
Catheter, surgical instrument, 471, 515.
Catholics, 533, 569, 656, 1053.
Catnip, 563.
Cat's foot, 844.
Cattack, city in Hindustan, 651.
Cat-tail flag, 68.
Cattle, 571, 845.
Caturus spiciflorus, 577.
Cauca, in South America, 877.
Caucalis daucoides, 203.
elongata, 960.
grandiflora, 892.
leptophylla, 952.
maritima, 296.
Orientalis, 886.
platycarpos, 912.
Caulinia fragilis, 931.
Caulophyllum thalictroides, 747.
Causeway, in England, between Peterborough and Ramsey, 669.

Cave-temples, 277, 328, 559–60, 606.
Cayenne Island, 948.
Ceanothus Africanus, 999.
Americanus, 961.
intermedius, 999.
microphyllus, 1043.
ovalis, 1063.
perennis, 1055.
sanguineus, 1054.
Cebus, S. American monkeys, 859.
Cecidomyia destructor, 267.
Cecropia palmata, 950.
sp., 791.
Cedar, 69, 157, 328, 772, 810.
Cedrela (Soymida) febrifuga, 616.
odorata, 714.
toona, 562.
Cedrota longifolia, 673.
Cedrus Atlantica, 157.
deodara, 328.
Libani, 69.
Celandine, 242, 419.
Celastrus alatus, 802.
articulatus, 632.
bullatus, 999.
edulis, 811.
lucidus, 999.
montanus, 691.
paniculatus, 577.
pyracanthus, 999.
scandens, 1004.
Celebes, island of, 664, 960, 981.
Celery, 864.
Celibacy of Christian priests, 561, 615, 639.
Celosia argentea, 974.
castrensis, 888.
coccinea, 897.
cristata, 702.
margaritacea, 851.
Monsoniae, 999.
nitida, 982.
nodiflora, 999.
spathulata, 385.
trigyna, 465.
Celsia arcturus and *Coromandeliana*, 405.
betonicaefolia, 1007.
Orientalis, 851.
Celt, or smooth stone hatchet, 12.
Celtiberians, of Spain, 401.
Celtic tribes and nations, 274, 583.
Celtis aspera, 622.
Australis, 214.
integrifolia, or *Missisippensis*, 732, 778.
Madagascariensis, 385.
micrantha, 986.
Occidentalis, 778, 958.
Orientalis, 369.
Sinensis, 622.
Tournefortii, 529.
Cenchras echinatus, 430.
? frutescens, 151.
tribuloides, 962.
Cenia turbinata, 975.
Censors, Roman, 277, 500.
Centaurea abrotanifolia, 971.
acaulis, 1015.
alba, 921.
alpina, 937.
amara, 919.
amberboi, 964.
argentea, 971.
armoracifolia, 530.
atrata, 973.
Babylonica, 930.
balsamita, 1008.
behen, see *Serratula*.
calcitrapa, 140.
centaurium, 236.
centauroides, 360.
cichoracea, 1007.
cineraria, 937.
(*Leuzia*) *conifera*, 898.
crocodilium, 888.
crupina, 934.
cyanus, 434, 451.
erucæfolia, 921.
eryngoides, 930.
galactites, see *Galactites*.
glastifolia, 1001.
hyssopifolia, 971.
Isnardi, 1004.
jacea, 781.
leucantha, 971.
limbata, 961.
linifolia, 971.
Lippii, 1004.
maculata, 1013.
Melitensis, 972.
montana, 878.
moschata, 679.
muricata, 894.
napifolia, 991.
nigra, 703.
nigrescens, 906.
nitens, 1008.
ovina, 1013.
paniculata, 911.
pectinata, 937.
Phrygia, 911.
polyacantha, 961.
pullata, 898.
radiata, 1013.
Ragusina, 973.
rhapontica, 530.
Romana, 973.
Ruthenica, 1013, 1029.
salmantica, 902.
scabiosa, 894.
sempervirens, 972.
Siberica, 1014.
Sicula, 973.
solstitialis, 935.
sonchifolia, 937.
spinosa, 360.
splendens, 894.
Tingitana, 991.
tomentosa, see *Galactites*.
trichocephala, 1013.
uliginosa, 961.
Centaurea uniflora, 994.
verutrum, 902.
Centaurella aestivalis, 1056.
paniculata, 1041.
Virginica, 1016.
Centaurs, or Leleges, 127.
Centaury, 449.
Central Asia, 326.
Centranthera prostrata, 385.
Centranthus angustifolius, 894.
Centunculus lanceolatus, 1041.
minimus, 978.
Century plant, 649.
Cephaelis ipecacuanha, 659.
Cephalanthus Occidentalis, 999.
Cephalaria rigida, 993.
Transylvanica, 978.
Cephaloaxus drupacea, 621.
Cephalophora glauca, 1002.
Cerastes, or horned viper, 23, 179.
Cerastium alpinum, 894, 970.
aquaticum, 913.
arvense, 913.
dichotomum, 902.
elongatum, 1055.
latifolium, 937.
macranthum, 998.
maximum, 1013.
oblongifolium, 1059.
perfoliatum, 1018.
repens, 915.
semidecandrum, 988.
tenuifolium, 1053.
tomentosum, 937.
viscosum, 479.
vulgatum, 479.
Cerasus avium, 167, 250.
capricida, 497.
(*Laurocerasus*) *Caroliniana*, 889.
chamæcerasus, 398.
karinka, 559.
laurocerasus, 886.
(*Laurocerasus*) *Lusitanica*, 889.
mahaleb, 356, 451.
mollis, 581.
padus, 134, 275, 451.
Pennsylvanica, 935.
semperflorens, 931.
serotina, 769, 866, 893.
Virginiana, 805.
vulgaris, 445.
Ceratiola ericoides, 1039.
Ceratochloa unioloides, 1049.
Ceratonia siliqua, 141.
Ceratophyllum demersum, 450.
submersum, 894.
Ceratospermum papposum, 587.
Cerbera ahovai, 891.
manghas, 590.
tanghin, 706.
Thevetia, 915.
Cercidiphyllum Japonicum, 622.
Cercis Canadensis, 962.
siliquastrum, 356.
Cercopithecus, 68.

Ceres, worship of, 113, 153.
the planet, 1052.
Cereus flagelliformis, 950.
hexagonus, 1004.
lanuginosus, 991.
Peruvianus, 901, 903.
pitayaya, 677.
Royeni, 950.
triangularis, 950.
Cerinthe aspera, 363.
maculata, 508.
major, 460.
minor, 363.
Ceriops Roxburghianus, 423.
Ceropegia candelabrum, 974.
palustris, 1053.
Cervus alces, elk, 135, 452.
Antisiensis, 799.
elaphus, the stag, 59, 452.
capreolus, 136, 452.
dama, fallow deer, 199.
hippelaphus, 323.
rangiferinus, 80, 571, 875, 909, 927, 932, 948.
Virginianus, 643, 866, 875, 908.
wapiti, American elk, 866, 903.
Cestrum auriculatum, 1002.
diurnum, 1011.
laurifolium, 999.
Mutisii, 689.
nocturnum, 999.
parqui, 660.
venenatum, 766.
vespertinum, 982.
Ceterach officinarum, 175.
Cetraria nivalis, 1012.
Ceylon, 240, 347, 572, 613, 753, 1048.
Chæronea, battle at, 322.
Chærophyllum aureum, 1005.
procumbens, 976.
sativum, see *Anthriscus*.
sylvestre, see *Anthriscus*.
Chaitur, fort in Hindustan, 765, 897.
Chalcedon, city in Asia Minor, 222.
Chaldeans, 76, 382, 403.
Chaleur Bay, 876, 948.
Chalons, in France, 566.
Chamaecyparis obtusa, 608.
pisifera, 631.
Chamaedorea gracilis, 868.
Chamænerium Americanum, 968.
angustifolium, 357.
angustissimum, 894.
latifolium, 1025.
Chamæriphis, see *Chamærops*.
Chamærops excelsa, 632, 846.
humilis, 262.
hystrix, 1052.
palmetto, see *Sabal*.
Chameleon, 12.
Chamomile, 516, 704.
Chancas, of Peru, 760.
Chang, fourth Chin. dyn., 99, 160.
Cha-no-ya, 818.
Chaptalia dentata, 987.
integrifolia, 1040.
Chara fœtida, 450.
foliolosa, 1051.
hispida, 937.
sp., 1064.
vulgaris, 450.
Chariots, 103.
Charitable institutions, 756.
Charles River, in Mass., 947.
Charleston, 970, 986, 1037, 1070.
Charlestown, city in Mass., 1035
Charlock, 88, 455.
Charophyllum aromaticum, 994.
Charts, 758, 814, 918.
Chaste tree, 144
Chatham Island, 1021.
Chaulmoogra odorata, see *Hydnocarpus*.
Chauras dynasty in Guzerat, 574.
Cheat, 979.
Chéchémécas, 713.
Cheeta, or hunting leopard, 87.
Cheilanthes dealbata, 1057.
microphylla, 987.
suaveolens, 997.
tenuifolia, 966.
tomentosa, 1044.
vestita, 1044.
Cheiranthodend. pentadactylum, 842.
Cheiranthus annuus, 844.
cheiri, 658, 969.
cuspidatus, 1007.
incanus, see *Mathiola*.
litoreus, 894.
longisiliquis, 961.
Pallasii, 1058.
taraxacifolius, 1029.
tomentosus, 1030.
trilobus, 937.
Chelidonium majus, 242, 419, 969.
Chelifer, insect, 323.
Chelone glabra, 962, 968.
Lyoni, 1053.
Chelonura serpentina, snapper, 875.
Chemistry, ancient Egyptian, 646
modern, 1034.
Chenopodina maritima, 897.
Chenopodium album, 452, 877.
ambrosioides, 710.
anthelminticum, 710.
aristatum, 1013.
bonus Henricus, 343.
botrys, 406, 969.
ficifolium, 1004.
fœtidum, 1046.
glaucum, 890.
hybridum, 880.
multifidum, see *Roubieva*.
murale, 90.
olidum, 287.
polyspermum, 452.
quinoa, 668.
rubrum, 419, 451.
serotinum, 989.
sp., 451.
urbicum, 1006.
Chequers, game of, 136.
Cherleria sedoides, 918.
Cherry, 134, 250, 445, 559, 581, 769, 909, 960.
laurel, 886.
Tomato, 755.
Chervil, 247, 272.
Chesapeake Bay, 926–28, 1036.
Chestnut, 77, 419, 431, 771, 816.
Chi, Chinese herb, 84.
Chiampa, first visited by a European ship, 863.
Chichimec Mexicans, 713–14.
Chickahominy River, in Va., 926.
Chickasaw plum, 747.
Chickasaws, N. A. tribe, 1016.
Chickrassia tabularis, 577.
Chickweed, 452.
Chicory, 256.
Chigoes, Acarus, 882.
Chili, 660, 811, 815, 881, 1070.
Chimaphila maculata, 1000.
umbellata, 907.
Chimonanthus fragrans, 632.
Chimpanzee, 268.
Chimu, ruined city in W. Peru, 796.
China, 143, 228, 240, 421, 601, 625, 810, 903, 905, 934, 952, 960, 985, 1006, 1067.
population of, 618, 620, 667, 798, 859, 943, 958, 961.
China aster, 507.
grass, 763.
rose, 817.
root, 601
trees, 670.
China ware, 884.
Chinchilla fur, 915.
Chinese, 240, 610–11, 787, 818, 820, 846, 1068.
canals, 597, 1037.
chronological table, 797, 1028.
colonists, 393.
commerce, 775, 782.
cycle of sixty years, 76, 78, 81–83, 85, 88, 91, 92, 95, 98, 99, 101, 103, 111, 117, 120, 124, 128, 137, 150, 155, 179, 188, 194, 198, 208, 217, 225, 233, 243, 266, 288, 318, 371, 389, 398, 415, 453, 468, 497, 525, 532, 538, 545, 552, 564, 569, 581, 597, 608, 618, 623, 630, 646, 655, 669, 682, 704, 719, 751, 776, 796, 818, 859, 896, 980, 1018, 1054, 1066.
dictionary, 1028, 1059.
fashion of wearing the hair, 942.
language and writing, 543, 1028.
manufactures, 114, 402, 443, 543.
ritual, 192, 967.
walls, 341.
Chinquapin nuts, 770.
Chiococca racemosa, 982.
Chionanthus? sp., 779.
Virginica, 1004.
Chiretta, 694.

Chirimoya, 887.
Chironia baccifera, 1001.
frutescens, 1001.
linoides, 975.
trinervia, 970.
Chives, 375.
Chlora perfoliata, 290.
sessilifolia, 934.
sessilis, 1002.
Chloranthus brachystachys, 445.
officinalis, 445.
Chloris cruciata, 982.
Meccana, 733.
petraea, 999.
polydactyla, 982.
radiata, 978.
Chlorogalum pomeridianum, 583.
Chloroxylon swietenia, 726.
Chocolate, 657, 859.
Choke berries, 804–5.
Chondrilla juncea, 281.
ramosissima, 282.
Chondrostoma nasus, 453.
Chondrus sp., 610.
Chonemorpha dichotoma, 682.
Chou-king, compiled by Confucius, 215, 407, 1030.
Christian Era, 619, 811.
Christians, the Early, 478, 482, 498, 519, 526, 528, 539, 542, 546, 548, 571, 573, 619.
Chromium, the metal, 1050.
Chronicle of Cashmere, 688.
Chrysanthellum procumbens, 983.
Chrysanthemum achilleaefol., 1013.
alpinum, 921.
Arcticum, 1013.
atratum, 937.
bipinnatum, 1013.
Bocconi, 994.
carneum, 1008.
coronarium, 310.
corymbosum, 892.
frutescens, 1000.
graminifolium, 988.
Halleri, 937.
Indicum, 98.
Italicum, 889.
maritimum, 894.
maximum, 973.
millefoliatum, 1013.
Monspeliense, 988.
montanum, 919.
Myconi, 912.
Orientale, 1003.
pectinatum, 971.
procumbens, 1000.
segetum, 90.
serotinum, 902.
trifurcatum, 930.
Chrysobalanus icaco, 658.
oblongifolius, 1033.
Chrysocoma cernua, 993.
ciliaris, 993.
coma-aurea, 990.
graveolens, 1055.
Chrysocoma linosyris, 197.
nauseosa, 1055.
scabra, 1011.
villosa, 587.
Chrysogonum Virginianum, 962.
Chrysophyllum cainito, 754.
? sp., 264, 269.
Chrysopsis falcata, 1060.
gossypina, 1060.
graminifolia, 1040, 1052.
Mariana, 995.
Chrysosplenium alternifolium, 951, 1031.
Americanum, 1025.
Chrysurus cynosuroides, 971.
echinatus, 940.
Chunam, 67.
Churches, Christian, 546, 584, 628–29, 657, 678, 683, 713, 716, 719, 724, 756, 796, 1091.
Cicada septendecim, 948.
sp., 44.
Cicca disticha, 208.
Cicely, 247, 488.
Cicendia hyssopifolia, 578.
Cicer arietinum, 183.
Cichorium divaricatum, 961.
endivia, 257.
intybus, 256.
spinosum, 920.
Ciconia alba, stork, 44, 453.
Cicuta bulbifera, 961.
maculata, 992.
virosa, 706.
Cilicia, country in Asia Minor, 478.
Cimbri, 424.
Cimex lectularius, 286.
Cimicifuga Americana, 1041.
foetida, 1013.
racemosa, 1000.
Cimmerians, or Crimeans, 186, 195, 207, 213, 228.
Cinaloa, in Mexico, 871.
Cinchona Condaminea, 921.
hirsuta, 921.
lanceolata, 921.
micrantha, 921.
nitida, 921.
purpurea, 921.
sp., 717, 921, 1032.
Cinclus aquaticus, 453.
Cineraria alpina, 921.
amelloides, 999.
campestris, 904.
cordifolia, 937.
glauca, 1013.
integrifolia, 919.
Japonica, 976.
longifolia, 971.
maritima, 724.
minuta, 971.
palustris, 785.
Siberica, 1013.
sonchifolia, 977.
Cinna arundinacea, 1019.
pendula, 1063.
Cinnamomum aromaticum, 143.
cassia, 143.
culilawan, 795.
iners, 394.
Loureirii, 776.
pedunculatum, 788.
rubrum, 795.
sintoc, 795.
tamala, 444.
xanthoneuron, 795.
Zeylanicum, see *C. cassia*.
Cinnamon, 143, 394, 431, 845, 854.
Cinquefoil, 289.
Cipher writing, 122.
Circæa alpina, 934.
lutetiana, 636.
Circle, properties of, 829.
Circuit courts, 714.
Circulation of blood, 15, 886, 936.
Circumcision, 107, 165, 425, 527, 549, 811, 845.
Circumnavigation of the Globe, 866, 903, 913, 921, 933.
Cirrha, city on the Gulf of Corinth, 233, 235.
Cirsium acarna, 239.
acaule, 653.
altissimum, 1011.
arvense, 360.
bulbosum, 904.
canum, 931.
Casabonae, 904.
cernuum, 1013.
cynaroides, 359.
discolor, 1052.
eriophorum, 899.
erisithales, 568.
ferox, 931.
Gmelini, 1013.
helenioides, 979.
heterophyllum, 784.
horridulum, 1038.
Italicum, 904.
lanceolatum, 557.
Monspessulanum, 889.
muticum, 1040.
oleraceum, 784.
palustre, 359.
Pitcheri, 1067.
pratense, 904.
pumilum, 1038.
rivulare, 360.
serratuloides, 793.
spinosissimum, 1028.
stellatum, 489.
Syriacum, 360.
tuberosum, 360.
Virginianum, 962.
Cissampelos caapeba, 950.
hexandra, 411.
pareira, 802.
Cissus acida, 999.
carnosa, 973.
cordata, 1041.
cordifolia, 986.
crenata, 966.

Cissus fragariæfolia, 380.
glandulosa, 598.
indivisa, 878.
Japonica, 976.
latifolia, 973.
microcarpa, 986.
pedata, 725.
quadrangularis, 999.
rotundifolia, 851.
setosa, 522.
sycioides, 986.
trifoliata, 982.
vitiginea, 458.
Cistoseira barbata, a *seaweed*, 453, 904.
Cistudo Europea, 136, 453.
Cistus Aegyptiacus, 970.
albidus, 894.
Clusii, 902.
Creticus, 118.
crispus, 902.
incanus, 378.
ladaniferus, 902.
lævipes, 1000.
laurifolius, 902.
lavandulifolius, 902.
laxus, 902.
ledum, 889.
linearis, 894.
Monspeliensis, 378.
polifolius, 1000.
populifolius, 921.
salvifolius, 283.
sericeus, 971.
verticilliflorus, 961.
villosus, 282.
Citharexylon caudatum, 982.
cinereum, 1000.
Citron, 311, 763, 779.
Citrullus colocynthis, 253.
pseudo-colocynthis, 253.
water-melon, 72.
Citrus acida, *lemon*, 644.
aurantium, *orange*, 656.
decumana, *shaddock*, 216.
Japonica, 631.
limonum, *lime*, 723.
Medica, *citron*, 311.
Sinensis, *Mandarin orange*, 216, 917.
torosa, 763.
trifoliata, 989.
Civet, 685, 775, 819, 884.
Civil Law, 707.
Civil war in America, 1070–71.
wars in England, 823, 952.
among the Romans, 441, 454.
Cladium mariscoides, 1060.
mariscus, 255.
Cladrastis lutea, 1053.
Clarkia pulchella, 1055.
Clary, 292, 446, 935.
Clathrus flavescens, 971.
ruber, 924.
Clavaria alvearis, 959.
Claytonia alsinoides, 1055.
Caroliniana, 1041.
Claytonia lanceolata, 1055.
perfoliata, 1049.
Virginica, 992.
Clearing-nut, 422.
Cleistanthus patulus, 744.
Clematis (*Atragene*) *alpina*, 918.
angustifolia, 937.
Catesbyana, 1005.
cirrhosa, 127.
crispa, 1011.
cylindrica, 1041.
dioica, 982.
Douglasii, 604.
erecta, 517, 1029.
flammula, 483.
hirsutissima, 1055.
holosericea, 1040.
integrifolia, 907.
ochroleuca, 1000.
Orientalis, 1011.
ovata, 1005.
reticulata, 1040.
viorna, 961.
Virginiana, 1000.
vitalba, 210.
viticella, 351.
Cleome Arabica, 1015.
dodecandra, 970.
monophylla, 974.
ornithopodioides, 1007.
pentaphylla, 648.
polygama, 983.
procumbens, 983.
tenella, 1000.
triphylla, 982.
violacea, 971.
Cleonia Lusitanica, 978.
Clepsydra, or water-clock, 269, 401.
Clerodendron fortunatum, 689.
fragrans, 590.
inerme, 695.
infortunatum, 689.
sp. n., 732.
squamatum, 609.
Clethra acuminata, 1033.
alnifolia, 992.
tinifolia, 983.
Cleyera gymnanthera, 744.
Japonica, 632.
Cliffortia ilicifolia, 1011.
phlomoides, 695.
ruscifolia, 1000.
serratum, 739.
siphonanthus, 696.
strobilifera, 1000.
ternata, 1015.
trichotomum, 989.
trifoliata, 1000.
Clinopodium Plumieri, 434.
vulgare, see *Calamintha*.
Clintonia borealis, 1038.
umbellata, 1041.
Clitoria Brasiliana, 975.
lasciva, 384.
Mariana, 1004.
Plumieri, 987.
Clitoria Ternatea, 606.
Virginiana, 1011.
Clocks, 629, 829.
Clomenoclema aurantia, 1012.
Cloth, 663.
Cloud-berry, 792.
Clover, 124, 473, 557, 582.
Cloves, 574, 609, 765, 816, 855, 860–61.
Clove-scented creeper, 713.
Club-moss, 836, 988.
Club-rush, 349.
Clubs, Nubian and Mesopotamian, 48.
Clupea, herring, 154, 741.
Clusia alba, 986.
flava, 982.
rosea, 1000.
venosa, 986.
Cluytia collina, 522.
daphnoides, 993.
lanceolata, 149.
Clypeola ionthlaspi, 934.
lasiocarpa, 1007.
Cneorum pulverulentum, 764.
tricoccon, 599.
Cnicus acarna, see *Cirsium*.
benedictus, 538.
Cnidium Alsaticum, 930.
apioides, 789.
Pyrenaeum, 913.
silaus, 507.
Cnidoscolus stimulosus, 950.
Coal, fossil, 723, 758, 773.
Cobalt, the metal, 888, 1012.
Cobra haje, 17, 59, 74.
naja, 277.
Cobresia caricina, 1052.
Coca, 799.
Coccinia grandis, 415.
Coccoloba excoriata, 986.
pubescens, 999.
punctata, 999.
uvifera, 659.
Cocculus acuminatus, 521.
bakis, 545.
Carolinus, 1003.
cebatha, 712.
cordifolius, see *Menispermum*.
crispus, 208.
fibraurea, 398.
Indicus, the drug, 541.
orbiculatus, 974.
palmatus, 1006.
Plukeneti, 1000.
radiatus, 974.
villosus, 734.
Coccus cacti, cochineal, 717.
ilicis, kermes insect, 86.
lacca, lac insect, 305.
manniparus, 75, 614.
radicis, 565.
Cochinchina, or Anam, 399, 981.
Cochineal, 717.
Cochlearia acaulis, 961.
Anglica, 903.
armoracia, see *Nasturtium*.

Cochlearia Groenlandica, 970.
Nilotica, 997.
officinalis, 929.
sp., 417.
Cochlospermum gossypium, 254.
Cockatoo, or white parrot, 564, 816, 960.
Cock-fighting, 642, 816.
Cock's-comb flower, 702.
Cocoa-nut, 427, 1068.
palms, 437, 779, 919.
Coco-plum, 658.
Cocos fusiformis, 854.
lapidea, 919.
nucifera, 427, 846.
Codex Gregorianus, Roman laws, 542.
Hermogenianus, Roman laws, 544.
Codiæum variegatum, 300, 917.
Coffea Arabica, 831.
Occidentalis, 986.
Coffee, 811, 831.
Coins, 161, 194, 212, 266, 457, 479, 542, 544, 575–76, 580, 601, 603, 607, 613–14, 618, 620–21, 623, 626, 629, 631, 640, 647, 650–52, 656, 664, 667, 675, 679, 684, 690, 707, 716, 718, 720, 741, 756, 760, 783, 787, 790–91, 900, 918, 942, 951, 997, 1010, 1023, 1028, 1034, 1043.
Coins, Bactrian, 396, 398.
Hebrew, 402.
Coix, 598.
agrestis, 966.
lachryma, 598.
Colam, city in Hindustan, and era, 627.
Colchians, 160, 217, 454.
Colchicum autumnale, 164.
Byzantinum, 945.
fasciculare, 897.
Illyricum, 658.
montanum, 159.
tesselatum, 961.
variegatum, 945.
Coldenia procumbens, 992.
Coleus Africanus, 1054.
Amboinensis, 966.
aromaticus, 424.
barbatus, 732.
Colinus, 875.
Colladea monostachya, 964.
Colliguaja, 662.
Collinsonia anisata, 1053.
Canadensis, 770.
ovalis, 1039.
præcox, 1040.
scabriuscula, 1043.
serotina, 1040.
verticillata, 1059.
Collomia grandiflora, 1066.
Colocasia antiquorum, 373.
Indica, 697.
macrorhiza, 414, 416.
maxima, 540.
Colocasia nymphæifolia, 370.
odora, 322.
sagittifolia, 714.
Colocynth, 253.
Cologne cathedral, 740.
city on the Rhine, 740, 751.
Colombia, country in South America, 1061.
Colombo, city in Ceylon, 652.
Colon, earliest use in writing, 790.
Colosseum, at Rome, 516.
Colossi, 87, 119, 502, 532.
that of Rhodes, 389, 605.
Coltsfoot, 259.
Colubrina Asiatica, 339.
Columba Carolinensis, 875.
migratoria, 875.
oenas, 28.
palumbus, the domestic pigeon, 28, 136, 453.
Columbia River, in Northwest America, 1035.
Columbia serratifolia, 990.
Columbine, 352, 580, 903.
Columnea scandens, 986.
Colutea arborescens, 355.
frutescens, 975.
herbacea, 990.
Orientalis, 882.
Pocockii, 1018.
Comandra umbellata, 999.
Combretum purpureum, 957.
Comedy, 284, 306, 323.
Cometes alterniflora, 999.
Comets, 228, 325, 393, 471, 475, 477, 483, 538, 566, 580, 586, 589, 610, 629, 782, 795–96, 823, 846, 892, 926, 936, 964, 977, 1061.
Comfrey, 346.
Commelyna angustifolia, 1041.
Bengalensis, 999.
Cayennensis, or *agraria*, 1047.
communis, 645.
erecta, 1011.
latifolia, 466.
nudiflora, 999.
tuberosa, 915.
Virginica, 999.
Commerce, 74, 268, 424, 528, 903, 909, 965, 1004.
Commersonia echinata, 966.
Commia Cochinchinensis, 399
Committee of Correspondence, the, appointed in Boston, 1032.
in Virginia, 1033.
Commons of England, 751, 943, 952, 1038.
Commonwealth, of Cromwell's time, 957, 958, 960.
Comocladia dentata, 658.
ilicifolia, 986.
integrifolia, 982.
Compass, the mariner's, 687, 758, 794, 814, 933.
Comptonia asplenifolia, 968.
Conanthera bifolia, 1002.
Concord, town in Massachusetts, 1035.
Cone flower, 941.
Conessi bark, 596.
Conferva rivularis, 514.
rupestris, 527.
sp., 451.
Congea villosa, 579.
Congo River, 843.
Congress, first American Colonial, 1034; second, 1035.
of the United States, Acts of, 1048–50, 1059, 1062, 1070–71.
Conioselinum Canadense, 873.
Conium Africanum, 1003.
maculatum, 633.
Conjunctions of the sun, moon, and planets, 77, 391, 716.
Conjurers, or jugglers, 330.
Connarus Asiaticus, 970.
pinnatus, 974.
speciosus, 245.
Connecticut, N. American State, 947, 951, 981–82.
River, 933.
Conobea multifida, 1044.
Conocarpus acuminatus, 745.
erectus, 982.
latifolius, 728.
racemosus, 982.
robustus, 245.
Conoclinium cælestinum, 993.
"Considerations, &c.," 1031.
Constantinople, 547, 568, 583, 600, 610, 616, 618, 640, 751, 823, 862.
Constellations, 77, 78, 268, 900.
Constitution, federal, of the United States, 1042–43.
Contracts, 112.
Contrayerva, 900, 924.
Convallaria Japonica, 989.
majalis, 419, 557.
Convention, federal, of the American States, 1042.
Convolvulus acetosaefolius, 986.
althæoides, 362.
arvensis, 206.
bifidus, 966.
(*Calonyctium*) *bona-nox*, 594.
(*Argyreia*) *bracteatus*, 524.
Cairicus, see *Ipomæa palmata*.
Canariensis, 993.
cantabrica, 509.
cneorum, 907.
(*Calonyction*) *Comorensis*, 381.
(*Calonyction*) *comosperma*, 381.
(*Elythrostamma*) *convolvulacea*, 381.
corymbosus, 986.
(*Argyreia*) *cuneata*, 617.
dorycnium, 324.
(*Batatas*) *edulis*, 753.
farinosus, 1030.
floridus, 764.
(*Rivea*) *fragrans*, 713.
(*Jacquemontia*) *hastigera*, 381.

Convolvulus (Batatas) Imperati, 876.
lanatus, 998.
lineatus, 894.
nil and *hederaceus*, see *Pharbitis*.
(*Batatas*) *littoralis*, 915.
macrocarpus, 986.
macrorhizus, 986.
(*Argyreia*) *Malabarica*, 728.
maximus, 973.
mechoacanha, 901.
Medium, 973.
(*Batatas*) *paniculatus*, 701.
(*Batatas*) *pentaphylla*, 982.
peltatus, 966.
quinquefolius, 999.
rupestris, 1032.
sagittifolius, 1005.
saxatilis, 912.
scammonia, 124.
sepium, see *Calystegia*.
(*Lettsomia*) *setosus*, 590.
Sibthorpi, 296.
(*Argyreia*) *speciosa*, 712.
spinosus, 1031.
tenellus, 999.
tomentosus, 999.
tricolor, 938.
turpethum, 614.
(*Jacquemontia*) *umbellata*, 381.
umbellatus, 986.
verticillatus, 986.
vitifolius, 999.
Conyza Aegyptiaca, 972.
bifoliata, 1000.
candida, 826.
cinerea, 978.
Dioscoridis, see *Pluchea*.
foetida, 982.
odorata, &c., 987.
pubigera, *prolifera*, and *Chinensis*, 966.
purpurascens, 983.
rupestris, 986.
saxatilis, 937.
Sicula, 931.
sordida, 912.
squarrosa, see *Inula conyza*.
Coontie, 761.
Copaifera coriacea, 784.
Jacquini, 783.
Langsdorfii, 784.
multijuga, 784.
Copaiva balsam, see *Balsam*.
Copal, 270.
Copenhagen Greenland Co., 949.
Copernican system of astronomy, 929.
Copper, and copper-mines, 3, 66, 520, 571, 573, 582, 612–13, 626, 630, 651, 789, 859, 926.
Coptic, or Egyptian Language, 13, 74, 119, 534.
Coptis asplenifolia, 418.
trifolia, 818.
Copts, 567, 811, 1068.
Coral, 133, 348, 663, 965.
Coral-islands, 427.
Corallorhiza innata, 1043.
Linnaei, 921.
odontorhiza, 1000.
Coral, or *trumpet*, *honeysuckle*, 959.
Coral-tree, 441, 448, 616, 673.
Coraysh Arab tribe, 536, 583, 599.
Corchorus acutangulus, 989.
capsularis, 764.
fascicularis, 1000.
hirsutus, 986.
hirtus, 986.
olitorius, 646.
procumbens, 380.
siliquosus, 986.
sp., 465.
Corcyra, or Corfu, in Greece, 213, 311, 391.
Cord-grass, 886.
Cordia Africana, 185.
angustifolia, 594.
collococca, 999.
crenata, 903.
gerascanthus, 1012.
latifolia, 422.
Macleodii, 595.
monoica, 385.
myxa, 107.
obliqua, 422.
subcordata, 385.
Cordylocarpus lavigatus, 94.
Corea, in Eastern Asia, 128, 159, 164, 390, 481, 538, 543, 597, 610, 681, 915–16, 1032, 1039, 1048, 1052, 1060, 1065, 1068, 1070–71.
Coreopsis acuta, 1033.
alba, 991.
angustifolia, 1033.
aristosa, 1044.
aspera, 1060.
auriculata, 962.
aurea, 1024.
chrysantha, 987.
coronata, 987.
delphinifolia, 1045.
gladiata, 1040.
lanceolata, 1009.
latifolia, 1041.
Oemleri, 1059.
reptans, 983.
senifolia, 1040.
tenuifolia, 1000.
tinctoria, 1061.
trichosperma, 1041.
tripteris, 962.
verticillata, 995.
Corfu, or Corcyra, Greek island, 213, 224, 280–81, 311.
Coriander, 141.
Coriandrum sativum, 141, 969.
Coriaria myrtifolia, 439.
ruscifolia, 661.
Corinth, city in Greece, 115, 162, 186, 213, 224, 280, 347, 388.
Corinthian architecture, 302.
Coris Monspeliensis, 885.
Corispermum hyssopifolium, 1008.
pungens, 1007.
Cork, 256.
Cormorant, 776.
Corn, 575, 603, 939, 954.
Corn-cockle, 733.
Cornel, 134.
Cornelian, 106, 114.
Corn-salad, 458.
Cornucopiae cucullatum, 997.
Cornus alba, 753.
alternifolia, 1037.
asperifolia, 1041.
brachypoda, 622.
Canadensis, 419, 937.
circinata, 1043.
florida, 992.
mascula, 171.
paniculata, 1042.
sanguinea, 134, 451.
sericea, 807.
stolonifera, 1038.
stricta, 1040.
Suecica, 788.
Coronation, by priests, 568.
Coronilla argentea, 905.
Cappadocica, 1007.
coronata, 921.
emerus, 526.
glauca, 921.
globosa, 905.
juncea, 931.
minima, 912.
scandens, 987.
securidaca, 341.
valentina, 962.
Coronopus Ruellii, 352.
Corrigiola littoralis, 734.
Corrosive sublimate, from quicksilver, 646.
Corsica, island in the Mediterranean, 237, 243, 389.
Cortusa Matthioli, 889.
Corvus corax, raven, 453.
corone, crow, 20, 453.
Corycium crispum, 1009.
vestitum, 1009.
Corydalis aurea, 1057.
capnoides, 894.
claviculata, 485.
enneaphylla, 994.
fabacea, 432.
glauca, 949.
lutea, 993.
paeonifolia, 1013.
Siberica, 1013.
solida, 166.
tuberosa, 432.
Corylus Americana, 771, 880, 893, 929, 935.
avellana, *filbert*, 134, 317, 451.
colurna, 299.
rostrata, 875, 935, 968.
sp., 418.
tubulosa, 921.

Corymbium glabrum, 999.
scabrum, 999.
Corypha rotundifolia, 966.
taliera, 347.
umbraculifera, 347.
Cosmetics, 108.
Cosmos caudatus, 1054.
Costus, 320.
Costus Meridnæ, 1004.
sarmentosus, 382.
speciosus, 633.
spicatus, 950.
Cotoneaster vulgaris, 505.
Cottage, the earliest, 51.
Cotton, 215, 264, 458, 657, 663, 741, 758, 791, 869.
rush, 809.
trees, 253–54, 819–20.
wood, 965.
Cotton cloth, 852.
wool, 929.
Cottonwood willow, 604.
Cotula anthemoides, 1000.
aurea, 931.
coronopifolia, 975.
minima, 1029.
tanacetifolia, 1000.
Cotyledon caryophyllacea, 1016.
fascicularis, 1016.
hemisphaerica, 1011.
lutea, 488.
malacophyllum, 1032.
mucronata, 1016.
orbiculata, 982.
papillaris, 1016.
parviflora, 998.
serrata, 889.
spuria, 1001.
tuberculosa, 1016.
umbilicus, 341.
ungulata, 1016.
Coumarouna odorata, 1025.
Court plaster, 551.
Courts of justice, 658, 758.
Cow, 14, 21, 401, 845, 957, 1030.
Cowbane, 706.
Cowitch, 674, 699, 950.
Cow-parsnip, 641.
Cowries, Cyprea monetas, 758, 786.
Cowslip, or *primrose*, 557, 637.
Cow-wheat, 510, 848.
Crab, 22, 154, 846.
Crambe Hispanica, 949.
maritima, 473.
Orientalis, 587.
Cranberry, 508, 806.
Crane, 52, 64.
Cranesbill, 500.
Crannoges, palisaded lake-villages of Ireland, 167, 631, 1070.
Crantzia lineata, 1041.
Crassula alternifolia, 1016.
ciliata, 1011.
coccinea, 977.
columnaris, 1016.
crenata, 998.
Crassula cultrata, 1011.
dichotoma, 982.
flava, 999.
gentianoides, 999.
Magnolii, 973.
nudicaulis, 1011.
pellucida, 1011.
scabra, 1009.
subulata, 997.
tetragona, 1004.
verticillaris, 1020.
Crassulaceæ, not found in Egypt, 4.
Cratægus apiifolia, 1040.
azarolus, 628.
coccinea, 923, 926, 992.
cordata, 1024.
Cretica, 998.
crus-galli, 1000.
flava, 1039.
glandulosa, 1039.
monogyna, 550.
oxycantha, 121.
parvifolia, 1000.
pyracantha, 356.
spathulata, 1041.
tanacetifolia, 219.
tomentosa, 866, 874–75, 958.
viridis, 1016.
Crataeva Adansoni, 426.
gynandra, 1000.
religiosa, 592.
Crawfurdia? sp., 588.
Creeks, N. American tribe, 776, 1012, 1016.
Crepis alpina, 919.
biennis, 197.
corymbosa, 934.
Dioscoridis, 914.
foetida, 937.
leontodontoïdes, 1003.
Nemaurensis, 913.
scariosa, 934.
setosa, 1020.
Taurinensis, 1003.
tectorum, 878.
virens, 913.
Crescentia cujete, 677, 882.
cucurbitina, 1000.
jasminoides, 1005.
Cress, 94, 352, 470.
Cressa Cretica, 435.
Cressy, in France, 787.
Crete, Greek island, 146, 151, 446, 627, 655, 719, 965.
Crimea, see Cimmerians.
Crimson clover, 995.
Crinum Americanum, 898.
Asiaticum, 301.
erubescens, 1001.
nervosum, 966.
Cristaria betonicaefolia, 1002.
Crithmum maritimum, 294.
Crocodile, 38, 55, 267, 269.
Crocodilus Gangeticus, 432.
sp., 55.
Crocus biflorus, 952.
Crocus minimus, 351.
nudiflorus, 351.
odorus, 512.
reticulatus, 898.
sativus, 115.
vernus, 173.
Cromlechs, Druidical, 149, 166.
Crossopteryx febrifuga, 731.
Crotalaria biflora, 997.
Brownei, 1023.
glauca, 465.
imbricata, 1000.
incana, 984.
juncea, 422.
laburnifolia, 982.
laevigata, 1000.
lotifolia, 983.
ovalis, 1040.
parviflora, 1041.
quinquefolia, 974.
retusa, 628.
sagittaris, 982.
strigosa, 380.
verucosa, 974.
Croton argenteum, 1012.
argyranthemum, 1037.
aromaticum, 966.
capitatum, 1044.
cascarilla, 984.
chamaedrifolium, 983.
citrifolium, 987.
coccineum, 974.
eleuteria, 984.
furfuraceum, 987.
glabellum, 983.
glandulosum, 1025.
lineare, 983.
lobatum, 1009.
maritimum, 1040.
palustre, 987.
pavana, 631.
phyllanthrus, 983.
plicatum, 98.
polyandra, 522.
sebiferum, 846.
sidaefolium, 1000.
solanifolium, 975.
sp., 732.
spinosum, 1000.
thet-yen-ka-dau, 322.
thet-yen-nee, 322.
tiglium, 631.
tinctorium, 97.
villosum, 98.
Croton oil, 631.
Crotona, city in Southern Italy, 132, 218, 631.
Crotonopsis argentea, 1041.
Crow, 20.
Crow berry, 781.
Crown-imperial, 672.
or *Loxa bark*, 921.
Crown Point, on Lake Champlain, 1035.
Crucianella glomerata, 998.
latifolia, 921.

Crucianellæ maritima, 894.
molluginoides, 1007.
Monspeliaca, 342.
Crucible, 40.
Crucifixion, 476.
Crusaders, 683–84, 686, 712, 716, 719, 741.
Crusades, 683, 705, 716, 718, 721, 740, 760.
Crypsis aculeata, 587.
? squarrosa, 1058.
Cryptomeria Japonica, 632.
sp., 601.
Cryptostegia grandiflora, 728.
Cryptotaenia Canadensis, 976.
Crystal, 663.
Crystopteris fragilis, 850.
Cleniuni aromaticum, 1039.
Cuba, island in the West Indies, 852, 860–61, 919.
Cubebs, 312, 629, 844.
Cuckoo-flower, 504, 634.
*Cucubalus baccifer*us, 504.
Cucumber, 72, 640, 808, 929, 944, 989.
Cucumber-melon, 627.
Cucumis Africanus, 991.
anguinus, 950.
anguria, 950.
chate, 627.
colocynthis, see *Citrullus*.
conomon, 260.
dipsarhendi, 649.
dudaim, 116.
flexuosus, 72.
Hardwickii, 497.
melo, *musk-melon*, 229.
momordica, 738.
prophetarum, 194.
sativus, 640.
utilissimus, 533.
Cucurbita maxima, 709, 876.
polymorpha, 747, 870, 929.
sp., 880.
Culex sp., mosquito, 39.
Culiacan, in Mexico, 871, 880.
Culilawan bark, 795.
Culver foot, 718.
Cumæ, or Cymæ, city in Asia Minor, 179, 186, 288.
Cumberland Straits, 909.
Cuminum cyminum, 211.
Cummin, 211.
Cunila Mariana, 999.
Cunninghamia Sinensis, 622.
Cunonia Capensis, 766.
Cuphea viscosissima, 1016.
Cupressus Japonica, 127.
Nutkanus, 581.
patula, 600.
sempervirens, 128.
thyoides, 810, 866, 893.
Curanga amara, 966.
Curculigo orchioides, 833.
Seychellensis, 385.
Curcuma amada, 832.
angustifolia, 579.
Curcuma aromatica, 595.
elata, 590.
leucorhiza, 579.
longa, 189, 526.
petiolata, 591.
reclinata, 414.
rubescens, 579.
viridiflora, 445.
zedoaria, 415.
zerumbet, 519.
Currants, 409, 856, 871, 908.
Currency of New England, depreciation of, 1020.
Curtisia faginea, 766.
Cuscuta Americana, 982.
corymbosa, 1037.
epilinum, 193.
epithymum, 313.
Europæa, 193.
Gronovii, 929.
Hassiaca, 1069.
monogyna, 193.
reflexa, 832.
trifolii, 1069.
Cusouta arvensis, 929.
Custard-apple, 867.
Cuttle-fish, Sepia, 29, 58, 503.
Cuzco, city in Peru, 667, 798, 871, 875, 887, 892.
Cyamopsis psoraleoides, 332.
Cyanella Capensis, 230.
Cyathea arborea, &c., 987.
Cyathula prostrata, 952.
Cyathus olla, 959.
striatus, 959.
Cybele, mother of the gods, 153.
worship of, 153, 597.
Cycas circinalis, 304, 917.
revoluta, 98.
Cyclamen Europaeum, 502.
hederæfolium, 379.
Persicum, 163.
Cycle lunar, 124, 281.
of Calippus, 326.
of Hipparchus, 402.
of Time, 618, 623, 630, 646, 655, 669, 682, 704, 719, 751, 776, 796, 818, 859, 896, 980, 1018, 1054.
Cycloloma platyphyllum, 1044.
Cyclopia genistoides, 1000.
Cycnium sp. n., 732.
Cydonia Japonica, 688.
Sinensis, 239.
vulgaris, 177.
Cygnus, constellation of, 920.
olor, swan, 453.
Cylindrocline Commersonii, 1067.
Cymbals, musical instruments, 199.
Cymbaria Davurica, 1013.
Cymbidium aloefolium, 974.
luteum, 1002.
ovatum, 974.
praemorsum, 973.
striatum, 762.
tenuifolium, 966.
Cymbidium venescens, 1002.
Cymbopogon schænanthus, 284.
Cymopterus acaulis, 1057.
Cynara acaulis, 310.
cardunculus, 261.
horrida, 382.
scolymus, 71.
Cynanchum acutum, 888.
erectum, see *Marsdenia*.
hirsutum, 978.
Indicum, 975.
lanceolatum, see *Leptadenia*.
nigrum, 339.
pilosum, 999.
(*Sarcostemma*) *pyrotechnicum*, 509.
reticulatum, see *Leptadenia*.
suberosum, 1011.
vincetoxicum, 377.
Cynocephalus, baboon, 18, 47.
Cynodon dactylum, 184, 214.
Cynoglossum Apenninum, 316.
cheirifolium, 921.
glastifolium, 998.
lanatum, 998.
Limense, 1002.
Morisoni, 978.
officinale, 315.
pictum, 316.
Rinderi, 1027.
Stamineum, 998.
sylvaticum, 934.
Virginicum, 1016.
Cynometra cauliflora, 966.
ramiflora, 727.
Cynomorium coccineum, 972.
Philippense, 690.
sp., 322.
Cynosurus cristatus, 638.
? durus, 708.
Cynthia dandelion, 1016.
Virginica, 1016.
Cynurian Greeks, 192.
Cyperus alopecuroides, 130.
arenarius, 999.
articulatus, 916.
autumnalis, 1042.
brizaeus, 1047.
bulbosus, 747.
canescens, 973.
Cleaveri, 1061.
compressus, 963.
dentatus, 1060.
difformis, 375.
distans, 1037.
dives, 130.
elegans, 984.
erythrorhizos, 1060.
esculentus, 224.
exaltatus, 1004.
filiculmis, 809.
flavescens, 878.
flavicomus, 1039.
fuscus, 173.
hamulosus, 1007.
haspan, 993.

Cyperus inflexus, 1056.
iria, 999.
juncifolius, 414.
kyllingaeoides, 1042.
ligularis, 982.
longus, 173.
Michauxianus, 1041.
Monti, 1005.
odoratus, 982.
pertenuis, 472.
phymatodes, 809.
poaeformis, 1055.
polystachyos, 999.
pumilus, 999.
Purshii, see *inflexus*.
rotundus, 209.
speciosus, 1051.
squarrosus, 999.
strigosus, 982.
Surinamensis, 950.
tenellus, 999.
textilis, 766.
vegetus, 1022.
virens, 1041.
Cyphia bulbosa, 1015.
Cypress-vine, 820.
Cypress, 128, 581, 842.
Cyprinus carpio, carp, 136, 453.
dobula, 453.
leuciscus, 136, 453.
Cypripedium acaule, 772, 958.
arietinum, 1058.
calceolus, 888.
candidum, 1055.
guttatum, 1013.
macranthos, 1013.
parviflorum, 995.
pubescens, 979.
spectabile, 949.
Cyprus, Greek island, 115, 133, 195, 237, 256, 303, 371, 400, 407, 604.
Cyrene, in North Africa, 225, 400, 438.
Cyrilla Antillana, 1043.
racemiflora, 1024.
Cyrillic alphabet of the Slavonians, 843.
Cystoperis bulbifera, 948.
Cystoseira selaginoides, 368.
Cytinus hypocistes, 436.
Cytisus argenteus, 903.
Austriacus, 884.
biflorus, 931.
capitatus, 907.
divaricatus, 902.
foliolosus, 1000.
glomeratus, 380.
laburnum, 355.
nigricans, 884.
purpureus, 973.
scoparius, 447.
sessiliflorus, 995.
spinosus, 888.
supinus, 785, 907.
triflorus, 902.
Wolgaricus, 587.
Czackia liliastrum, 889.
Czekhs, or Bohemians, 620.

DACIA, country on the North side of the Danube, 449, 456, 519.
Dactylis glomerata, 851.
littoralis, 937.
spicata, 999.
Dactyloctenium Aegyptiacum, or *mucronatum*, 512.
Dædalia quercina, 451.
Dæmia extensa, 738.
Daffodil, 752.
Dahlia variabilis, 1045.
Daisy, 507, 645.
Dakkeh, in Nubia, 391, 402.
Dalbergia frondosa, 593.
Hookeri, 384.
lanceolaria, 974.
latifolia, 463.
melanoxylon, 431.
Oujeinensis, 617.
scandens, 711.
sissoides, 735.
sissoo, 463, 573.
sp., 383.
Telfairii, 384.
thet-ksouk-yo, 588.
Dalea alopecuroides, 1044.
aurea, 1057.
Cliffortiana, 1015.
laxiflora, 1057.
Dalechampia scandens, 987.
Dalibarda repens, 1019.
Dalmatia, 417, 680, 857.
Damascus, city in Syria, 179, 213, 478, 601, 607, 814.
blades, 237.
Damasonium Indicum, 375.
Damietta, city in Egypt, 721, 740.
Dammara, see *Agathis*.
Dammer pitch, 240, 370, 593, 744.
Damnacanthus Gaertneri, 966.
Damson, 345.
Danaea alata, 987.
nodosa, 987.
Dandelion, 419, 685, 870.
Danes, 639, 664, 667.
Danthonia sericea, 1060.
spicata, 1025.
Danube, or Ister, river in Europe, 227, 444, 446, 519, 611.
Daphne alpina, 406.
argentea, 217.
cneorum, 464.
dioica, see *Passerina*.
Gnidium, 207.
hsæ-læ, 423.
jasminea, 364.
laureola, 167.
mezereum, 586.
(*Cansiera*) *monostachya*, 974.
odora, 989.
odorata, 632.
papyracea, 789.
Daphne (*Cansiera*) *polystachya*, 974.
Pontica, 996.
sericea, 544.
squarrosa, 1016.
tartonraira, 365.
thymelea, 937.
vermiculata, 971.
villosa, 894.
Daphniphyllum Roxburgii, 632.
Dar Fur, Negro country on the Upper Nile, 1048.
Darien, Spanish settlement on, 860, 900.
Darnel, 93.
Date palm, 15, 67, 72, 254, 330, 464, 702.
Datisca cannabina, 566.
Datura fastuosa, see *D. metel*.
ferox, 622.
metel, 596.
stramonium, 622.
Daucus carota, 190, 451.
gingidium, 882.
gummifer, 471.
Mauritanicus, 975.
muricatus, 934.
polygamus, 975.
Davallia aculeata, 983.
Canariensis, 988.
clavata, 987.
Domingensis, 987.
sp., 632.
tenuifolia, 1000.
trifoliata, 987.
Davis Straits, discovered, 909, 933.
Day-lily, 688.
Dead-nettle, 510, 635, 816, 822.
Dean's Island, 924.
Debod, in Nubia, 376.
Decamerone, the, of Boccaccio, 787.
Decimal fractions, 829.
Declaration of Independence, the, by American colonies, 1035.
Decline of the arts, 126.
Decumaria barbara, 1023.
Deed, for sale of land, 431.
Deer, 80, 643, 866, 875, 908.
Deerberries, 769.
Deerfield, town in New Eng., 999.
Deer's hair, 792.
Deghop, see Lingam.
Degree of Latitude measured, 967, 1015.
Deidamia alata, 957.
Delaware River and Bay, 928, 936, 951, 978.
Delaware, State in N. America, 978.
Deleb palm, 125.
Delhi, seat of government on the Ganges, 667, 676, 711, 798, 947.
Delima sarmentosa, 974.
Delphi, in Greece, oracle at, 118, 237, 241, 271, 377.
Delphinapterus beluga, 875.
Delphinium ajacis, 177.
ambiguum, 921.

Delphinium azureum, 1039.
consolida, 679.
crassifolium, 1013.
elatum, 906.
exaltatum, 1013.
grandiflorum, 1013.
hybridum, 1013.
intermedium, 921.
pentagynium, 961.
peregrinum, 292.
puniceum, 1033.
staphisagria, 293.
tenuissimum, 484.
tricorne, 1041.
urceolatum, 1013.
Delphinus Gangeticus, 432.
Demak, or Bintara, first Muslim capital of Java, 830, 834.
Demotic, or Enchorial, writing, 228, 233, 396, 482.
Dendera, temple at, 454, 457, 479, 482, 525.
Dendrobium catenatum, 419.
crumenatum, 966.
moniliforme, 989.
polystachyon, 987.
sanguineum, 983.
Denmark, country in Europe, 960.
Dentalium, 955.
Dentaria bulbifera, 848.
diphylla, 748.
enneaphylla, 504.
laciniata, 1041.
pentaphyllos, 888.
pinnata, 884.
quinquefolia, 998.
tenella, 1055.
Dentella repens, 999.
Descada, island in W. Indies, 919.
Desert plants, 4.
Desima, island of, 952.
Desmanthus brachylobus, 1044.
diffusus, 973.
planus, 1012.
punctatus, 993.
Desmocheta atropurpurea, 974.
see *Cyathula*.
micrantha, 999.
muricata, 966.
Desmodium acuminatum, 1041.
biarticulatum, 970.
cæspitosum, 384.
Canadense, 949.
canescens, 962.
ciliare, 1041.
cuspidatum, 1052.
Gangeticum, 692.
glabellum, 1041.
glutinosum, 1052.
heterophyllum, 970.
humifusum, 1059.
incanum, 988.
lactescens, 380.
lineatum, 1041.
Marilandicum, 962.
nudiflorum, 1016.
Desmodium paniculatum, 1000.
rigidum, 1061.
rotundifolium, 1041.
scalpe, 384.
spectabile, 380.
strictum, 1053.
tortuosum, 984.
triflorum, 251.
triquetrum, 590.
umbellatum, 384.
viridiflorum, 1000.
Detarium sp., 425.
Deutzia scabra, 622.
Devil's bit, 824.
Devra Libanos monastery in Shoa, 747.
Dew, 34.
Dewal, or Dival, seaport of Sind, 615.
Dewberries, 357.
Dhamma-raza, title of Pegu king, 812.
Dhammawatie, title of Pegu king, 834.
Diamonds, 886.
Diamorpha pusilla, 1041.
Diana, worship of, 132, 136, 180, 192.
Dianella ensifolia, 966.
Dianthera comata, 982.
Dianthus arboreus, 403.
armeria, 834.
atrorubens, 930.
attenuatus, 961.
barbatus, 825.
caesius, 921.
carthusianorum, 765.
caryophillus, 585.
deltoides, 903.
ferrugineus, 971.
fruticosus, 353.
juniperinus, 905.
pinifolius, 913.
plumarius, 796.
prolifer, 963.
suffruticosus, 937.
superbus, 766.
sylvestris, 937.
tripunctatus, 1040.
virgineus, 906.
Diapensia Lapponica, 1011.
Diarrhena Americana, 1044.
Dicerocaryum sinuatum, 381.
Diceros longifolius, 974.
Dichondra Carolinensis, 1040.
repens, 1034.
Dichromena ciliata, 950.
latifolia, 1059.
leucocephala, 962.
Dicksonia apiifolia, 1000.
cicutaria, 983.
Dicliptera bivalvis, 966.
brachiata, 1055.
ciliaris, 1057.
Curanga, 1057.
Hydropityon, 1057.
Physkium, 1057.
Dicliptera scorpioides, 1012.
Dictamnus fraxinella, 377.
Dicypellium caryophyllatum, 674.
Didelphis Virginiana, opossum, 869.
Dieffenbachia seguina, 990.
Dielytra Canadensis, 949.
cucullaria, 962, 1017.
eximia, 1055.
tenuifolia, 1058.
Diervilla Tournefortii, 1001.
Diet of Spires, 868–69, 885.
at Ratisbon, 871.
Dighton, in New England, inscription at, 803.
Digitalis ambigua, 879.
Canariensis, 764.
ferruginea, 903.
lutea, 882.
obscura, 994.
purpurea, 654.
thaspi, 890.
Digitaria filiformis, 1019.
linearis, 982.
sanguinalis, 563.
Dilivaria ebracteata, 966.
ilicifolia, 74.
Dill, 232, 700.
Dillenia elliptica, 966.
pentagyna, 329.
scabra, 112.
serrata, 966.
speciosa, 592.
thaibyu, 112.
Diocletian's column, 543.
Diodia teres, 1039.
Virginica, 1015.
Dionæa muscipula, 1030.
Dioscorea aculeata, 301.
alata, 714.
altissima, 987.
atropurpurea, 589.
bulbifera, 416.
dæmona, 589.
deltoidea, 498.
fasciculata, 589.
globosa, 862.
Japonica, 571.
nummularia, 966.
oppositifolia, 997.
pentaphylla, 416.
piperifolia, 987.
purpurea, 862.
quaternata, 1040.
quinqueloba, 989.
sativa, 714, 950.
sp., 589, 733, 917.
toxicaria, 382.
triphylla, 729.
tugui, 865.
villosa, 993.
Diosma cistoides, 999.
cupressina, 999.
ericoides, 999.
hirsuta, 998.
oppositifolia, 998.
pubescens, 999.

Diosma pulchella, 1015.
rubra, 998.
uniflora, 1015.
Diospyrus calycina, 745.
chloroxylon, 559.
cordifolia, 559.
ebenaster, 348.
ebenum, 331.
glutinosa, 693.
kaki, 305.
lotus, 886.
melanoxylon, 331.
mollis, 423.
montana, 331.
multiflora, 917.
pen-lay-boke, 591.
pilosanthera, 917.
reticulata, 91.
tau-boke, 591.
tomentosa, 559.
Virginiana, 770, 875, 881.
Diotis lanata, 1055.
Dipavansa, history of Ceylon, 545.
Diphtheria, 1014.
Diphylleia cymosa, 1041.
Diplachne fascicularis, 1044.
Diplazium juglandifolium, 983.
undulosum, 987.
Diplolaena sp., 985.
Diplomacy, 219, 811.
Diplopappus amygdalinus, 1041.
cornifolius, 993.
linarifolius, 962.
obovatus, 1061.
Diplotaxis muralis, 971.
tenuifolia, 883.
Dipsacus laciniatus, 913.
sylvestris, 237.
Dipteracanthus ciliosus, 1056.
humistratus, 1041.
oblongifolius, or *biflorus*, 1011.
strepens, 1011.
Dipterocarpus grandiflorus, 278.
Indicus, 743.
lævis, 565.
sp., 588.
Dipus hirtipes, 31.
sagitta, 31.
Dirca palustris, 1016.
Disandra prostrata, 999.
Dischidia nummularia, 966.
Discopleura capillacea, 1040.
Distephanus populifolius, 1067.
Distylium racemosum, 622.
Dittander, or *dittany*, 290.
Divination, 119, 231.
Diving-bell, 756.
Divorce, law of, 389.
Djidda, on the Red Sea, the port of Mecca, 778.
Dniester River, 434.
Dobera glabra, 390.
Dobi, sun-dried brick, 32, 51, 63, 88.
Dock, 262, 377, 465, 777, 1031.
Dodartia Orientalis, 996.
Dodecatheon integrifolium, 999.
Dodecatheon Meadia, 1003.
Dodder, 193, 313, 1069.
Dodona, oracle there, 128.
Dodonaea viscosa, 999.
Dog, 19, 154, 875, 924, 939, 955, 1030.
Dog-bane, 794, 945.
grass, 638, 876.
Dog sledges, 758, 781–82, 1031.
Dog-faced Baboon, 18.
Dolichos angularis, 989.
articulatus, 987.
catiang, 974.
cultratus, 989.
ensiformis, 983.
funarius, 660.
gladiatus, 974.
hirsutus, 235.
incurvus, 989.
lablab, see *lablab*.
lignosus, 966.
lubia, 312.
medicagineus, 970.
minimus, 983.
rotundifolius, 974.
scarabaeoides, 1000.
Sinensis, 786.
tuberosus, 987.
uniflorus, 332.
Dolmens, 149.
Dombeya erythroxylon, 994.
ferruginea, 1067.
multiflora, 466.
punctata, 1067.
Domestic fowl, 114, 453.
Dominican monastic Order, 719, 723, 999, 1019.
Dongola, 571, 774.
Donkey, 35.
Doomsday Book, compiled, 681.
Dorema ammoniacum, 724.
Dorian Greeks, 132, 186.
Doric architecture, 85, 241, 302.
Dormouse, 320.
Doronicum Austriacum, 889.
Columnae, 934.
pardalianches, 292.
plantagineum, 889.
scorpioides, 597.
Dorstenia Brasiliensis, 900.
caulescens, 987.
contrayerva, 900.
Drakena, 924.
Houstoni, 924.
opifera, 900.
Doryanthes excelsa, 564.
Dorycnium herbaceum, 888.
latifolium, 172.
Monspeliense, 897.
Dosia powder, 625.
Doum palm, 61, 72.
Dourra, 475.
Dove's foot, 679.
Dowlutabad, stronghold in Hindustan, 515, 762, 766, 787.
Draba aizoides, 894.
arabisans, 1044.
Draba Caroliniana, 1016.
glabella, 1060.
hirta, 419.
incana, 992.
muralis, 931.
nemorosa, 1019.
nivalis, 1030.
Pontica, 998.
repens, 1013.
stellata, 937.
verna, 556.
Dracæna Australis, 438.
draco, 442.
sp., 732.
terminalis, 438.
Dracocephalum Altaicum, 1007.
Austriacum, 907.
Canariense, 990.
canescens, 990.
chamaedryoides, 1002.
lamiifolium, 998.
Moldavicum, 890.
nutans, 1013.
pinnatum, 1013.
Ruyschiana, 973.
Sibericum, 1029.
thymiflorum, 1013, 1029.
Dracontium pertusum, 986.
polyphyllum, 429.
Dragon's blood, 442, 514, 913.
Dravick, 704.
Drepanocarpus lunatus, see *Phaseolus*.
Dropwort, 686.
Drosera Anglica, 634.
brevifolia, 1053.
Burmanni, 970.
Capensis, 1016.
capillaris, 1050.
cistiflora, 977.
Indica, 974.
longifolia, 634, 969.
peltata, 737.
rotundifolia, 529, 969.
Droseraceæ, not found in Egypt, 4.
Drosophyllum Lusitanicum, 999.
Drugs, the traffic in, 63, 663.
Druids, 100, 167, 186.
Drums, 800, 862.
Druses of Lebanon, 665.
Dryandra cordata, 571.
Dryas octopetala, 894.
tenella, 1010.
Drymis Winteri, 1002.
Dryobalanops, or *precious camphor*, 623, 788.
Drypis spinosa, 353.
Ducks, 87, 136.
Duck-weed, 163.
Dudley Digges, cape, 933.
Duelling, 939, 1007.
Dugong, 330.
Duke of York's Island, in the Antarctic Seas, discovered, 978.
Dulcimer, musical instrument, 199.
Dulichium spathaceum, 999.

Dulse, 849.
Dumb cane, 990.
Dunkers, Christian sect, 1007.
Duranta Plumieri, 987.
Durien, 816.
Durio tibethimus, 816.
Dutch, 930, 932, 934, 943, 948, 952, 961, 965, 970, 981, 1049.
West India Company, 939.
Duties on imports, 618, 630, 992, 1003.
Dwara Samudra, capital of Dowlatabad, 773.
Dwarf cornel, or *pigeon-berry*, 937.
Dycotyles, peccary, 859.
Dykes, 820, 952.

EAGLE, 33.
Earth, the, 20, 65, 369, 389, 391, 787.
Earth-gall, 290, 449.
Earthen ware, art of making, 47.
Earthquakes, 472, 520, 550, 569, 584, 789, 866, 951, 964, 976, 982, 990, 1007–8, 1010, 1015, 1019, 1022, 1024, 1032, 1038, 1049, 1070.
Easter, 533, 609, 759.
East India Company, of England, 920, 981, 1003, 1020, 1026, 1069.
of France, 953, 1020.
of Holland, 919, 1048.
East India Marine Society, of Salem, Mass., 1027.
East Indies, 919–20, 945.
East Indian tribes, 215.
Eatonia obtusata, see *striata*.
Pennsylvanica, 1060.
striata, 1016.
Ebony, 91, 128, 331, 348, 591, 917.
Ecastaphyllum Brownei, 988.
Ecbatana, city in Media, 221.
Ecclesiastical Councils, 528, 554, 565, 566, 584, 612, 623, 640, 687, 703, 715, 720, 736, 755, 773, 802, 813, 861, 885, 896.
Echaltium piscidium, 735.
Echineis, 853.
Echinocloa crus-galli, 750.
crus-corvi, 750.
Echinocystis lobata, 1044.
Echinopanax horridum, 830.
Echinophora spinosa, 294.
tenuifolia, 348.
Echinops Graecus, 360.
ritro, 508.
sphærocephalus, 433.
spinosus, 211.
strigosus, 898.
Echinospermum deflexum, 1058.
lappula, 509.
minimum, 1034.
spinocarpos, 509.
Echites asperuginis, 986.
biflora, 986.
macrophylla, 984.
suberecta, 982.
umbellata, 982.
Echium fruticosum, 993.
gigánteum, 467.
Italicum, 404.
maritimum, 994.
Orientale, 996.
plantagineum, 960.
rubrum, or *setosum*, 108
violaceum, 907.
vulgare, 368.
Eclipses, 26, 85, 192, 208, 215, 218, 222, 226–28, 231, 236, 241, 245, 251, 252, 256, 263, 282, 291, 298, 302, 319, 326, 346, 395, 397, 399, 403, 466, 483, 526, 549, 560, 562, 566, 568–69, 591, 656, 675, 733, 855, 917, 939, 971, 1060.
the Babylonian series, 215, 228, 250, 254, 258.
Eclipta erecta, 700.
procumbens, 1040.
prostrata, see *E. erecta*.
Ecliptic, 164, 241.
Edessa, 705.
Edfu, 391.
Edgeworthia papyrifera, 601.
Edict of Nantes, 919, 981.
Editors, 239.
Edom, or Idumea, 149, 194, 199.
Eel, 154.
Egg-plant, 602, 656, 831.
Egret, 124.
Egypt, 457, 541, 599, 603, 646, 656, 740, 843, 854, 900, 1001, 1028, 1050, 1058, 1066, 1071.
Egyptian Chronicle, 319.
Egyptian, or Coptic, Language, 13, 74, 119, 534.
soldiers in Mexico, 1071.
Ehrarta panicea, 1044.
Ehretia buxifolia, 746.
corymbosa, 381.
serrata, 702.
tinifolia, 982.
Eider duck, 154.
Eileithya, or El Kab, Egyptian walled city, 103.
Elæagnus angustifolia, 191.
argentea, 1054.
conferta, 84.
latifolia, 970.
Orientalis, 410.
Elæocarpus ganitrus, 616.
oblongus, 712.
sp., 240.
than-lwen, 240.
Elaeococca cordata, 622.
Elæodendron argam, see *Argania*.
integrifolium, 245.
Orientale, 590.
Roxburghii, 522.
Elais Guineensis, 820.
Occidentalis, 853.
Elaterium, 249.
Elatine alsinastrum, 937.
Americana, 1031.
hydropiper, 504.
Elatine triandra, 1006.
verticillata, 374.
Elba, Island of, 1060.
Elder, see *Sambucus*.
Eleatic philosophy, 250.
Elecampane, 461.
Elections, 402.
Electricity, 250, 298, 1021.
Electrotyping, art of, 1068.
Elementarium, vocabulary, 677.
Eleocarpus integrifolius, 966.
Eleocharis Baldwini, 1059.
capitata, 1016.
compressa, 1068.
interstincta, 982.
obtusa, 1049.
palustris, 349.
quadrangulata, 1041.
Robbinsii, 1065.
tenuis, 1059.
tuberculosa, 1041.
Elephant, African sp., 67, 80, 115.
the Indian, 95, 114, 147, 328, 378, 573, 775, 897.
Elephant-creeper, 712.
grass, 740.
Elephanta cave-temples, 483, 606.
Elephantopus angustifolius, 983.
Carolinianus, 983.
scaber, 974.
spicatus, 983.
tomentosus, 1025.
Elephants' teeth, traffic in, 686, 689, 762.
Elettaria cardamomum, 321.
medium, 579.
Eleusine coracana, 276.
Indica, 705.
stricta, 740.
virgata, 982.
Elizabeth Islands, 923.
Elizabethtown, in New Jersey, 963.
El Kab, tombs at, 103.
Elk, Cervus alces, 135, 1030.
fossil, of Ireland, 167.
Eller, 790.
Elliottia racemosa, 1058.
Ellisia nyctelaea, 978.
Ellora, Braminical cave-temples at, 515, 766.
Elm, 134, 171, 252, 366, 873.
Elodaea petiolata, 1041.
Virginica, 968.
Elsholtzia cristata, 1001.
Elymus arenarius, 912, 927.
Canadensis, 961.
crinitus, 1005.
Europaeus, 1095.
Sibericus, 1013.
striatus, 1049.
Virginicus, 666, 940.
Elyna spicata, 1040.
Elytraria crenata, 999.
virgata, 1040.
Emancipation of slaves in U.S., 1071.
Embargo, 1056.

Embelia ribes, 413.
sp., 731.
Emblica officinalis, 408.
Emeralds, 274, 573, 870.
Emery, the mineral, 230, 1071.
Emetic-weed, 1015.
Emigration to New England stopped by King Charles, 947, 950–51.
Emilia sonchifolia, 966.
Empetrum album, 878.
nigrum, 781.
Endive, 257, 929.
Endosmia Gardneri, 582.
Endrachyum Madagascarense, 957.
England, and the English, 719, 965, 967, 972, 982, 1016, 1018, 1021.
English Colonies in North America, 960, 997, 1020.
English, first arrival of the, in China, 921.
language, 747.
trade of, in India, 948–49, 952.
Enoch, book of, 466.
Entada scandens, 775, 917.
Enterpe sp., 715.
Entertainment, house of, first, established in Boston, 948.
Ephedra altissima, 886.
distachya, 218.
fragilis, 905.
monostachya, 587, 1013.
Ephesus, Greek city in Asia Minor, 192, 400.
Ephori, of Greece, 211.
Epicarpurus asper, 697.
Epidendrum amabile, 966.
bifidum, 915.
coccineum, &c, 987.
conopseum, 1043.
ensifolium, 976.
nocturnum, 1005.
scriptum, 966.
Epigaea repens, 962.
Epilobium alpestre, 993.
alpinum, 995.
coloratum, 1059.
hirsutum, 872.
luteum, 1058.
montanum, 906.
palustre, 892.
parviflorum, 913.
roseum, 882.
tetragonum, 872.
Epimedium alpinum, 485.
Epipactis ensifolia, 1037.
grandiflora, see *Serapias*.
latifolia, 884.
nidurarvis, 848.
Epiphagus Virginianus, 962.
Epistles, or letters, the earliest, 136.
Equinox, observations on, 400–1, 407, 527, 571, 642.
Equisetum arvense, 297.
ephedrioides, 297.
fluviatile, 436.
hyemale, 825.
Equisetum limosum, 496.
palustre, 825.
pratense, 1042.
scirpoides, 1044.
sylvaticum, 841.
variegatum, 1040.
Equus asinus, 35, 452.
caballus, 103, 452.
hemionus, the onager, 111.
Era, Assyrian, or Abrahamic, 91.
Burman, 602.
Chinese, 73, 76.
Christian, 574, 715, 811.
Cilician of Aegae, 455.
Diocletian, 574, 652.
Dionysian, 375.
kaliyug of the Hindus, 66.
Naci of the Arabs, 562, 601.
of Augustus, 458.
of Colam, 627.
of Gaza, the First, 448.
of Gaza, the Second, 526.
of Java, 444.
of Nabonassar, 212, 251.
of Petra and Bostra, 519.
of Prome, 515.
of Sinmu, Japanese, 225.
of Spain, 715.
of the Christians of Malabar, 632.
of the Seleucidæ, 345.
of Yazdegird, of the Persians, 601.
Saca, of India, 453.
Salivahana, 515.
Eragrostis capillaris, 810.
ciliaris, 992.
conferta, 1061.
cynosuroides, 238.
nitida, 1061.
pectinacea, 1040.
pilosa, 1005.
poæoides, 852.
Purshii, 1055.
reptans, 1044.
rigida, 978.
tenella, 999.
tenuis, 810.
? uniflora, 1060.
Eranthis hyemalis, 906.
Eras, Jewish, 63, 345.
of Calicut and Kaulam, 627.
Erianthus alopecuroides, 982.
brevibarbe, 1041.
Japonicus, 812.
saccharoides, 1016.
strictus, 1059.
Erica abietina, 1009.
apsynthioides, 999.
arborea, 379.
Australis, 902.
baccans, 1014.
bruniades, 999.
bryantha, 1013.
calycina, 1014.
capitata, 1014.
Erica cerinthoides, 975.
ciliaris, 902.
cinerea, 902.
corifolia, 997.
curviflora, 1014.
glutinosa, 1004.
gnaphalodes, 999.
herbacea, 258.
Mediterranea, 902.
multiflora, 258.
nigrita, 1014.
planifolia, 999.
Plukenetii, 999.
purpurascens, 921.
Sabana, 1014.
scoparia, 902.
Stelleriana, 1013.
tenuifolia, 1014.
umbellata, 902.
urceolaris, 1014.
(*Calluna*) *vulgaris*, 627.
Ericaceæ not found in Egypt, 4.
Erigenia bulbosa, 1044.
Erigeron acre, 525.
alpinum, 895.
(*Phalacroloma*) *annuum*, 935.
bellidifolium, 968.
Bonariense, 1011.
(*Conotus*) *Canadense*, 902.
Carolinianum, 1011.
? compositum, 1055.
glutinosum, 912.
gramineum, 1013.
Jamaicense, 983.
? longifolium, 1050.
Philadelphicum, 1019.
pumilum, 1057.
(*Phalacroloma*) *strigosum*, 935.
uniflorum, 919.
vernum, 1016.
Erinaceus auritus, 24.
Europæus, 136, 452.
Erinus Africanus, 1016.
alpinus, 912.
fragrans, 1016.
Eriobotrya Japonica, 652.
Eriocalea minor, 985.
Eriocaulon decangulare, 1001.
(*Papalanthus*) *flavidus*, 1041.
gnaphalodes, 1016.
quinquangulare, 999.
septangulare, 1026.
setaceum, 973.
triangulare, 975.
(*Lachnocaulon*) *villosum*, 1039.
Eriocephalus Africanus, 1014.
Eriochlæna hirva-nie, 240.
Eriogonum pauciflorum, 1057.
sericeum, 1053.
tomentosum, 1041.
Eriophorum alpinum, 911.
gracile, 1006.
polystachyum, 513.
Scheuchzeri, 1015.
vaginatum, 558.
Virginicum, 809, 929, 940.

Eriospermum latifolium, 975.
Erithalis fruticosa, 986.
timon, 966.
Ermine, 124, 758
Ernodea littoralis, 982.
montana, 961.
Erodium chamaedrioides, 994.
Chium, 1009.
ciconium, 518.
cicutarium, 706.
glaucophyllum, 868.
gruinum, 903.
guttatum, 1015.
laciniatum, 1009.
malachoides, 196.
malopoides, 994.
maritimum, 1000.
moschatum, 500.
oxyrhinchum, 1007.
petraeum, 952.
pimpinellifolium, 913.
Romanum, 919.
Erucaria Aleppica, see *Cordylocarpus*.
Ervum ervilia, 193.
hirsutum, 557.
lens, 46, 451.
monanthos, 520.
tetraspermum, 280, 419.
Eryngium alpinum, 721.
amethystinum, 909.
aromaticum, 1059.
aquaticum, 915.
Baldwini, 1059.
campestre, 199.
coeruleum, 978.
dilatatum, 993.
foetidum, 982, 991.
ilicifolium, 960.
? lateriflorum, 574.
maritimum, 507.
multifidum, 998.
odoratum, 960.
parviflorum, 998.
pentanthum, 961.
pusillum, 921.
rigidum, 912.
tenue, 902.
tricuspidatum, 972.
virgatum, 1040.
Virginicum, 999.
viride, 199.
Erysimum alliaria, 634.
Bocconi, 994.
cheiranthoides, 409.
cornutum, 1029.
diffusum, 903.
hieracifolium, 937.
junceum, 889.
Orientale, 921.
polyceratum, 1034.
virgatum, 1049.
Erythraea centaurium, 449.
Chilensis, 662.
ramosissima, 1006.
Roxburgii, 738.
Erythraea spicata, 937.
Erythraean periplus, 424, 517.
Erythrina Abyssinica, 80.
corallodendron, 673, 921.
fulgens, 444.
herbacea, 1005.
Indica, 616.
pen-lay-ka-theet, 448.
picta, 966.
seu-pen-lai, 441.
suberosa, 444.
toung-ka-theet, 588.
versicolor, 384.
Erythronium Americanum, 964, 968.
dens-canis, 350.
grandiflorum, 605, 612.
Erythroxylon coca, 799, 882.
monogynum, see *Sethia*.
sideroxyloides, 1000.
Escholtzia Californica, 1061.
Esox lucius, pike, 136, 453.
Espiritu Santo, island of, 925.
Esquimaux, 788.
Ether, anæsthetic qualities of, 1069.
Ethiopia, 88, 114, 818.
Ethiopian, or Nubian, race, 57, 64, 217, 228, 264, 376.
Ethnography, 124.
Ethulia conyzoides, 374.
divaricata, 1000.
Etna, see Aetna.
Etruria, or Tuscany, 213, 252, 319, 346.
Euboea, Greek island, 186, 213.
Eucalyptus globulus, 1046.
gummifera, 1043.
robusta, 1047.
Eucharist, 798.
Euchroma coccinea, see *Castilleia*.
Euclea racemosa, 1016.
undulata, 229.
Eucomis nana, 997.
regia, 1011.
Eugenia acris, 609.
angustifolia, 986.
buxifolia, 1002.
corymbosa, 974.
cymosa, 966.
Javanica, 966.
parviflora, 974.
pimenta, 609.
uniflora, 1007.
Eulophia salep, 725.
Eulophus ambiguus, 604.
leiocarpus, 581.
triternatus, 581.
Eunuchs, 83, 85, 517, 645–46, 854, 961.
Euonymus alatus, 632.
Americanus, 961.
angustifolius, 1053.
atropurpureus, 1039.
crenulatus, 744.
Europaeus, 259, 451.
Japonica, 632.
latifolius, 259.
Euonymus pungens, 976.
Sieboldianus, 622.
verrucosus, 921.
Eupatorium ageratoides, 949.
altissimum, 962.
aromaticum, 979.
ayapana, 1039.
cannabinum, 653.
Chilense, 661.
cuneifolium, 1040.
divaricatum, 977.
foeniculaceum, 1040.
hyssopifolium, 962.
ivaefolium, 950.
maculatum, see *purpureum*.
odoratum, 950.
perfoliatum, 962.
pubescens, 1052.
purpureum, 949
rotundifolium, 962.
serotinum, 1041.
sessilifolium, 962.
sinnatum, &c., 987.
teucrifolium, 1040.
trifoliatum, 962.
villosum, 983.
Euphorbia agraria, 587.
Aleppica, 493.
amygdaloides, 894.
anacantha, 1004.
antiquorum, 243.
apios, 197.
balsamifera, 467.
biglandulosa, 998.
Bojeri, 1068.
cactiform, 819.
Calendulifolia, 1051.
Canariensis, 800.
caput-Medusae, 977.
cattimandoo, 744.
cereiformis, 1000, 1004.
chamaesyce, 436, 994.
characias, 273.
clava, 998.
Commelyni, 998.
corollata, 1000.
cotinifolia, 993.
cyathophora, 1031, 1037.
cyparissias, 493.
Darlingtonii, 1068.
dendroides, 493.
dentata, 1044.
denticulata, 998.
dulcis, 879.
epithymoides, 934.
esula, 912.
exigua, 879.
falcata, 319.
genistoides, 766.
Gerardiana, 916.
helioscopia, 89.
heptagona, 349.
hirta, 674.
hyberna, 713.
hypericifolia, 732.
hystrix, 1000.

Euphorbia ipecacuanha, 1016.
isatifolia, 952.
lathyris, 419, 471.
laurifolia, 1002.
ligularia, 329.
lophogona, 957.
maculata, 998.
mamillaris, 998.
marginata, 1055.
Mauritanica, 920.
mercurialina, 1044.
micrantha, 1007.
microphylla, 1000.
myrsinites, 354.
neriifolia, 329.
obconica, 381.
obtusata, 1055.
officinarum, 778.
origanoides, 994.
palustris, 827.
paralias, 311.
parviflora, 970.
peplus, 306, 319.
pilosa, 971, 1014.
pilulifera, 997.
piscatoria, 800.
platyphylla, 493.
polygonifolia, 961, 968.
Portlandica, 989.
portulaccoides, 1002.
procera, 1013.
pubentissima, 1041.
punicea, 1038.
regis Jubae, 467.
rubra, 937.
salicifolia, 1050.
saturesoides, 1000.
segetalis, 894.
serrata, 894.
Sieboldiana, 817.
simplex, 464.
spinosa, 313.
splendens, 385.
sylvatica, 894.
terracina, 971.
thymifolia, 851.
tirucalli, 698.
tuberosa, 1007.
valerianaefolia, 998.
verrucosa, 894.
Euphrasia filifolia, 951.
glutinosa, 998.
latifolia, 934.
longiflora, 994.
lutea, 846.
minima, 994.
odontitis, 510.
officinalis, 637.
scabra, 961.
tricuspidata, 973.
viscosa, 1004.
Euphrates, the river, 114, 525, 600, 834.
Europe, 603, 774.
Eurya Japonica, 976.
Euryale ferox, 159.
Eurycles Amboynensis, 209.
Euthamia lanceolata, 1011.
tenuifolia, 1041.
Euxolus caudatus, 1042.
deflexus, 1031.
lividus, 1003.
oleraceus, 282.
polygamus, 701.
viridis, 430, 917
Evangelium, early Slavonic writing, 678.
Evax asteriscifiora, 964.
pygmaea, 265.
Evening primrose, 930.
Everlasting flower, 903.
pea, 849.
Evernia prunastri, 514.
Evil eye, superstition, 137, 301.
Evodia glauca, 526.
hortensis, see *Xanthoxylum triphyllum*.
Evolvulus alsinoides, 739.
linifolius, 1007.
Nuttallii, 1057.
Evonymus, see *Euonymus*.
Exacum bicolor, 728.
filiforme, 960.
hyssopifolium, 1015.
pedunculatum, 746.
pulchellum, 1055.
pusillum, 1006.
tetragonum, 735.
verticillatum, 986.
Excoecaria agallocha, 334.
glandulosa, 983.
Exocarpus Ceramicus, 966.
Exodus of the Hyksos, 103, 132.
of the Israelites, 140.
Eyebright, 510, 637.
Eye-paint, 108, 443.
Ezion-gaber, port on the Red Sea, 194.

FABA VULGARIS, *horse bean*, 78, 451, 969.
Faeroe Islands, 794.
Fagara Avicennæ, 640.
pterota, 982.
rhetsa, see *Zanthoxylon tragodes*, 999.
Fagonia Arabica, 1015.
Cretica, 916.
Fagræa fragrans, 448.
Fagus ferruginea, 909, 942, 958.
pyra, 418.
sylvatica, 134, 168, 451.
Falaise, city in France, 719.
Falco buteo, buzzard, 132, 453.
milvus, kite, 136, 453.
nisus, sparrow-hawk, 15, 136, 453.
palumbarius, 136, 453.
Falconry, 21, 758, 954.
Fallow-deer, 199.
Fallow-dock, 638.
Falls of St. Anthony on the Mississippi, 977.
False Angustura, 639.
hellebore, 809.
False-scorpion, 323.
Faneuil Hall, in Boston, built, 1017.
Fan palm, 515.
Fans, flag-shaped and folding, 608.
Farsetia clypeata, 905.
Fatia Japonica, 632.
Fayal, one of the Azores Islands, 830.
Fedia cornucopiae, 921.
coronata, 934.
dentata, 934.
discoidea, 978.
echinata, 934.
mixta, 978.
radiata, 962.
vesicaria, 1003.
Feejeean Islands, in the Pacific, 299.
Felis Canadensis, 875.
catus, European wildcat, 136, 452.
concolor, puma, 859, 860.
jubata, hunting leopard, 87.
lynx, 154.
maniculata, domestic cat, 111, 224.
rufa, bay lynx, 866.
Fellahs, or Egyptian peasants, 51.
Fennel, 261, 403, 653, 700, 935, 969.
Fenugreek, 37.
Fernandina, island in the West Indies, discovered, 852.
Fernando Po Island, discovered, 833.
Ferns, rare in Egypt, 4; figured at Karnak, 123.
Feronia elephantum, 370.
Ferraria ixioides, 1002.
Ferret, 52, 465.
Ferula asafœtida, 328.
communis, 127.
ferulago, 156.
glauca, 518.
hooshee, 497.
meoides, 998.
nodiflora, 357.
nudicaulis, 581.
Orientalis, 905.
Persica, 342.
Siberica, 812.
Tingitana, 152.
Fescue grass, 395.
Festuca bromoides, 999.
caespitosa, 978.
capillata, 999.
? distachya, 987.
duriuscula, 395.
elatior, 980.
Indica, 973.
Ligustica, 1053.
loliacea, 978.
myurus, 918.
? nutans, 1059.

Festuca ovina, 395.
parviflora, 1061.
pinnata, 937.
pratensis, 1005.
quadridentata, 689.
rubens, 852.
rubra, 1005.
spicata, 1054.
Stipoides, 971.
tenella, 1039.
uniglumis, 988.
Feuillea cordifolia, 950.
Feverfew, 326, 1048.
Ficaria ranunculoides, 476.
Ficus Americana, 919.
ampelos, 973.
avi-avi, 385.
Bengalensis, 467.
Benjamina, 335.
carica, 2, 72.
citrifolia, 915.
comosa, 334.
cotoneaefolia, 973.
cunia, 749.
dæmonum, 524.
elastica, 857.
erecta, 989.
excelsa, 408.
Forskali, 390.
(*Covellia*) *glomerata*, 414.
heterophylla, 740.
hispida, see *F. oppositifolia*.
Indica, 329.
infectoria, 401.
itabu, 976.
Kotschyana ?, 378.
laccifera, 690.
Martinicensis, 982.
nitida, 729.
(*Covellia*) *odorata*, 865.
(*Covellia*) *oppositifolia*, 697, 865.
pedunculata, 999.
populifolia, 431.
prolixa, 441.
pseudo palma, 690.
pumila, 989.
racemosa, 335.
religiosa, 238.
rufescens, 973.
salicifolia, 708.
septica, 973.
sp., 269, 425.
sur, 366.
sycomorus, 106.
tinctoria, 441.
toxicaria, 445
tsiela, 515.
vasta, 467.
venosa, 973.
Fiefs, or manor-jurisdictions, 648.
Fig, 2, 72, 238, 334–35, 909.
Filago arvensis, 906.
Gallica, 811.
Germanica, 907.
minima, 904.
Filaria Medinensis, Guinea-worm, 410.
Filbert, 134, 317.
Fimbristylis argentea, 973.
castanea, 1040.
cylindrica, 1016.
dichotoma, 999.
ferruginea, 982.
laxa, 1055.
polytrichoides, 966.
spadicea, 982.
Fine Arts, 115.
Fiorin, 849.
Fire, 862, 954.
Fire-arms, 756, 943, 947.
Fire-ships, invention of, 326.
Fire-worshippers, 562, 566, 651.
Firmiana platanifolia, 632.
Fir-moss, 792.
Fir-tree, 123, 198.
Fish-glue, or isinglass, 274.
Fish-spear, 49.
Five-leaved creeper, 942.
Five Nations, the, federated tribes of North America, 985, 990.
Flacourtia cataphracta, 592.
crenata, 743.
Ramontchi, 692.
sapida, see *F. Ramontchi*.
sepiaria, 725.
sp., 730.
Flagellaria Indica, 443.
Flaveria eupatorioides, 1002.
Flax, 44, 154, 572, 847.
seed, 899.
Flea, 47.
Fleabane, 343, 525.
Flindersia radulifera, 966.
Flint, 133.
Float-grass, 397, 840.
Floating gardens, 799.
Floerkia proserpinacoides, 1052.
Florence cathedral, 762.
Florence, city in Italy, 684, 815.
Florida, discovered, 861; subsequent history, 877, 896–98, 939, 1037, 1062, 1069.
Flourensia thurifera, 1038.
Flower-de-luce, 99.
Flower-of-an-hour, 885.
Flowering fern, 786.
Flowers of Cassia, 776.
Fluggea Comorensis, 381.
Flute, 234, 330, 800.
Fly, biting, 25.
house, 181, 766.
meat, 24.
Fœniculum panmorium, 700.
vulgare, 261, 969.
Fonseca Bay, in Guatimala, 865.
Fontinalis antipyretica, 959.
Fool's parsley, 719.
Fools, feast of, 813.
Foot-ball, game of, 956.
Foo-to-ki, or Fung-thou-ki, Japanese book, 615.
Forbisher's Straits, discovered, 901.
Forestiera acuminata, 1041.
ligustrina, 1044.
porulosa, 1043.
Forget-me-not, 549, 633.
Formica, the ant, 25.
Formosa, island near China, 540, 939, 948, 961, 980.
Forskolea tenacissima, 1000.
Forstera muscifolia, 1037.
Forsteronia difformis, 1039.
Fortifications of the Senecas, 747.
Fortified places, 934, 940, 948, 971.
Fort Nelson, on Hudson's Bay, 990.
Fort Sumter, in Charleston (S. C.) harbor, 1070.
Fortunate Isles, 424.
Fossils, 250.
Fostat, Egyptian city, 603.
Fothergilla alnifolia, 1003.
Four-leaved grass, 829.
Four-o'clock, 820.
Fowl, domestic, 114. 453.
Fox, 136, 452, 758, 789.
Foxglove, 654.
Fragaria Chiloensis, 892.
elatior, 932.
vesca, 378, 451, 873.
Virginiana, 771, 873, 881, 923, 927, 935, 940.
Frame house, first, in Connecticut, 947.
France, and the French, 442, 539, 630, 719, 965, 970–71, 986, 1018, 1021, 1043, 1048, 1061.
Franci, or Franks, 539–40, 811.
Franciscan cathedral, 721.
Monastic Order, 719, 773, 908.
Frangula alnifolia, 1055.
Caroliniana, 1040.
Frankenia hirsuta, 491.
laevis, 898.
pulverulenta, 898.
Frankincense, 110, 346, 411, 630.
Fraxinus Americana, 873, 945.
Caroliniana, 1005.
excelsior, 362, 451.
lentiscifolia, 999.
longicusis, 622.
ornus, see *Ornus*.
platycarpa, 909.
pubescens, 929, 943.
quadrangulata, 881.
rostrata, 460.
sambucifolia, 925, 940, 942.
viridis, 873.
Frazera Carolinensis, 1040.
Freemasons, 1012.
French Republic, first, 1047.
Fringilla Canaria, 891.
domestica, 19.
Fritillaria imperialis, 672.
lanceolata, 605.
meleagris, 891.
persica, 891.
pudica, 1054.

Fritillaria Pyrenaica, 376, 1029.
sp., 419.
Frog, 18, 136, 226.
Fuca, Straits of, 914.
Fuchsia macrostema, 1002.
triphylla, 986.
Fucus acinarius, 904.
articulatus, 978.
buccinalis, 230.
bulbosus, 937.
(*Alaria*) *esculenta*, 417.
filum, 937.
loreus, 906.
lumbricalis, 920.
nodosus, 703.
palmatus, 937.
palmetta, 433.
pilularia, 985.
plocamium, 920.
saccharinus, 937.
siliquosus, 906.
sp., 417.
vesiculosus, 921.
volubilis, 971.
Fuegians, 902.
Fugitive Slave-law, of the U. S. Congress, 1069.
Fuirena glomerata, 999.
squarrosa, 1041.
umbellata, 733.
Fukkara tribe, in Upper Nubia, 1068.
Fulica atra, coot, 453.
Fumaria capreolata, 503.
officinalis, 500.
parviflora, 205.
racemosa, 976.
spicata, 894
vesicaria, 1000.
Fumitory, 500
Funeral papyri, 122.
Fungi, 155, 212, 451.
Fungia, 348.
Funkia Japonica, 688.
Fureræa gigantea, 993.
odorata, 854.
Furs, 758, 794.
Fur-trade in North America, beginning of, 965.
Furze, or *gorse*, 635.
Fusi jama, volcano in Japan, 375.
Fuss-balls, 837.

GALACTIA COMOSA, 1004.
diversifolia, 384.
Elliottii, 1058.
glabella, 1016.
pendula, 983.
volubilis, or *pilosa*, 1011.
Galactites tomentosa, 448.
Galangal, 570.
Galanthus nivalis, 350.
Galardia aristata, 1055.
bicolor, 1040.
Galax aphylla, 1016.
Galbanum officinale, 143, 156.
Galedupa, see *Pongamia*.
Galega Daurica, 1032.
Galenia Africana, 993.
Galeobdolon luteum, 816.
Galeopithecus, or flying-cat, 816.
Galeopsis ladanum, 911.
tetrahit, 685.
Galinsoga parviflora, 1002.
Galipagos tortoise, 775.
Galipea cusparia, 709.
officinalis, 379, 709.
sp., 709.
Galium Anglicum, 824.
aparine, 309, 451, 969.
aristatum, 993.
asprellum, 1044.
Bauhini, 937.
Bermudense, 962.
Bocconi, 993.
boreale, 784.
capillare, 998.
circaezans, 1038.
coronatum, 998.
cruciatum, 637.
cucullaria, 1007.
glaucum, 937.
Graecum, 905.
hispidulum, 1041.
hispidum, 934.
latifolium, see *Bermudense*.
linifolium, 971.
lucidum, 913.
maritimum, 971.
micranthum, 1056.
mollugo, 636.
palustre, 450.
purpureum, 1040.
pusillum, 937.
rotundifolium, 930.
rubrum, 921.
saccharatum, 309.
saxatile, 1004.
sylvaticum, 882.
tinctorium, 748.
tricorne, 826.
trifidum, 1019.
triflorum, 1038.
tuberosum, 419.
uliginosum, 930.
uniflorum, 1041.
verum, 482.
Galleys and ships, 219, 136.
Gall-nuts, 526.
Gallus Bankivus, 114.
Galvanism, or Galvanic electricity, 1046.
Gama grass, 964.
Gamassia esculenta, 695.
Nuttallii, 742, 1057.
Gambia, 267.
Gambier, 445.
Gambling, 642, 955, 1007.
Gamboge, 763, 950.
Ganga-Vansa, or Gangetic dynasty of Orissa, 702, 872.
Garcinia (*Oxycarpus*) *Celebica*, 966.
cornea, 966.
elliptica, 763.
gambogia, or *Roxburghii*, 241.
Malabarica, 974.
mangostana, 642.
pa-rawa, 245.
pedunculata, 743.
pictoria, 606.
purpurea, 483.
Garden balm, 363.
nightshade, 748.
nasturtium, 901.
Gardenia campanulata, 578.
clusiaefolia, 1005.
florida, 526.
gummifera, 738.
lucida, 496.
lutea, 731.
Rothmannia, 766.
Thunbergia, 766.
Gardening, 597.
Garidella nigellastrum, 988.
Garlic, 145, 808, 909.
Garnets, 114.
Gas-lighting, invention of, 1042.
Gasteria carinata, 1006.
Gastridium lendigerum, 496.
Gaulish writing in the Church, 683.
Gauls, or French, 232, 302, 303, 318, 371, 377, 390, 392, 453.
Gaultheria hispidula, 961.
Leschenaultii, 745.
procumbens, 995.
shallon, 581.
Gaura angustifolia, 1041.
biennis, 999.
coccinea, 1057.
Gauze, 129.
Gaylussacia brachycera, 1041.
resinosa, 1036.
Gazania rigens, 999.
Gazelle, 54, 55, 323.
Ge, or Gaia, worship of, 118.
Geastrum rufescens, 989.
Gebel Barkal, 125, 217, 571.
Ellaka, gold mines of, 652, 663.
Gecko, sp., 57.
Gela, city in Sicily, 235, 279.
Gelidium corneum, 610.
Gelsemium sempervirens, 962.
Gems, traffic in, 63.
Gen. Cucurbitac, 668.
General European war against France and Spain, 997.
Genette, 12.
Gen. ignot., 607.
Geniosporum prostratum, 578.
Genipa Americana, 950.
Merianae, 1004.
Genista Anglica, 894.
candicans, 541.
florida, 902.
Germanica, 878.
Hispanica, 937.
horrida, 243.

Genista Lusitanica, 894.
monosperma, 178.
pilosa, 911.
sagittalis, 878.
sylvestris, 931.
tinctoria, 86.
triacanthos, 961.
Gentiana acaulis, 682.
acuta, 1044.
adscendens, 1013.
alba, 1059.
amarella, 653.
Andrewsii, 1050.
angustifolia, 1039.
aquatica, 1013.
asclepiadea, 509.
Bavarica, 884.
campestris, 798.
ciliata, 892.
crinata, 1018.
cruciata, 844.
detonsa, 1025.
dichotoma, 1013.
imbricata, 909.
kurroo, 497.
linearis, 968, 1049.
lutea, 399.
macrophylla, 1013.
montana, 1034.
nivalis, 907.
ochroleuca, 999.
Pannonica, 894.
pneumonanthe, 635.
prostrata, 895.
puberula, 1044.
pumila, 919.
punctata, 894.
purpurea, 891.
Pyrenaica, 1028.
quinqueflora, 1019.
saponaria, 978.
utriculosa, 934.
verna, 894
Gentian, the drug, 399, 497.
Geoffraea spinosa, 950.
Geological science, 250, 269, 965.
Geometry, 65, 66, 231, 312.
Geonoma pinnatifrons, 791.
Geophila reniformis, 659.
Geoponica, Greek agricultural writings, 652.
Georgia, in Asia, history and literature, 391.
Georgia, N. A. State, 1012, 1021.
Gephyræi, Cadmean clan, 167.
Geranium, banded, 998.
Geranium argenteum, 918.
asphodeloides, 372.
Bohemicum, 1011.
Carolinianum, 915, 968.
columbinum, 679.
dissectum, 718.
lucidum, 911.
maculatum, 95[illegible] 968.
molle, 718.
nodosum, 708.
Geranium palustre, 932.
phæum, 907.
pratense, 419, 500.
pusillum, 938.
Pyrenaicum, 719.
radicatum, 913.
reflexum, 889.
robertianum, 158, 969.
rotundifolium, 872.
sanguineum, 834.
Sibericum, 1013.
sp., 604.
spinosum, 1016.
striatum, 945.
sylvaticum, 828.
tuberosum, 196.
Gerardia aphylla, 1057.
auriculata, 1044.
cuneifolia, 1033.
delphinifolia, 1000.
flava, 962.
? fruticosa, 1055.
pedicularia, 962.
purpurea, 962.
quercifolia, 1000.
tenuifolia, 1000.
tuberosa, 986.
setacea, 1039.
Germander, 364.
Germans, 470, 517.
German silver, or pack-fong, 1063.
Germantown, near Philadelphia, 980.
Geropogon glaber, 404.
hirsutus, 934.
Gerris, Hemipterous insects, 394.
Gesneria acaulis, 982.
humilis, &c., 986.
tomentosa, 982.
Getæ, or Dacians, 449.
Geum album, 1030.
anemonoides, 1008.
Atlanticum, 961.
ciliatum, 1055.
coccineum, 440.
geniculatum, 1041.
montanum, 752.
nudum, 1064.
radiatum, 1041.
reptans, 894.
rivale, 626.
triflorum, 1057.
urbanum, 506.
Virginicum, 968, 991.
Ghazni, west of the Indus, 655, 667.
Gibraltar, 999.
Gielhsidi, on the North coast of Africa, 915.
Gilding, process of, 862.
Gillenia stipulacea, 1057.
trifoliata, 962.
Gilliflower, 658.
Gilolo, island in the Malayan Archipelago, 741, 869.
Ginger, 260, 808, 832.
Ginger-grass, 336.
Ginkgo biloba, 797.
Ginseng, 558, 956.
Giraffe, or cameleopard, 535.
Gisekia pharnaceoides, 739.
Gizeh, 67, 951.
Gladiatorial combats, 382, 560.
Gladiolus angustus, 977.
Byzantinus, 951.
communis, 200.
galeatus, 999.
iridifolius, 930.
Lamarckii, 977.
Milleri, 1021.
plicatus, 230.
recurvus, 1021.
strictus, 1021.
tristis, 977.
Glagolitic alphabet of the Slavonians, 639, 678, 843.
Glasgow, city in Scotland, 897.
Glass, manufacture of, 232, 565, 886.
money, 714.
staining of, discovered, 888.
Glaucium citrinum, 648.
luteum, 196.
phoeniceum, 265.
rubrum, 472.
violaceum, 378.
Glaux maritima, 914.
Glechoma hederacea, see *Nepeta*.
Gleditschia monosperma, 1003.
triacanthos, 995.
Glinus dictamnoides, 1000.
lotoides, 972.
Globes, 842.
Globularia alypum, 490.
bisnagarica, 999.
cordifolia, 894.
longifolia, 982.
nudicaulis, 463.
spinosa, 937.
vulgaris, 837.
Gloriosa superba, 617.
Glottidium Floridanum, 1037.
Gloxinia maculata, 1015.
Gluta Travancorica, 744.
Glyceria aquatica, 704.
Canadensis, 1044.
elongata, 1064.
fluitans, 397.
nervata, 1044.
obtusa, 1060.
Glycine bituminosa, 982.
floribunda, see *Wistaria*.
labialis, 692.
ligniosa, 1056.
Glycyrrhiza asperrima, 793.
echinata, 309.
glabra, 305.
glandulifera, 309.
hirsuta, 753.
lepidota, 1057.
Gmelina arborea, 401.
Asiatica, 746.
parviflora, 249.
sp., 588.

Gnaphalium alpinum, 904.
arenarium, 488.
arnicoides, 1067.
auriculatum, 1016.
cæspitosum, 1067.
cephalotes, 1000.
coronatum, 1016.
cylindricum, 1000.
confusum, 419.
cymosum, 1000.
decurrens, see *obtusifolium*.
discolor, 1016.
divaricatum, 977.
divergens, 1000.
Domingense, 915.
fasciculatum, 997.
fastigiatum, 997.
felinum, 1000.
foetidum, 990.
Germanicum, see *Filago*.
grandiflorum, 1016.
helianthemifolium, 990.
imbricatum, 1016.
Indicum, 1000.
lavandulæfolium, 973.
leontopodium, 612.
luteo-album, 894.
maritimum, 1016.
mucronatum, 1016.
multicaule, 1067.
nodiflorum, 1000–3.
notatum, 1016.
nudifolium, 975.
obtusifolium, 1014.
odoratissimum, 1000.
Orientale, 223.
petiolatum, 1016.
polycephalum, 978.
purpureum, 979.
rectum, 930.
rutilans, 1011.
sanguineum, 433.
serratum, 977.
spicatum, 997.
squarrosum, 1000.
stellatum, 1016.
stoechas, 223.
supinum, 994, 1064.
sylvaticum, 898.
teretifolium, 1000.
uliginosum, 874.
undulatum, 1011, 1030.
viravira, 665.
yuccæfolium, 1067.
Gnidia eriocephala, 333.
oppositifolia, 999.
pinifolia, 1014.
sericea, 1016.
simplex, 975.
Gnostic sect of Christians, 525.
Goat, 17, 64, 154, 335, 957.
Goat's beard, 844.
rue, 379.
Goatsucker, the bird, 22, 23.
Gods, the Egyptian, 65.
of Greece, 398.
Gold, 1, 80, 373, 571, 573, 614, 619, 630, 663, 757, 819, 852, 870, 884, 900, 918.
Golden club, 771.
rod, 766, 941, 949.
Gold-purple, manufacture of, 981.
Gomphia angustifolia, 522.
jabotapita, 950.
Zeylonica, 970.
Gomphocarpus arborescens, 1015.
fruticosa, 986.
sp., 731.
Gomphrena globosa, 879.
hispida, 974.
perennis, 1011.
Gonolobus crispiflorus, 986.
hirsutus, 1039.
laevis, 1044.
macrophyllus, 1059.
Good-henry, 343.
Goodyera ? obsoleta, 1016.
pubescans, 967.
repens, 894.
Goose, 28, 776.
Gooseberry, 611, 755, 873, 916.
Goosefoot, 287, 431, 452, 668, 880, 890.
Goose-grass, 300, 636.
Gordonia floribunda, 113.
lasianthus, 777, 929.
obtusa, 744.
pubescens, 1033.
Gorteria personata, 1000.
Gospel, Society for the propagation of, 997, 1001.
Gospels, 639, 665.
Gossypium arboreum, 458, 950.
Brasiliense, 791.
herbaceum, or *Indicum*, 215.
hirsutum, 1000.
Jamaicense, 657.
oligospermum, 657.
Peruvianum, 663.
purpurascens, 657.
religiosum, 624.
vitifolium, see *G. arboreum*.
Gothic Language, 553.
Gothland, 326.
Goths, 536, 538–39, 541, 552, 576–77, 579–86, 584
Guania Domingensis, 999.
Gourd, 137, 413, 462, 553.
Governor's Island, in Boston Harbor, 951.
Gracilaria lichenoides, 524.
tenax, 609.
Graha Munjari, Hindu chronological tables, 687.
Grains of Paradise, 675.
Gram, 332.
Gramin-incert, 418.
Grammar, 119.
Grammarians, 303.
Granada, 842, 850.
Grangea Maderaspatana, 374.
Granite, 76, 84.
Grape, 36, 417, 517, 803, 891.
Grape-hyacinth, 351.
Graphephorum melicoides, 1044.
Grasshopper, 51.
Grass of Parnassus, 834.
Grass-poley, 884.
Gratiola acuminata, see *Herpestis*.
aurea, 1038.
hyssopioides, 999.
linifolia, 960.
officinalis, 825.
Peruviana, 1002.
pilosa, 1039.
quadridentata, 1040.
rotundifolia, 973.
subulata, 1059.
trifida, 973.
Virginica, 1016.
Gravitation, law of, 967, 972.
Great Bear, the constellation, 427.
Canal, 597, 751.
Pyramid, 629, 714.
Year, 1, 69, 122, 526, 965.
Greco-Bactrian kingdom, 408.
Greece, 1062, 1065, 1069.
Greeds, 665.
Greek alphabet, 150, 639, 652.
anthology, 434.
architecture, 237, 241.
art, 153, 320, 325.
Church, 584, 619, 623, 812.
comedy, 236.
fire, 610–11.
history, 105, 237, 619.
language, 101, 704, 756, 834, 847, 854.
temples, 132, 136, 147, 151, 265, 274, 281, 285, 526.
tragedy, 244.
Greeks, 607, 611, 618, 639, 672, 711, 1062, 1065.
Green Island, in the Pacific, 953.
Greenland, 641, 660, 662, 678, 747, 753, 767, 797, 803, 834, 862, 924, 1010.
Greenweed, 86.
Grewia cuneifolia, 380.
elastica, 735.
microcos, 974.
Occidentalis, 993.
oppositifolia, 369.
Orientalis, 974.
? sp., 278, 466.
ta-yau, 244.
tenax, 589.
ulmifolia, 380.
velutina, 721.
Greyhound, 20.
Grielum tenuifolium, 1016.
Griffin, 34.
Grimaldia assurgens, 1000.
Grindelia Siberica, 973.
squarrosa, 1055.
Grislea tomentosa, 412.
Gromwell, 450.
Gronovia scandens, 1009.
Grossularia cynosbati, 926, 940.

Grossularia hirtella, 926, 935, 958.
Groundheele, 722.
Ground ivy, 409.
juniper, 939.
nut, 357, 706.
pine, 549.
Groundsel, 152.
Ground-tax, 119.
Grus, or crane, 52.
Canadensis, 875.
cinerea, 453.
Gruta das mumias, burial cave in Brazil, 791.
Gryllus migratorius, the locust, 51.
Grypi, 202.
Guadalupe Island, 854, 919, 940.
Guaiacum officinale, 829.
sanctum, 1000.
Guam, one of the Ladrone Islands, 981.
Guanches, of the Canaries, 856.
Guano, or bird-manure, 668.
Guarea binectarifera, 333.
trichilioides, 950.
Guatemala, 649, 865–66.
Guatimala, city of, 1032.
Gaultheria (Polyalthia) cerasoides, 725.
Corinti, 711.
longifolia, 690.
lucida, 380.
Guava, 627.
Guayana, 936, 963–64.
Guazuma ulmifolia, 713.
Guelfs and Gibbelines, 708.
Guettarda Matthiola, 972.
speciosa, 876
Guevina avellana, 1002.
Guilandina axillaris, 974.
bonduc, 648.
microphylla, 966.
paniculata, 974.
Guinea, first visited by Europeans, 821.
fowl, 270, 475.
pig, Cavia, 665.
subsequent history, 831, 999.
worm, 410, 431.
Guinea-grains, 675.
grass, 1038.
hen weed, 987.
Guitar, 45.
Guizotia oleifera, see *Verbesina sat.*
Gulo luscus, 948.
Gum-Arabic, 203.
lac, 690.
Gums, traffic in, 63, 769.
Gundelia Tournefortii, 900.
Gunnera perpensa, 999.
scabra, 661, 799.
Gunpowder, 299, 588, 756, 897.
plot in England detected, 924.
Gustavia augusta, 950.
Guzerat, country in Hindustan, 517, 528, 583, 650, 764, 802.
Gwalior, in N. Hindustan, 667, 717.
Gymnadenia conopsea, 672.
flava, 1060.
nivea, 1059.
odoratissima, 878.
tridentata, 1041.
viridis, 903.
Gymnandra borealis, 1008.
Gymnandropogon sp., 733.
Gymnema sylvestre, 694.
Gymnocladus Canadensis, 1020–22.
Gymnopogon brevifolius, 1057.
racemosus, 1041.
Gymnosporia coriacea, 730.
Gymnostichum hystrix, 1016.
Gypsies, a scattered intrusive people, 788.
Gypsophila altissima, 993.
fastigiata, 894.
muralis, 895.
perfoliata, 971.
prostrata, 1000.
repens, 894.
rigida, 912.
saxifraga, 846.
struthium, 504.
Gyrocarpus Asiaticus, 745.

HABEAS CORPUS Act, 976.
Habenaria bifolia, 882.
quinqueseta, 1041.
Habzelia Æthiopica, 323.
Hackberry, 778.
Hackmatack, 810.
Haemanthus coccineus, 898.
multiflorus, 928.
puniceus, 1011.
Hæmatoxylon Campechianum, 919.
Hagenia Abyssinica, 185.
Hail in Egypt, 139.
Halenia corniculata, 1013.
deflexa, 1019.
Halesia diptera, 1024.
tetraptera, 1003.
Haliætus Ponticerianus, 775.
Halifax, city and seaport in Nova Scotia, 1020.
Hallera elliptica, 1016.
lucida, 1016.
Hallia sororia, 997.
Halymenia sp., 849.
Halys, river in Asia Minor, 600.
Hamamelis Japonica, 632.
macrophylla, 1053.
Virginica, 805.
Hamelia chrysantha, 986.
patens, 986
ventricosa, 982.
Hammocks, 852.
Han, seventh Chinese dynasty, 395, 540.
the later, nineteenth Chinese dynasty, 652.
Hanan, battle of, 1059.
Hand-mills, 139.
Hand-tree, of Mexico, 842.
Hang-tcheou, city in China, 689.
Hard fern, 760.
Hardwickia binata, 727.
Hare, 46, 866, 869, 875, 908.
Hare-bell, 828.
Hare's ear, 170.
Hare's foot, 315.
Harp, 3, 36.
Harpoons, 182.
Harrewort, 637.
Harrisonia sp., 730.
Hartwort, 321.
Hasseltia arborea, 445.
Hassocks, 638, 705.
Hastings, in England, 679.
Havana, in Cuba, 1024.
Haverhill, town in Mass., 1001.
Hawaiian Islands, 415, 882.
Hawthorn, 121.
Hayti, 853, 860, 919, 964, 1054.
Hazel, 317, 451, 771.
Hazor, city of, 149.
Heart-clover, 654.
Heath, 258.
Heath-cypress, 886.
Heather, 627.
Heaths, not found in Egypt, 4.
Hebdomon, a palace in Constantinople, 629.
Hebenstreitia ciliata, 1016.
dentata, 993.
Hebrew language, 765, 854, 870.
letters, 541.
lineage, 92.
manuscripts, 684.
Hebron, city in Palestine, 105, 149–50, 179.
Hedeoma hispida, 1057.
pulegioides, 944.
Hedera helix, 218, 419.
umbellata, 208.
Hedge, 121.
Hedgehog, 24, 136, 452.
Hedge-mustard, 371.
Hedwigia balsamifera, 673.
Hedychium coronarium, 445.
Hedyotis Adscensionis, 994.
angustifolia, 1043.
auricularia, 973.
crataegonum, 966.
densiflora, 380.
purpurea, 961.
racemosa, 973.
rotundifolia, 1040.
rupestris, 982.
scandens, 693.
umbellata, 831.
Hedysarum alpinum, 1013.
argenteum, 1013.
bupleurifolium, 997.
caput-galli, 937.
circinnatum, 1007.
cornutum, 996.
coronarium, 894.
flexuosum, 989.
fruticosum, 793.

Hedysarum grandiflorum, 781.
maculatum, 1011.
nummularifolium, 997.
obscurum, 919.
onobrychis, 1029.
radiatum, 998.
saxatile, 913.
sericeum, 1013.
spinosissimum, 1000.
supinum, 950.
tuberosum, see *Pueraria*.
vaginale, 997.
Hegira, era of the, 600, 601.
Heidelberg, city in Germany, 940.
Heimia salicifolia, 829.
Helenium autumnale, 949.
quadridentatum, 1037.
Helianthemum Appeninum, 978.
Canadense, 968.
Carolinianum, 1040.
corymbosum, 1041.
elongatum, 902.
fumana, 922.
glutinosum, 931.
guttatum, 894.
halimifolium, 894, 902.
hirtum, 971.
Italicum, 971.
ledifolium, 902.
libanotis, 902.
marifolium, 1011.
nummularium, 931.
ocymoides, 931.
Oelandicum, 921.
pilosum, 902.
racemosum, 971.
rosmarinifolium, 1056.
squamatum, 993.
surreianum, 1011.
thymifolium, 894.
torosum, 971.
tuberaria, 912.
umbellatum, 921.
vulgare, 296.
Helianthus altissimus, 978.
angustifolius, 1004.
annuus, 749, 914.
atrorubens, 1009.
decapetalus, 968.
divaricatus, 968, 978.
frondosus, 952.
giganteus, 1000.
longifolius, 1053.
mollis, 1044.
multiflorus, 914.
radula, 1033.
strumosus, 965.
tomentosus, 1041.
trachelifolius, 973.
tuberosus, 749, 958.
Helichrysum canescens, 1016.
fœtidum, 1064.
frigidum, 1028.
imbricatum, 977.
paniculatum, 1016.
proliferum, 977.
Helichrysum retortum, 1011.
speciosissimum, 1014.
spinosum, 1016.
virgatum, 977.
Heliconia bihai, 867.
Helicteres isora, 462.
Heliocarpus Americanus, 1015.
Heliophila coronopifolia, 982.
integrifolia, 1000.
Heliopolis, or On, city of, 65.
Heliopsis laevis, 962, 976.
Heliotropium Curassavicum, 978.
eriocarpum, 997.
Europæum, 339.
parviflorum, 973.
Peruvianum, 1024.
supinum, 363.
villosum, 998.
Helix, land-snail, 154.
Helleborine cordigera, 996.
lingua, 494.
oxyglottis, 997.
Helleborus fœtidus, 472.
lividus, 943.
niger, 235.
Orientalis, 153.
viridis, 823.
Hellenes, when first named, 132.
Helminthia echioides, 391.
spinosa, 961.
Helonias angustifolium, 1041.
bullata, 992.
frigida, 797.
(*Chamaelirium*) *luteum*, 1016.
(*Amianthium*) *muscaetoxicum*, 1039.
officinalis, 1036.
Helos and Helots, 268.
Helosciadium nodiflorum, 172.
Hemerocallis flava, 588.
fulva, 688.
Japonica, see *Funkia*.
Hemicarpha subsquarrosa, 1060.
Hemidesmus Indicus, 681.
Hemimeris diffusa, 1000.
montana, 1000.
Hemionitis cordifolia, 698.
lanceolata, 987.
rufa, 983.
Hemlock, 633.
Hemlock-dropwort, 291, 465.
Hemp, 77, 95, 419, 526, 653, 794.
Hemskirk's shoals in the Pacific, 953.
Hen, 917, 953.
Henbane, 449.
Henbit, 822.
Henchera Americana, 959.
Hennia, 189.
Hepatica triloba, 843, 969.
Heptarchy, seven Anglo-Saxon kingdoms, 628.
Heracleum alpinum, 907.
angustifolium, 937
apsynthifolium, 998.
aureum, see *Lophotænia*.
Heracleum Austriacum, 937.
elegans, 952.
lanatum, 641, 935.
panaces, 865.
Pyrenaicum, 998.
Sibericum, 1013.
sphondylium, 158.
tsima, 418.
tuberosum, 669.
Heraclidæ, 166, 180.
Heraldry, 716.
Herbaria, 753, 941.
Herculaneum, Pompeii, 498, 513.
Hercules, or Samson, worship of, 166, 179.
Herds-grass, or *Timothy*, 941.
Hereditary nobility, 751.
Heritiera littoralis, 974.
minor, 113.
Hermannia alnifolia, 993.
althaeifolia, 997.
lavandulifolia, 1011.
scabra, 990.
Hermas depauperata, 1016.
gigantea, 230.
Hermetic writings, 544.
Herminiera elaphroxylon, 425.
Herminium monorchis, 892.
Hermits, 539, 544, 613, 683, 758, 779.
Hernandia ovigera, 966.
sonora, 651.
Herneria stellata, 1002.
Herniaria alpina, 937.
fruticosa, 366.
glabra, 366.
hirsuta, 930.
payco, 662.
Heroic Age, 103.
Heron, 41, 136.
Herpestis amplexicaulis, 1041.
Monnieri, 975.
nigrescens, 1040.
rotundifolia, 1044.
Herring, 154, 250, 741.
Hervey Islands in the Pacific, 680.
Hesiodic poems, 196.
Hesperis acris, 352.
Africana, 972.
alyssoides, 971.
cretacea, 1007.
inodora, 921.
lacera, 991.
matronalis, 352.
pinnatifida, 998.
ramosissima, 850.
Tartarica, 1029.
tristis, 921.
Heteranthera acuta, 1044.
limosa, 982.
Heteropogon contortus, 999.
Heterotheca scabra, 995.
Heuchera caulescens, 1053.
cylindrica, 581.
hispida, 1055.
pubescens, 1055.
villosa, 1041.

Heudelotia Africana, 545.
Hevea Guianensis, 1018.
Hexalobus Senegalensis, 730.
Hexameter verse, 132.
Hia, third Chinese dynasty, 84, 99.
Hiao-king, Confucian Scripture, 767.
Hibiscus aculeatus, 1040.
Aethiopicus, 1000.
cannabinus, 691.
clypeatus, 983.
coccineus, 1040.
esculentus, 274.
ficulneus, 1011.
furcatus, 726.
grandiflorus, 1043.
hastatus, 1000.
(*Abelmoschus*) *heterotrichus*, 269.
hirtus, 1000.
incanus, 1033.
lampas, 990.
(*Abelmoschus*) *manihot*, 591.
militaris, 1039.
(*Abelmoschus*) *moschatus*, 846.
moscheutos, 905.
mutabilis, 553.
palustris, 905.
rosa-sinensis, 675.
sabdariffa, 797, 921.
surattensis, 974.
Syriacus, 371.
trilobus, 987.
trionum, 885.
tortuosus, 691.
unilateralis, 987.
vitifolius, 974.
Hickories, 768.
Hieracium alpinum, 911.
amplexicaule, 919.
aurantiacum, 934.
aureum, 919.
auricula, 824.
bracteolatum, 1003.
bulbosum, 361.
Canadense, 1038.
cerinthoides, 919.
chondrilloides, 937.
crinitum, 1003.
croceum, 1013.
cymosum, 911.
dubium, 910.
glutinosum, 937.
Gmelini, 1013.
grandiflorum, 937.
Gronovii, 1016.
lyratum, 1013.
molle, 1033.
murorum, 911.
nudicaule, 1044.
paludosum, 911.
paniculatum, 1019.
pilosella, 751.
porrifolium, 919.
pracaltum, 937.
praemorsum, 911.
Hieracium prunellaefolium, &c., 994.
pulmonarium, 635.
Pyrenaicum, 991.
Sabaudum, 911.
scabrum, 1041.
Sibericum, 781.
staticaefolium, 931.
sylvaticum, 913.
umbellatum, 897.
venosum, 962.
verbascifolium, 919.
villosum, 894.
Hieratic writing, 71, 80.
Hierochloe alpina, 1055.
Borealis, 959.
Hieroglyphic characters, 65, 388, 1063.
Hilsenbergia cannabina, 383.
Himalayan horse-chestnut, 735.
Himyarite dynasty in Yemen, 407.
Himyarites, 573.
Himyaritic monuments, 468.
Hindu poets, 583.
Hindustan, 66, 74, 84, 86, 252, 254, 258, 465, 483, 503, 609, 615, 664, 667, 715, 843, 857.
Hippia frutescens, 993.
Hippocratea volubilis, 986.
Hippocrepis comosa, 850.
multisiliquosa, 894.
unisiliquosa, 889.
Hippomane mancinella, 854.
Hippophae rhamnoides, 703.
Hippopotamus, 40, 267.
Hippuris vulgaris, 501.
Hiptage madablota, 575.
Hirundo riparia, bank swallow, 17.
Hispaniola, island in the W. I., 852.
Hoango-ho River in China, 789, 952.
Hoarwort, 811.
Hochelaga, aboriginal town in Canada, 881.
Hog, 953, 981.
Hog-plum, 371, 699.
Hoitzia coccinea, 797.
Holcus atropurpureus, 1064.
lanatus, 655, 969.
mollis, 1005.
? striatus, 1016.
Holigarna longifolia, 522.
Holland, in Europe, 972, 1038.
Hollihock, 187, 308.
Holly, 246.
Holly-fern, 496.
Holostemma Rheedii, 728.
Holosteum cordatum, 991.
umbellatum, 913.
Homalomena aromatica, 579.
Homerid hymns, 199, 218.
Ho-nan-fou, city in China, 476.
Honduras, 859, 867.
Honey, 299, 325, 642, 852.
bee, 106.
dew, 529.
guide, the bird, 877.
Hong-fan, Chin. phil. treat., 84, 159.
Hong-kong, island of, 1068.
Hood's Island, one of the Marquesas, 1034.
Hoopoe, bird, 49, 59.
Hop, 620.
Hop-clover, 654, 849.
hornbeam, 214.
Hopea odorata, 240.
parviflora, 438.
sp., 445.
Wightiana, 438.
Hordeum bulbosum, 349.
hystrix, 960.
jubatum, 419, 583, 940.
maritimum, 978.
murinum, 207.
pratense, 918.
vulgare, 34, 154, 167, 451.
Horehound, 206, 316.
Hornbeam, 388.
Hornbill, the bird, 322.
Horse, 103, 452, 482, 531, 571, 869.
Horsechestnut, 582, 892.
Horse-flower, 635.
Horse-mint, 263, 962.
Horseradish, 298, 432.
Horseshoe vetch, 850.
Horse-shoe crab, see Limulus.
Horsetail, 297, 496.
Hosackia sericea, 1057.
Hospitals, 757.
Hosta coerulea, 986.
Hot-house, 752.
Hottentots, 229, 269, 845, 985.
Hottonia inflata, 1038.
palustris, 889.
Hound's-tongue, 315.
Hour-glasses, 786.
House fly, 181.
lizard, 57.
Houseleek, 293, 439.
Houstonia coerulea, 961.
tenella, 1053.
serpyllifolia, 1041.
Houttuynia cordata, 976.
Howenia dulcis, 622.
Hoya pendula, 728.
viridiflora, 523.
Huacas, of Peru, 662.
Huancabamba on the Peruvian Andes, 801.
Huckleberry, 362, 779, 806.
Hudsonia ericoides, 958.
tomentosa, 1038.
Hudson-Bay Company formed, 965.
Hudson's Bay, 898, 936, 947.
River, 928, 940.
Straits, 892, 929, 936.
Huehuetlapallan, ancient country of the Toltecs, 582.
Hugonia mystax, 744.
Huguenots, or Protestants, 892, 897.
Human sacrifices, 105, 128.
Humirium balsamiferum, 673.
floribundum, 673.

Humulus Japonica, 419.
lupulus, 620.
Hungarian balsam, 455.
Hungarians, 553, 646, 664.
Hungary, 733, 787.
Huns, 388, 395, 553, 566, 572, 600.
Hunting-scenes, 762.
Hura crepitans, 915.
Hutchinsia petræa, 934.
procumbens, 973.
Hyacinthus ciliatus, 921.
(*Agraphis*) *nutans*, 828.
Orientalis, 460.
Romanus, 460.
serotinus, 921.
Hyæna, 12, 49, 61.
the spotted, 424.
Hyantheia, or Oeantheia, city in Greece, 148.
Hydnocarpus inebrians, 335.
odoratus, 577.
Hydrangea ajisai, 632.
hortensis, 989.
nivea, 1040.
paniculata, 592.
quercifolia, 1033.
vulgaris, 1016.
Hydrastis Canadensis, 1021.
Hydrocharis morsus-ranae, 889.
(*Limnobium*) *spongia*, 1050.
Hydrocotyle Americana, 968.
Asiatica, 700.
? citriodora, 1002.
interrupta, 1059.
natans, 934.
ranunculoides, 1037.
repanda, 1040.
umbellata, 950.
vulgaris, 450.
Hydrogeton fenestralis, 706.
Hydrolea Caroliniana, 1040.
Zeylanica, 682.
Hydrophobia, 391.
Hydrophyllum appendiculatum, 1044.
Canadense, 1025.
Virginicum, 979.
Hydropyrum latifolium, 500.
Hygrophila ringens, 974.
spinosa, 731–32.
Hyksos, 85, 94, 103, 111, 132.
Hymenæa courbaril, 901.
verrucosa, 384.
Hymenocardia Heudelotii, 732.
Hymenodictyon excelsum, 578.
sp., 731.
Hymenopappus scabiosæus, 1041.
tenuifolius, 1057.
Hymenophyllum hirsutum, &c., 987.
Tunbrigense, 1000.
Hymns, 152, 154, 166, 218, 831.
Hyobanche sanguinea, 997.
Hyoscyamus albus, 159.
aureus, 480.
insanus, 736.
muticus, 534.
niger, 449. 969.
Hyoscyamus Orientalis, 998.
pusillus, 671.
reticulatus, 491.
Scopolia, 889.
Hyoseris foetida, 934.
hedypnois, 919.
lucida, 361.
minima, 507.
radiata, 937.
scabra, 507.
Hypaelytrum nemorum, 973.
Hypecoum erectum, 1013, 1032.
pendulum, 898.
procumbens, 484.
Hyperboreans, 154, 202.
Hypericaceæ, not found in Egypt, 3
Hypericum Aegyptiacum, 1015.
androsæmum, see *Androsæmum*.
angulosum, 1041.
aureum, 1033.
Balearicum, 921.
barbatum, 403.
Canadense, 1019.
calycinum, 927.
ciliatum, 998.
coris, 308.
corymbosum, 777, 968.
crispum, 288.
dolabriforme, 1044.
ellipticum, 1063.
elodes, 904.
ericoides, 1000.
fasciculatum, 1049.
floribundum, 993.
galioides, 1049.
hircinum, 434.
hirsutum, 883.
humifusum, 878.
Kalmianum, 1019.
lanuginosum, 162.
linariaefolium, 961.
monogynum, 1024.
montanum, 883.
nudiflorum, 1044.
Oakesii, 1062
Orientale, 996.
Olympicum, 978.
perfoliatum, 469.
perforatum, 394, 969.
prolificum, 1016.
pulchrum, 878.
pyramidatum, 995.
quadrangulare, 486.
quinquenervium, 962.
Richeri, 919.
serpyllifolium, 904.
simplex, 1000.
sphærocarpon, 1044.
tomentosum, 961.
villosum, 992.
Hyphæne crinita, 61.
nov. sp., 126.
schatan, 385.
Hypnum crista-castrensis, 959.
recognitum, 959.
Hypochœris glabra, 911.
maculata, 878.
minima, 934.
radicata, 901.
Sicula, 1003.
Hypoxis angustifolia, 1067.
decumbens, 1023.
erecta, 992.
juncea, 1046.
stellata, 947.
Hyptis atrorubens, 1054.
brevipes, 1054.
capitata, 983.
pectinata, 1023.
radiata, 984.
spicata, 1054.
spicigera, 732.
suaveolens, 1001.
Hyrax Syriacus, 144.
Hyrcania, along the Southern shores of the Caspian, 326.
Hyssopus foeniculum, 1057.
nepetoides, 979.
officinalis, 633, 935.
scrophulariaefolius, 991.
Hystrix, the Porcupine, 70.
Canadensis, 875.

IAXARTES, river flowing into Lake Aral, 326.
Iberis amara, 501.
Gibraltarica, 1011.
linifolia, 1004.
odorata, 921.
pinnata, 898.
rotundifolia, 971.
saxatilis, 919.
semperflorens, 293.
sempervirens, 293.
umbellata, 888.
Ibis cristata, 60.
religiosa, 29–30.
Icebergs, 325, 977–78.
Ice-houses, 391.
plant, 1026.
trade, beginning of, 1066.
Iceland, 613, 638, 640, 662, 753, 794, 841.
Ichneumon, 12, 48.
Ichnocarpus frutescens, 413.
Icica aracouchini, 673.
caranna, 673.
? copallina, 919.
heptaphylla, 673.
Indica, 734.
tacamahaca, 673.
Ignatia amara, see *Strychnos*.
Ignatius beans, 671.
Ikhtiarat Buddée, Persian work on medicine, 798.
Ilex aquifolium, 246, 451.
cassine, 777.
crenata, 622.
crocea, 766.
cuneifolia, 986.

Ilex dahoon, 1039.
decidua, 1039.
integra, 631.
latifolia, 631.
laxiflora, 1039.
myrtifolia, 1039.
opaca, 896, 909.
Paraguayensis, 683.
vomitoria, see *I. cassine*.
Illicium anisatum, 618.
Floridanum, 1021.
parviflorum, 1033.
Philippinarum, 921.
religiosum, 618.
Illinois, N. American State, 1061.
River, 1021.
Illyria, North and West of Greece, 318, 389, 456, 553.
Ilysanthes gratioloides, 1016.
Image-symbols, 128, 561, 603, 615, 618, 620–21, 623, 626, 869, 897.
Imamate, 607.
Immaculate Conception, doctrine of, 858.
Impalement, punishment of, 198.
Impatiens balsamina, 556.
biflora, 803.
cornuta, 970.
fasciculata, 974.
latifolia, 974.
noli-tangere, 479.
pallida, 1055.
parviflora, 1064.
(*Hydrocera*) *triflora*, 689.
Imperata cylindrica, 287.
pedicillata, 419.
Imperatoria angustifolia, 910.
ostruthium, 760.
verticillaris, 980.
Incas, of Peru, 662, 667.
Inclinometer, or dipping needle, 901.
Independence, the, of the American colonies acknowledged by England, 1038.
India ink, 458.
India, see Hindustan.
India-rubber fig-tree, 857.
Indian-shot, 430.
tobacco, 1015.
Indiana, N. American State, 1060.
Indictions, in Chronology, 546.
Indigo, 443, 532, 583, 588, 1019, 1048.
Indigofera anil, 1019.
argentea, 532.
aspalathoides, 692.
Caroliniana, 1040.
coerulea, 1048.
cytisoides, 1000.
depressa, 977.
enneaphylla, 692.
glabra, 974.
hedysaroides, 974.
hirsuta, 970.
hirta, 380.
Indigofera lotoides, 993.
pauciflora, 722.
psoraleoides, 1000.
sp., 532–33, 590.
tinctoria, 443, 1019.
Indulgences, Catholic, 711, 720, 773, 863.
Indus, the river, 328, 330.
Inga bigemina, 331.
bung-ma-zai, 240.
cinerea, 975.
circinalis, &c., 987.
dulcis, 650.
ingoides, 1002.
marginata, 1000.
mellifera, 390.
microphylla, 1000.
nodosa, 1000.
saman, 650.
sassa, 598.
Sinemariensis, see *Prosopis dulcis*.
unguis-cati, 649.
vera, 983.
Xylocarpa, 775.
Ink, sympathetic, 568.
Inocarpus edulis, 437, 917.
Inoculation for small-pox, 1006, 1021.
Inquisition, 719, 723, 765, 863, 887.
Inscriptions, Arabic, 652, 663, 679, 721–22, 741, 774, 779, 784.
Armenian, 710, 902.
Assyrian, 195, 233, 255.
Canara, 715.
Chinese, 195, 209, 621, 623.
Coptic, 534, 566, 652.
Etruscan, 174.
Greek, 163–64, 200, 228, 236, 241, 268, 312, 318, 326, 383, 388, 391, 400, 441, 443, 478, 481, 498, 527–28, 534, 538, 547–48, 631.
Hebrew, 302, 402.
Jain, 667, 791.
Javan, 626, 647, 651, 760, 762.
Kufic, 629, 641, 665, 779.
Latin, 372, 456, 477, 679.
Mongol, 1031.
Pali, 383, 389, 391, 398.
Persian, 616.
Sinaitic, 410, 441.
Tartar, 1031.
Insubria, battle of, 867.
Insurrections, 1015, 1048.
Interest, reduction of, on English funds, 1020.
"Interim book," granted to the Protestants by Charles V., 886.
Interpreters, 102.
Intsia Madagascarensis, 707.
Inula aestuans, 987.
aromatica, 1000.
bifrons, 994.
Britannica, 584.
bubonium, 508.
Inula conyza, 220.
conyzoides, 998.
crispa, 997.
crithmifolia, 26.
ensifolia, 921.
foetida, 972.
Germanica, 878.
graveolens, 254.
helenium, 461, 969.
hirta, 1029.
Indica, 970.
Japonica, 989.
montana, 898.
oculus Christi, 824.
odora, see *Pulicaria*.
pinifolia, 975.
primulaefolia, 987.
provincialis, 937.
satureioides, 1012.
saxatilis, 912.
spiraeaefolia, 931.
squarrosa, 1000.
tuberosa, 894, 900.
vaillanti, 1028.
viscosa, 254.
Ionian Greeks, 192.
Ionic Migration, 192.
Ionidium brevicaule, 783.
ipecachuanha, 674.
maytensillo, 661.
microphyllum, 688.
poaya, 783.
suffruticosum, 725.
urticaefolium, 783.
Iowa, North American State, 1069.
Ipecacuanha, 659.
Ipomœa arachnoidea, 381.
bona-nox, see *Calonyction*.
campanulata, 973.
Carolina, 1005.
ciliolata, 1044.
commutata, 1011.
coptica, 938.
digitata, 986.
discolor, 932.
dissecta, 1031.
gemella, 746.
glaucifolia, 1011.
grandiflora, 973.
hederaefolia, 986.
jalapa, 649.
ligulata, 381.
lacunosa, 958.
macropoda, 381.
mammosa, 966.
Michauxii, 1021.
nil, 628; and *hederacea*, see *Pharbitis*.
obscura, 972.
operculata, 784.
palmata, 936.
pandurata, 770.
parviflora, 982.
pes-capræ, 429, 973, 994.
pes-tigridis, 974.
platanifolia, 891.

Ipomæa purga, 650.
repens, 973.
reptans, 703.
sagittata, 999.
solanifolia, 986.
see *Quamoclit*.
tamnifolia, 1011.
tridentata, 973.
tuberosa, 999.
umbellata, 986.
violacea, 982.
Ipomopsis aggregata, 1054.
elegans, 1011.
Ira, city in Greece, 222.
Irak, 583, 612.
Ireland, 167, 536, 566, 708, 713, 952.
Iresine aggregata, 1051.
celosioides, 984.
elatior, 983.
vermicularis, 950–51.
Iris aphylla, 921.
biflora, 932.
cristata, 992.
cuprea, 1056.
dichotoma, 793.
Florentina, 290.
fœtidissima, 351.
graminea, 905.
humilis, 1013.
lacustris, 1058.
Lusitanica, 960.
lutescens, 921.
Mauritanica, 921.
ochroleuca, 1021.
pseudacorus, 255, 450.
pumila, 921, 1029.
salsa, 1014.
sambucina, 99.
scorpioides, 901.
Siberica, 419, 785.
sisyrinchium, 69.
spuria, 921.
susiana, 921.
Swertii, 930.
tectorum, 632.
tuberosa, 551.
variegata, 921.
ventricosa, 1032.
verna, 992.
versicolor, 958, 968.
Virginica, 1011.
xiphioides, 932.
xiphium, 932.
Irish language, 573.
Iron, 120, 232, 252, 582.
Age, 180, 186, 211, 232.
Iron-clad ships, 932, 1071.
Iron-wood, 775.
Iroquois, N. A. tribe of Indians, 665, 927.
Irrigation, 668, 709.
Isabella, in Hayti, first permanent settlement in America, 855.
Isatis Armeniaca, 1007.
Orientalis, 313.
Ischæmum muticum, 973.
Ischia, island in the Bay of Naples, 765.
Ishmaelite Arabs, 118, 448.
Isis, worship of, 410, 538, 584.
Isle of Man, between England and Ireland, 1026.
Ismene amancaes, 711.
Isnardia palustris, 962.
Isochilus linearis, 987.
Isoetes lacustris, 837.
riparia, 1068.
Isolepis Antarctica, 1004.
sp., 500.
squarrosa, 973.
supina, 1004.
tristachya, 970.
Isonandra acuminata, 745.
Isopyrum aquilegioides, 937.
fumarioides, 1013.
thalictroides, 907.
Isotoma longiflora, 853.
Issedones, 202.
Issikul, lake in Central Asia, 792.
Isthmian games, 396, 551.
Istrus, city at the mouth of the Danube, 227.
Italy, 132, 646, 655, 667.
Itch-trefoil, 901.
Itea Virginica, 1016.
Itzaes, Central American tribe, 799.
Iva axillaris, 1057.
frutescens, 979.
imbricata, 1040.
Ivory, 80, 630.
Ivory, vegetable, 717.
Ivy, 218, 804.
Ixia bulbifera, 1021.
bulbocodium, 901.
corymbosa, 999.
cœlestina, 1033.
crocata, 986.
erecta, 999.
flexuosa, 1021.
grandiflora, 1021.
Ixora alba, 973.
bandhuca, 593.
coccinea, 609.
manila, 788.
parviflora, 712.

Jacaranda Brasiliensis, 950.
Caroliniana, 1005.
ovalifolia, 876.
Jackal, 16.
Jack fruit, 330.
Jack-in-a-box tree, 651.
Jacobea lily, 915.
Jacobites, 567, 656.
Jacob's ladder, 906.
Jacquinia armillaris, 982.
rusciflora, 1011.
Jagannath, a form of Vishnu worship, 546, 569, 714, 716, 787, 897, 1007, 1013, 1053.
Jamaica, island in the West Indies, 855, 860, 959, 990.
Jambosa Malaccensis, 416, 481, 917.
vulgaris, 699.
James's Bay, in Hudson's Sea, 947.
Jamestown, in Virginia, first permanent English settlement in America, 926, 928–29.
Jamestown weed, 622.
Jang'gala, Javan seat of government, 648, 651, 664.
Janipha Loeflingii, 950.
Jan Mayen Island, 927.
Janus, temple of, in Rome, 389, 457, 461, 499.
Japan and the Japanese, 98, 146, 225, 591, 607, 623, 822, 882, 891, 930, 934, 939, 1070.
Japanese paintings, 905.
poetry, 646–47.
Jasione montana, 490.
Jasminum angustifolium, 559.
arborescens, 763.
auriculatum, 617.
fruticans, 606.
grandiflorum, see *officinale*.
hirsutum, 702.
odoratissimum, 959.
officinale, 535.
præcox, 419.
revolutum, 537.
sambac, see *Mogorium*.
Jatropha curcas, 868.
glandulosa, 721.
glauca, 721.
herbacea, 1012.
multifida, 901.
urens, see *Cnidoscolus*.
Java almond, 670.
Java, island in the Malayan Archipelago, 444, 543, 546, 554, 571, 775, 855.
Jaxartes River, see Iaxartes.
Jeffersonia diphylla, 1016.
Jerboa, 31.
Jericho, city of, 149, 536.
Jerusalem, 111, 125, 132, 179, 186, 199, 232, 239, 251, 268, 276, 399, 407, 447, 456, 499, 526, 548, 551, 555, 566, 598, 602, 624, 684, 686, 882.
Jesuits, Monastic Order, 880, 908, 916, 930, 936, 957, 999, 1026–27.
Jesumi, inquisitorial tribunal in Japan, 964.
Jet, the mineral, 536, 619.
Jew-bush, or *slipper-plant*, 985.
Jewish literature, 568.
Jews, 119, 121, 126, 165, 396, 400, 407, 447, 456, 475, 520, 527, 534, 546, 548–9, 570, 591, 597, 599, 628, 711, 723, 760, 850.
Jones's Sound, 933.
Jonesia asoca, 383.
Jonquill, 672.
Jordan River, 150.

Jorullo, a new mountain in Mexico, 1023.
Juan de Nova Island, discovered, 858.
Jubilæum, Romish rite, 764.
Judas tree, 356.
Judicial decisions, 221.
Juggernaut, Hindu idol, see Jagannath.
Juglans arguta, 476.
baccata, 983.
cinerea, 807, 874, 875, 927, 940, 946, 957.
nesiko, 417.
nigra, 778, 869, 893, 909, 929, 957.
regia, 188.
Jujube, 104, 222.
Julian Period, 1.
Year, 65.
Juncus acuminatus, 1044.
acutus, 255.
aquaticus, 903.
arcticus, 1012.
articulatus, 858.
biglumis, 1020.
Bottnicus, 1013.
bufonius, 890.
bulbosus, 836.
effusus, 400.
ericetorum, 932.
filiformis, 940, 1064.
Fontanesii, 1050.
Gerardi, 1024.
glaucus, 904.
Jacquini, 997.
lampocarpus, 978.
marginatus, 1044.
militaris, 1063.
Muhlenbergii, 1060.
nodosus, 979, 999.
odoratus, see *Cymbopogon*.
polycephalus, 992.
pygmæus, 1031.
repens, 1041.
setaceus, 1052.
spinosus, 19.
squarrosus, 838.
subverticillatus, 978.
sylvaticus, 913, 937.
tenageia, 1006.
tenuis, 810.
trifidus, 892.
triglumis, 912.
uliginosus, 896.
June-berry, 804.
Jungermannia asplenioides, 959.
Juniperus Barbadensis, 1000.
Bermudiana, 915, 982.
communis, 136, 167, 451.
drupacea, 230.
excelsa, 502.
Japonica, 631.
macrocarpa, 1000.
nana, 287.
oxycedrus, 128.
Juniperus Phœnicea, 129.
prostrata, 939.
rufescens, 287.
sabina, 454.
thurifera, 867.
Virginiana, 772, 869, 908, 923.
Juno, or Hēra, worship of, 105, 121, 180, 285.
Juno, the planet, 1052.
Jupiter, Heathen deity, 128, 130, 440, 526, 540.
the planet, 625, 928, 971.
Jussiæa acuminata, 1038.
decurrens, 1040.
diffusa, see *J. repens*.
erecta, 983.
grandiflora, 1041.
hirta, 986.
octovalvis, 986.
Peruviana, 1002.
repens, 374.
subacaulis, 1054.
villosa, 737.
Justicia betonica, 952.
ecbolium, 419.
echioides, 973.
humilis, 1040.
hyssopifolia, 999.
Moretiana, 970.
(*Rhinacanthus*) *nasuta*, 594.
nitida, 982.
(*Andrographis*) *paniculata*, 956.
pedunculosa, 999.
(*Graptophyllum*) *picta*, 147.
(*Rostellaria*) *procumbens*. 746.
(*Hypoestis*) *purpurea*, 300.
(*Rungia*) *repens*, 729
sericea, 798.
(*Hypoestis*) *serpens*, 1067.
stricta, 999.
(*Adhatoda*) *Tranquebarensis*, 746.
(*Adhatoda*) *vasica*, 387.
(*Gendarussa*) *vulgaris*, 696.
Justinian codex of laws, 576.
Jute fibre, 646, 764.

KADSURA JAPONICA, 632.
Kæmpferia galanga, 833.
pandurata, 966.
rotunda, 833.
Kai-foung, city in China, 952.
Kailas, monolithic temple in Hindustan, 515.
Kalanchoe Ægyptiaca, 851.
Kali-yug, era of the Hindus, 66, 124.
Kalmia angustifolia, 968.
cuneata, 1041.
glauca, 1036.
hirsuta, 1033.
latifolia, 928, 958, 992.
Kaloponax ricinifolia, 622.
Kamas root, see *Gamassia*.
Kamila dye, 414.
Kamtchatka, 986.
Kamtchatkans, 1008.
Kandahar, city in Sind, 775.
Kandelia Rheedii, 578.
Kansas, N. American State, 1070.
Karacoroum, in Tartary, 736, 742.
Karagué, country in C. Africa, 730.
Karaites, a Jewish sect, 620.
Karaitic literature, 620.
Karen tribes, in Burmah, 588, 757, 762.
Karnak, 84, 124, 185.
Karunj oil, 590.
Kava drink, 438.
Kawi, ancient Javan character, 626, 647, 651.
Keelwah, city in East Africa, 658, 994.
Kelp, 319, 417.
Kennebec River, 923, 926.
Kennedia prostrata, 985.
Kentucky, State in N. America, 1033, 1046.
Kermes dye, 86.
Kerria Japonica, 688.
Keys, invention of, 198.
Khalifate, Muslim Empire, 656.
Kharesmians, 735.
Khawarij, 607.
Khaya Senegalensis, 545.
Kja-che-mi-lo (Cashmere), 615.
Kiai tree, 266.
Kiakhta, city in East Siberia, 1008.
Kigelia pinnata, 466.
Kiggelaria Africana, 1015.
Kilmungaro, mountain in East Africa, 527.
Kin, dynasty of Northern China, 707, 723.
King-bird, 954.
King of bitters, 957.
King's Chapel, in Boston, 985.
Kino gum, 421, 643, 825.
Kipchak Empire, 751.
Kirghiz-Kazaks, a Tartar tribe, 1010.
Kite, the bird, 136, 775.
Kleinhovia hospita, 743.
Kleinia anteuphorbium, see *Cacalia*.
Knappia agrostoidea, 912.
Knapweed, 703.
Knautia Propontica, 1007.
Knights of Malta, 686.
of St. John, Monastic Order, 686, 772, 870.
Templars, 687, 772–73.
Knight's wort, 558.
Knot-grass, 393, 419.
Knowltonia gracilis, 1016.
hirsuta, 1016.
vesicatoria, 1000.
Kochia hyssopifolia, 1007.
prostrata, 1007.
scoparia, 511.
sedoides, 1007.
Koeleria cristata, 959.
phleoides, 971.

Koenigia Islandica, 1028.
Ko-kin, Japanese poem, 646.
Kokum oil, 483.
Kongara language, of Dar Fur, 1068.
Koobokusi, Japanese temple, 615.
Koodoo antelope, 818.
Koran, 525, 599.
Koripan, Javan seat of gov't, 664.
Korusco, in Egypt, 1068.
Ko-si-ki, history of Japan, 615.
Kosteletzkya Virginica, 989.
Ko-teou, or Ko-tow, Chinese form of saluting the Emperor, 624.
Koua symbols, forming the Y-king, 155.
Kousouri, village of the Ainos, 1006.
Krafto (Saghalien) island, north of Japan, 1070.
Krameria triandra, 799.
Krigia Virginica, 968, 1016.
Kris, or short sword, 147.
Kshattriya, military caste of the Hindus, 118.
Kuen-lun mountains, 1070.
Kufic inscriptions, 629, 779.
letters, 860.
Kuhnia eupatorioides, 992.
Kunasiri, island East of Yeso, 953.
Kurile Islands, 971, 1004, 1008, 1070.
Kusa grass, 238.
Kutab Minar, round tower near Delhi, 716.
Kuteera gum, 254.
Kydia calycina, 521.
Kyllingia macrocephala, 733.
monocephala, 973.
odorata, 950.
pumila, 430, 1041.
triceps, 973.
umbellata, 973.

LABLAB VULGARIS, 614.
Labong, city in Burmah, 588.
Labrador, 662, 858, 1009.
Laburnum, 355.
Labyrinth, 90, 796, 1068.
Lac dye, 305, 691.
Lace-bark, 983.
Lace tree, 983.
Lachenalia orchioides, 977.
pallida, 932.
tricolor, 1009.
Lachnanthes tinctoria, 1040.
Lacquer, 634.
Lactuca augustana, 894.
Canadensis, 962.
coriacea, 253.
Cretica, 998.
elongata, see *L. Canadensis*.
graminifolia, 1041.
quercina, 889.
saligna, 884.
Lactuca scariola (*sativa*), 222, 969.
sonchifolia, 1008.
virosa, 252.
Ladanum gum, 118.
Ladrone Islands, 865.
Lady fern, 914.
Lady's tresses, 848.
Lagenaria, the *gourd*, 137, 878, 926.
vulgaris, 876, 917, 929.
Lagerstræmia glomerata, 278.
hirsuta, 974.
Indica, 756.
kha-moung-phyu, 278.
kleeza, 240.
microcarpa, 728.
parviflora, 737.
reginæ, 692.
Lagetta lintearia, 983.
Lagoecia cuminoides, 158.
Lagurus ovatus, 163.
Lahaya corymbosa, 993.
spadicea, 970.
Lahore, city on the upper Indus, 658, 676, 684, 775.
Lake Champlain, 927.
Huron, 933.
Moeris, 1068.
St. John, discovered, 958.
Superior, 926, 939.
temples, 562.
villages, 154, 252, 450, 1069.
Lama, or Peruvian camel, 665.
Lamaism, religion of Thibet and Tartary, 751, 758, 767, 791.
La Matanza, an island, 924.
Laminaria Blosevillii, 319.
bulbosa, 319.
saccharina, 368.
Lamium album, 635.
amplexicaule, 419, 822.
flexuosum, 1058.
garganicum, 1004.
incisum, 912.
laevigatum, 870.
maculatum, 509.
multifidum, 1001.
orvala, 1004.
purpureum, 510.
rugosum, 993.
Lanaria plumosa, 906.
Lancaster Sound, 933.
Lancewood, 383, 600.
Land-crocodile, or Monitor, 12, 38.
surveying, 66, 233.
tortoises, 957.
Landolphia florida, 731.
Langivach, on the Lower Obi, 781.
Language, 13, 74, 101, 821.
Burman, 322.
Lydian, 148.
Peruvian, ancient, 665.
Lantana aculeata, 1000.
camara, 820.
involucrata, 1000.
melissaefolia, 1011.
mista, 993.
Lantana odorata, 986.
stricta, 982.
trifolia, 986.
Lanuvium, city in Latium, 213.
Laocoon group, Greek sculpture, 325.
Lapathum sp., 817.
Lapis lazuli, 106.
Laplanders, 81.
La Plata River, 868.
Lappa edulis, 418.
major, see *Arctium*.
Lappago racemosa, 852.
Lapsana communis, 361.
virgata, 1003.
Lapwing, 49.
Larch, 424, 621, 810.
Larissa, cities bearing this name, 137, 158.
Larix Americana, 810, 935.
Europæa, 424.
leptostachys, 499.
Larkspur, 177, 292–3, 679.
Larus sp., sea gulls, 453.
Laserpitium angustissimum, 930.
aquilegifolium, 683.
aureum, 930.
ferulaceum, 996.
Gallicum, 898.
glabrum, 669.
hirsutum, 975.
latifolium, 911.
libanotis, 889.
Pruthenicum, 975.
siler, 342.
trilobum, 815.
Latania Borbonica, 1038.
Lathræa squamaria, 557.
Lathyrus amphicarpos, 355.
angulatus, 894.
annuus, 882.
aphaca, 826.
articulatus, 1023.
cicera, 220.
clymenum, 1000.
decaphyllus, 1057.
helodes, 961.
heterophyllus, 1019.
hirsutus, 931.
incurvus, 1007.
latifolius, 849, 911.
maritimus, 873, 926.
myrtifolius, 1052.
Nissolia, 905.
odoratus, 992.
palustris, 940.
pisiformis, 1013.
pratensis, 911.
purpureus, 998.
sativus, 220.
setifolius, 894.
sylvestris, 906.
tuberosus, 670.
venosus, 1062.
Latin Church, 619.
in church services, 609.

Latin literature, 388, 534, 794.
Latitude, parallels of, first established, 389.
Latium, in Italy, 302, 318, 322.
Laurel, 28, 167, 448, 886.
Laurencia botryoides, 368.
Laurestinus, 328.
Laurus Canariensis, 448.
(*Persia*) *Carolinensis*, 893.
caryophyllus, 782.
(*Persea*) *Catesbyana*, 1005.
(*Oreodaphne*) *cupularis*, 431.
(*Caryodaphne*) *densiflora*, 445.
(*Sassafras*) *hman-then*, 278.
Indica, 795.
(*Sassafras*) *ka-rwae*, 588.
kyai-zai, 278.
(*Benzoin*) *melissaefolium*, 1039.
montana, 1038.
nitida, 278.
nobilis, 28, 969.
(*Benzoin*) *odoriferum*, 770, 875.
(*Camphora*) *officinarum*, 598.
(*Sassafras*) *parthenoxylon*, 445.
sp., 394.
till, 467.
Lavandula dentata, 889.
multifida, 902.
spica, 262.
stoechas, 466.
vera, 645, 969.
Lavatera arborea, 353.
Cretica, 977.
maritima, 902.
micans, 977.
olbia, 898.
Thuringiaca, 932.
triloba, 1000.
trimestris, 937.
Lavender, 262, 645.
Lavenia decumbens, 983.
Laver, 704.
Lavinium, city in Italy, 174.
Law-pleadings, changed from Fr. to English by Edward III., 791.
Laws, agrarian, 292.
Chinese, 589, 798.
of the Burgundians, 571.
of (Alfred) England, 644, 715.
of Hungary, 683.
of Lycurgus, 202, 397.
of the Romans, 270.
of the Saxons, published, 615.
of Solon, 233, 270.
written, 202, 225.
Lawsonia alba, 189.
Lead, 113, 520.
League of Cambray, 860.
of Protestant princes against Ferdinand II., 943.
Leaning tower at Pisa, 714.
Leather, 576, 582.
Leavenworthia uniflora, 1044.
Lecanora parella, 436.
Lechea major, 1026.
minor, 961.
Lechea tenuifolia, 1041.
thymifolia, 1041.
Lectisternium, Roman religious festival, 301.
Lecythis parviflora, 950.
Ledebouria hyacinthoides, 350.
Ledum latifolium, 1027.
palustre, 889.
Leea hirta, 412.
macrophylla, 462.
sambucina, 691.
Leech, 454.
Leed, 704.
Leek, 144.
Leeria nutans, 987.
Leersia lenticularis, 1044.
oryzoides, 940.
Virginica, 1049.
Leiophyllum buxifolium, 1036.
Leipsic, city of, 1059.
Leleges, or Carians, 193.
Le Maire, Straits of, 978.
Lemna gibba, 478.
minor, 163.
polyrhiza, 478.
trisulca, 351.
Lemnos, Greek island, 186.
Lemon, 644, 779.
grass, see *Cymbopogon*.
Lentil, 46.
Leonotis leonurus, 975.
nepetifolia, 982.
Leontice chrysogonum, 484.
leontopetalon, 265.
vesicaria, 1033.
Leontium, city in Sicily, 213.
Leontodon autumnale, 870.
crispum, 904.
hispidum, 826.
obovatus, 931.
taraxacum, 419, 685.
Leonurus cardiaca, 733.
lanatus, 793.
marrubiastrum, 993.
Sibericus, 1013.
Leopard, 30.
the hunting, 87.
Lepachys pinnata, 1043.
Lepanto, battle at, 900.
Lepidium alpinum, 921.
Bonariense, 1011.
campestre, 834.
cornutum, 472.
draba, 485.
graminifolium, 477.
iberis, 477.
latifolium, 473, 969.
lyratum, 996.
perfoliatum, 894.
ruderale, 634.
sativum, 94.
spinosum, 340.
Virginicum, 867.
vesicarium, 1007.
Lepidotum, city in Egypt, 130.
Lepisma, silver-fish insect, 323.
Lepraria flava, 318.
Leprosy, cutaneous disease, 131, 141.
Letadenia lancifolia? 426.
reticulata, 464.
Leptocarpus simplex, 975.
Leptocaulis divaricatus, 1040.
Leptochloa mucronata, 1039.
Leptopoda fimbriata, 1043.
Lepturus? paniculatus, 1058.
Lepurandra saccidora, see *Antiaris*.
Lepus Americanus, 866, 869, 875, 908.
cuniculus, 87.
Grœnlandicus, 909.
palustris, 869, 908.
timidus, hare, 46, 452.
variabilis, 875.
Lesbos, Greek island, 222.
Lespedeza capitata, or *frutescens*, 1000.
crytobotria, 601.
hirta, 1016.
latebrosa, 997.
procumbens, 1041.
repens, 1011.
violacea, 1016.
Letters in Inscriptions, &c., ancient forms of, 498, 544, 555, 566, 570, 574, 597, 613, 684, 725, 776.
of Marque, 762.
Lettuce, 222, 252, 361, 909, 935.
Leucadendron argenteum, 1006.
decurrens, 975.
Levisanus, 1006.
squarrosum, 1006.
Leucanthemum vulgare, 645.
Leucas aspera, 739.
biflora, 970.
Martinicensis, 1019.
Zeylonica, 966.
Leucoium æstivum, 350.
autumnale, 902.
trichophyllum, 961.
vernum, 870.
Leucospermum conocarpum, 1006.
hypophyllum, 1006.
Levant, or Turkey co., the, for trade betw. England and Turkey, 903.
Levelling, art of, 127.
Lewisia rediviva, 604.
Lexington, town in Mass., 1035.
Leysera callicornia, 1000.
Liang, the later, sixteenth Chinese dynasty, 647.
twelfth Ch. dyn. 571, 583, 584.
Liatris cylindrica, 1039.
elegans, 1040.
gracilis, 1033.
graminifolia, 1033.
heterophylla, 1033.
odoratissima, 1040.
paniculata, 1040.
pauciflora, 1033.
pilosa, 1040.
pyenostachya, 1011.
scariosa, 962.

Liatris spicata, 962.
squarrosa, 978.
Libations, 43.
Libraries, 65, 124, 245, 552.
at Alexandria, 373, 375, 382, 388, 555.
at Buda, 884.
at Constantinople, 618, 719, 824, 869.
at Heidelberg, 940.
at Rome, 400, 442, 464, 532.
in China, 403.
in France, 741.
in Greece, 239, 245.
in Pergamus, 457.
the Medicean, 842.
Lichen rocella, see *Rocella*.
Lichens, 4, 318.
Licuala acutifida, 411.
spinosa, 950, 966.
Light, development of, by magnets, 1066.
Light-house, or pharos, built at Alexandria, 373.
Lightning, in Greenland, 767.
Lign-aloes, 189.
Lignum colubrinum, 639, 813.
Ligurian language, 154.
Ligusticum aconitifolium, 935, 1044.
athamanthoides, 901.
Austriacum, 920.
cervaria, see *Peucedanum*.
ferulaceum, 971.
levisticum, 530.
(*Trochiscanthes*) *nodiflorum*, 474.
Peloponnense, 889.
Scoticum, 581, 935.
Sibericum, 1013.
vaginatum, 1013.
Ligustrum ibota, 788.
Japonicum, 976.
vulgare, 460.
Li-ki, or Chinese Ritual, 192.
Lilac, 362.
Lilium bulbiferum, 273.
Canadense, 641, 940, 958.
candidum, 129, 960.
Catesbæi, 1003.
Chalcedonicum, 273.
Kamtchaticum, 1018.
martagon, 779.
Pennsylvanicum, 1003.
Philadelphicum, 958, 968.
pomponium, 793, 976.
Pyrenaicum, 922.
speciosum, 976.
superbum, 866, 936, 958.
umbellatum, 1054.
Lily, 129.
Lily of the valley, 558.
Lima bean, 1018.
Lima, city in Peru, 875, 881, 1019.
Limestone, 87.
Limnanthemum cristatum, 975.
Forbesianum, 1068.
Limnanthemum lacunosum, 903.
trachyspermum, 1040.
Limodorum abortivum, 922.
epigenium, 1013.
Limonia acidissima, 725
Madagascarensis, 957.
Limosella aquatica, 919
Limulus Americanus, 909.
Linaria Aegyptiaca, 491.
amethystina, 961.
arvensis, 937.
bipunctata, 961.
Canadensis, 1016.
Chalepensis, 989.
corifolia, 998.
cymbalaria, 491.
Dalmatica, 937.
dealbata, 961.
elatine, 491.
genistifolia, 908.
Græca, 491.
grandiflora, 998.
linifolia, 937.
linogrisea, 961.
Lusitanica, 961.
minor, 910.
multicaulis, 972.
multipunctata, 961.
origanifolia, 937.
Pelisseriana, 931.
pilosa, 1003.
purpurea, 907.
reflexa, 992.
repens, 937.
simplex, 995.
supina, 995.
spuria, 491, 882.
tenella, 1054.
triphylla, 902.
villosa, 971.
vulgaris, 478, 969.
Linden, 214, 227.
Lindera sericea, 622.
triloba, 632.
Lindernia pyxidaria, 1009.
Lindus, city in Rhodes, 136.
Linen, 49.
Lingam, Bacchic emblem, 606, 815.
Linkia nostoc, 973.
Linnæa borealis, 835.
Linnæan Society, London, Transactions of, 1046.
Linociera compacta, 999.
cotinifolia, 999.
Linum alpinum, 907.
angustifolium, 154, 451.
arboreum, 905.
aquilinum, 661.
Austriacum, 913.
campanulatum, 903.
catharticum, 847.
Gallicum, 501.
hirsutum, 584.
luteolum, 1007.
maritimum, 889.
Narbonense, 937.
Linum perenne, 572, 880.
rigidum, 1057.
strictum, 903.
tenue, 961.
tenuifolium, 889.
usitatissimum, 44, 944.
verticillatum, 993.
Virginianum, 881, 908, 926, 929, 940.
viscosum, 940.
Linus, the earliest Greek poet, 136.
Lion, 12, 18, 264, 618, 621, 791.
Liparia villosa, 1014.
Liparis liliifolia, 1016.
Loeselii, 898.
Lipocarpha argentea, 1045.
Lippia Americana, 1012.
asperifolia, 984.
cymosa, 983.
lanceolata, 1016.
nodiflora, 920.
Liquidambar altingia, 639.
styraciflua, 741, 928–29.
Liquorice, 305, 309.
Liquorice-vetch, 720.
Liriodendron tulipifera, 767, 909, 929, 958.
Lisbon, city in Portugal, 704, 854, 1022.
Lisianthus exaltatus, 915.
longifolius, 982.
trinervis, 957.
Listera convallarioides, 1044.
cordata, 930.
ovata, 541.
Li-tai-ki-sse, the, a collection of Chinese annals, 1028.
Literature, Egyptian, 62.
Muslim, 687.
of other nations, 623, 737, 845.
Lithography, invention of, 1043.
Lithospermum angustifolium, 1044.
arvense, 835.
callosum, 433.
dispermum, 1025.
erythrorhizon, 526.
fruticosum, 490.
latifolium, 1044.
officinale, 450.
purpureo cæruleum, 404.
tenuiflorum, 450.
tinctorium, or *arnebia*, 286.
Lithotomy, 306.
Lithotrity, 471.
Lithrea Chilensis, 661.
Lithuania, or East Poland, 802.
Litsæa glabraria, 966.
trinervia, 1000.
Littorella lacustris, 978.
Liverwort, 436, 514, 843.
"Livre de Nature," first printed work on Natural History, 842.
Lloydia Græca, 359.
Loasa acanthifolia, 1002.
Lobelia acuminata, 915.
amœna, 1041.

Lobelia arborea, 985.
Breynii, 975.
cardinalis, 945.
Claytoni, 1016.
Cliffortiana, 990.
coronopifolia, 975.
Dortmanna, 897.
erinoides, 982.
fulgens, 1054.
glandulosa, 1039–40.
hirsuta, 1015.
inflata, 1015.
Kalmii, 995.
Laurentia, 993.
longiflora, 982.
lutea, 1015.
nicotianifolia, 744.
paludosa, 1057.
pinifolia, 975.
puberula, 1041.
syphilitica, 957.
sp., 230.
succulenta, 1065.
tenella, 551.
tupa, 1002.
urens, 937.
Loblolly, 761, 777.
Locks, invention of, 54, 198.
Locri, in Italy, 225.
Locust, 768, 941.
Locust, the migratory, 51, 948.
Lodoicea Seychellarum, 856.
Log, in navigation, 865.
Logarithms, invention of, 933.
Logic, 269.
Log-wood, 919.
Loire, river in France, 442.
Loiseleuria procumbens, 907.
Lolium arvense, 978.
perenne, 93.
temulentum, 93, 451.
Lollards, a Christian sect, 795.
Lomaria grandis, 386.
Lombards, 553, 586, 619, 622.
Lombardy Poplar, 672.
Lonchitis aurita, 987.
hirsuta, 987.
repens, 987.
Lonchocarpus laxiflorus, 739.
London bridge, 714.
London, city in England, 552, 964.
Great fire in, 964.
Long Island, in Long Island Sound, 952, 1035.
Long walls at Athens, 269.
Longitude of places on the Earth's surface, 929, 971.
Lonicera brachypoda, 817.
caprifolium, 160.
ciliosa, 1055.
corymbosa, 661.
flava, 1039.
grata, 1039.
Japonica, 963.
parviflora, 1036.
periclymenum, 160.
Lonicera Pyrenaica, 988.
sempervirens, 959.
xylosteum, see *Xylosteum*.
Loo Choo Islands, 235, 597, 711, 716, 798, 822, 928, 1032.
Loosestrife, 372, 379.
Lophira alata, 730.
Lophiola aurea, 1055.
Lophotænia aurea, 480.
Loranthus Americanus, 986.
elasticus, 974.
Europæus, 186.
longiflorus, 693.
loniceroides, 974.
Occidentalis, 982.
scurrula, 997.
Lory, or red parrot, 564, 816.
Lota vulgaris, burbot, 453.
Lote tree, 886.
Lotophagi, 174.
Lotus angustissimus, 931.
corniculatus, 172.
Creticus, 1009.
cytisoides, 902.
diffusus, 937.
edulis, 442.
Forskali, 410.
fruticosa, 410.
glaucus, 918.
hirsutus, 894.
jacobæus, 993.
major, 172.
ornithopodioides, 909.
peregrinus, 894.
rectus, 213.
siliquosus, 898.
tetragonolobus, 921.
Lotus, or *water-lily*, 111.
Louisbourg, town on the island of Cape Breton, 1018, 1023.
Louisiana, State in N. America, 925, 978, 1003–4, 1023, 1053–54, 1059.
Lovage, 530, 581.
Lubec, Germany, 708.
Lucuma bifera, 660.
caimito, 754.
mammosa, 659.
obovata, 662.
spinosa, 660.
turbinata, 660.
Valparadisica, 660.
Ludwigia alternifolia, 999.
arcuata, 1040.
capitata, 1040.
glandulosa, 1040.
hirsuta, 1040.
linearis, 1040.
mollis, 1040.
polycarpa, 1067.
sphærocarpa, 1061.
virgata, 1040.
Luffa acutangula, 413, 462.
amara, 523.
Arabum, 553.
bindaal, 497.
pentandra, 818.
Luma sp., 660.
Lumnitzera racemosa, 745.
Lunaria canescens, 906.
Græca, 996.
rediviva, 517, 969.
Lungwort, 514, 567, 635, 978.
Lupines, edible, 183.
Lupinus albus, 301.
angustifolius, 355.
argenteus, 1055.
hirsutus, 202.
Nootkatensis, 1046.
perennis, 977.
pilosus, 202.
pusillus, 1054.
sericeus, 1055.
termis, 183.
villosus, 1040.
Lusitania, or Portugal, 401.
Lutra vulgaris, otter, 136, 452.
Luxor, 119, 123.
Luzon, island in the East Indies, 788, 846, 916.
Luzula albida, 937.
campestris, 419, 903.
glabrata, 1042.
maxima, 512.
melanocarpa, 1044.
nivea, 976.
pallescens, 1011.
pilosa, 838.
spadicea, 1005.
spicata, 1007.
Lybia, in Africa, 66, 226.
Lycaonia, and its language, 299, 480.
Lychnis alpina, 991.
apetala, 1011.
Chalcedonica, 781.
dioica, 504.
flos-cuculi, 504.
variegata, 998.
vespertina, 451, 504.
viscaria, 849.
Lycia, country in Asia Minor, 128.
Lycium Afrum, 491.
barbarum, 363.
Carolinianum, 1033.
Europæum, 161.
Lycoperdon bovista, 827.
epidendrum, 368.
herculeum, 1029.
solidum, see *Pachyma cocos*.
sp., 970.
Lycopersicum esculentum, 615.
Peruvianum, 1002.
Lycopodium alopecuroides, 962.
alpinum, 886.
annotinum, 836.
Caroliniianum, 1017.
clavatum, 836.
complanatum, 785, 1031.
curvatum, &c, 1001.
dendroides, 792.
denticulatum, 203.
imbricatum, 698.

Lycopodium inundatum, 988.
linifolium, &c., 987.
lucidulum, 1017, 1044.
phlegmaria, 974.
plumosum, 975.
rupestris, 962, 1017, 1032.
selago, 418.
Lycopsis arvensis, 828.
echioides, 368.
obtusifolia, 1007.
pulla, 889.
Virginica, 1016.
Lycopus Virginicus, 1016.
vulgaris, 454.
Lydia, kingdom in Asia Minor, 148, 153, 241.
Lygeum spartum, 878.
Lygodium circinnatum, 997.
flexuosum, 974.
palmatum, 1041.
pinnatifidum, 974.
scandens, 975.
volubile, 983.
Lyme grass, 927.
Lynn, town in Massachusetts, 952.
Lynx, 154.
Lyons, or Lugdunum, city in France, 455, 482, 531, 628, 736.
Lysimachia anagalloides, 998.
angustifolia, 1041.
atropurpurea, 372.
ciliata, 1014.
dubia, 774.
ephemerum, 905.
heterophylla, 992.
lanceolata, 1005.
linum-stellatum, 937.
longifolia, 1056.
nemorum, 892.
nummularia, 655.
punctata, 921.
quadrifolia, 932.
stricta, 999.
thyrsiflora, 921.
vulgaris, 372.
Lythrum acuminatum, 1007.
alatum, 1056.
hyssopifolium, 884.
lineare, 1016
meonanthum, 961.
salicaria, 372, 419.
thymifolia, 930.
virgatum, 998.

MABA BUXIFOLIA, 241.
Macao, city of, founded, 863, 921.
Macaranga Indica, 744.
Roxburghii, 414.
tomentosa, 744.
Macassar, 960.
Macbridea Caroliniana, 1040.
Maccabee coins, 402.
Macedonia, 221, 373, 399, 619, 789, 798.
Machaerina restioides, 999.
Mackerel, 874.
Maclura, 869.
Macrocladus sp., 112.
Maculists, a religious sect, 858.
Madagascar, 60, 91, 165, 312, 330, 333, 706, 821, 860, 953, 956.
Madder, 275, 661.
Indian, 421, 526, 831.
Madeira, 794, 810, 823.
Madia mellosa, 1002.
sativa, 1002.
viscosa, 1046.
Madrid, city in Spain, 834, 967.
Madura, in Southern Hindustan, 571, 942.
Madwort, 503.
Maeonia, part of Lydia, 152.
Maerua crassifolia, 390.
Magadha, in Hindustan, 236.
Magellan, Straits of, discovered, 864, 902.
Magian religion, 252, 566.
Magna Charta, 720, 722, 764.
Magnesia, city in Asia Minor, 213.
the mineral, 279.
Magnetic needle, or mariner's compass, 80, 686, 750.
Magnetic variation, 815, 852, 933, 980.
Magnetism, 302.
Magnolia acuminata, 1003.
cordata, 1041.
glauca, 908.
grandiflora, 1005.
hypoleuca, 500.
kobus, 989.
macrophylla, 1044.
obovata, 989.
pariflora, 632.
pyramidata, 1033.
tripetala, 1003.
yulan, 600.
Mahabharata, Sanscrit epic poem, 602.
Mahadeva emblem, 606.
Mahamlaipur in Hindustan, temple there, 743.
Mahernia pinnata, 1001.
verticillata, 999.
Mahogany, 673.
East Indian, 562.
Mahometans, 609.
Maidenhair fern, 37, 938.
Maina bird, 743.
Maine, North American State, 958, 965, 975, 1062.
Maize, or *Indian corn*, 610, 665, 668, 741, 859.
Majapahit, Hindu capital of Java, 762, 775, 798, 814, 834.
Malabar, Eastern coast of Hindustan, 573, 649, 774–75.
Malacca, city and Straits, 750, 861.
visited by a European ship, 860, 863.
Malacca canes, 1018.
Malachra capitata, 983.
radiata, 987.
Malambo bark, 709.
Malaria, the Italian, 214.
Malaxis paludosa, 1000.
Rheedii, 974.
Malay countries, 147.
language, 981.
Malayan Race of man, 147, 215, 517, 787, 924, 976, 981.
Malay-apple, 481.
Malcomia maritima, 556.
Maldive Islands, in the Indian Ocean, 427, 786.
Mallow, 105, 348, 646, 723, 935.
Malope malacoides, 972.
Malpighia coriacea, 982.
faginea, 950.
glabra, 993.
punicifolia, 1000.
urens, &c., 986.
Malta, island South of Sicily, 182, 870, 1050.
Malus angustifolia, 929.
baccata, 610.
coronaria, 958.
sylvestris, 134, 181, 451.
Malva abutiloides, 1011.
alcea, 486.
althæoides, 556.
Caroliniana, see *Modiola*.
coccinea, 1054.
crispa, 932.
fragrans, 1000.
Gangetica, 1000.
grossularifolia, 1011.
Hispanica, 1000.
montana, or *Nicæensis*, 1026.
moschata, 969.
parviflora, 1000.
rotundifolia, 348, 958, 969.
Sherardiana, 1007.
sylvestris, 105.
Tournefortiana, 683.
tuberculata, 961.
verticillata, 723.
virgata, 1011.
Malwa, country in Hindustan, 722.
Mamillaria simplex, 899.
Mammea Americana, 677, 882.
Mammei-sapote, 659.
Manchineel apple, 854.
Mandchous, 759, 908, 920, 942, 958, 1069.
Mandingo tribe of Negroes, 268.
Mandragora officinalis, 247.
Mandrake, 248.
Mandshuria, 956, 1069–70.
Manettia lanceolata, 671.
Manganese, the metal, 756, 1017.
Mangarevan, or Gambier Islands in the Pacific, 704–5, 1033.
Mangel wurzel, 110.
Mangifera altissima, 917.
fœtida, 445.
Indica, 237.

Mango, 237, 445, 832.
Mangosteen, 642.
Mangroves, 300, 324, 423, 622.
Manhattan island, 928, 932–33.
Manhawer, city in Hindustan, 517.
Manicaria saccharifera, 715.
Manichæan sect, 542, 668, 711.
Manihot aipi, 576.
utilissima, 575.
Manila, city on the Philippines, 788, 814, 846, 900, 918, 1021.
Manilla-nut, 736.
Manisuris granularis, 985.
Manna, 75, 614.
the drug, 169.
Man-orchis, 890.
Mansura, on the Indus, 621, 755.
Mantineia, battle at, 288, 318.
Mantis, or praying-insect, 48.
Manufactures and Mechanic Arts, 1020.
Manulea cheiranthus, 993.
tomentosa, 1000.
villosa, 1016.
Manwantara, Hindu period of time, 88, 99, 124, 179, 224, 347, 481, 561, 621, 687.
Many-pronged anchor, 234.
Manzanitta, 582.
Maple, 157, 271, 354, 580, 803.
Maps, 241, 787, 789, 792, 798, 878.
Maracanda, see Samarcand.
Maranon, or Amazons, river, 858.
Maranta arundinacea, 985.
dichotoma, 697.
tonchat, 966.
Marathon, battle at, 258.
Marblehead, seaport of New England, 1012.
Marcgravia umbellata, 986.
Marchantia polymorpha, 514.
Marcomanni, a Germanic tribe, 542
Mare's-tail, 501.
Margarita, isl. in W. I., 857, 939.
Margaritaria nobilis, 1000.
Marigold, 223, 550, 785, 820.
Marine societies, 1027.
Mariscus aphyllus, 982.
glandulosus, 386.
maculatus, 1040.
ovularis, 999.
paniceus, 999.
retrofractus, 999.
Marjoram, 248, 262.
Market, first, estab. in Boston, 948.
Mark Islands, in the Pacific, 953.
Markland, 787.
Marquesan, or Nukuhivan, Islands, in the Pacific, 1034, 1046.
Marriage, among priests, 687, 740,
Marrubium acetabulosum, 918.
Africanum, 1000.
alyssum, 316.
Astrakanicum, 1007.
candidissimum, 971.
catariæfolium, 316.
Marrubium cinereum, 991.
Creticum, 463.
peregrinum, 907.
pseudodictamnus, 317.
supinum, &c., 993.
vulgare, 316.
Mars, worship of, 439.
Marsdenia erecta, 187.
tinctoria, 588.
Marseilles, 231, 325, 409.
Marshallia angustifolia, 1040.
lanceolata, 1040.
latifolia, 1040.
Marsh fern, 849.
mallow, 392.
marigold, 352.
Marsilea dentata, 698.
quadrifolia, 702.
Martaban, city in Burmah, 753, 766.
Marten weasel, 52, 136, 452.
Martha's Vineyard, island, 923.
Martynia diandra, 1009.
proboscidea, 1024.
Martyrs, 632, 888, 894, 900, 918, 1019, 1071–72.
Maruta cotula, 703, 969.
Marwar, capital of the Rahtor clan, 716.
Maryland, North American State, 947, 951, 958, 961.
Mascareigne, or Bourbon Island, 953, 957.
Maser-tree, 353.
Massachusetts, North American State, 943, 953, 975, 980, 990, 1035, 1039, 1041.
Massacre of Protestants on St. Bartholomew's day, 900.
Massara, quarries at, 107.
Massonia latifolia, 978.
Masterwort, 760.
Mastich, 275
Mastiff, Thibetan, 20.
Mathematical science, 65, 66.
Matricaria Capensis, 1014.
chamomilla, 295.
discoidea, 1055.
parthenium, 969.
suaveolens, 295.
Mats, 234.
Matsmay, city in Japan, 817.
Matsuri, religious festival of the Japanese, 611.
Matthiola fenestralis, 434.
incana, 375, 969.
livida, 26.
sinuata, 894.
tricuspidata, 584.
Maudeline, 669.
Maulmain, city and seaport in Burmah, 766.
Mauritania, or Barbary, 532.
Mauritia flexuosa, 858.
Maurya, dynasty of Hindu kings, 554.
Mayaca Michauxii, 1041.
Mayapan, city in Yucatan, 799.
May-apple, 767.
Mayence, city on the Rhine, 552, 631, 684, 796, 843, 858.
Mayflower, Puritan ship, 939.
Maytenus Chilensis, 661.
May-weed, 295, 326.
Meadow clary, 630.
rue, 484, 563.
saffron, 945.
Mecca, 566, 583, 600, 603, 650, 652, 860.
Mechoacan, 784.
Medeola angustifolia, 1007.
Virginica, 808.
Media, 136, 218, 221, 457.
Median Empire, 221.
Medicago arborea, 217.
coronata, 931.
denticulata, 1052.
elegans, 977.
falcata, 474.
Gerardi, 977.
intertexta, 977.
laciniata, 894.
lupulina, 871.
maculata, 654.
marina, 898.
minima, 451.
murex, 894.
muricata, 977.
nigra, 977.
orbicularis, 937.
pubescens, 931.
radiata, 904.
rigidula, 931.
sativa, 258.
scutellata, 945.
sylvestris, 1062.
terebellum, 977.
tornata, 894.
tuberculata, 931.
turbinata, 898.
Medicine, early work on, 63, 623.
men of the N. American tribes, 604.
Medinet Abu, temple at Thebes, 136, 525.
Medlar, 201.
Megalopolis, city in the Peloponnesus, 312.
Megara, city in Greece, 186.
city in Sicily, 261.
Megarhiza Oregana, 581.
Megiddo, battle-field in Palestine, 113.
Melaleuca cajuputi, 444.
leucadendron, 444.
Melampodium Americanum, 1012.
Melampyrum Americanum, 1038.
arvense, 847.
cristatum, 837.
nemorosum, 918.
sylvaticum, 911.
vulgatum, 635.
Melananthera hastata, 1011.

Melanorrhœa usitatissima, 423.
Melanthesa rhamnoides, 737.
Melanthium Sibericum, 1013.
Virginicum, 999.
Melastoma acinodendron, 1000.
argenteum, 982.
asperum, 986.
discolor, 1000.
fragile, 915.
hirta, 1000.
holosericeum, 975.
Malabathricum, 339, 974.
splendens, 986.
Meleagris gallipavo, turkey, 881, 908.
Meles vulgaris, badger, 136, 452.
Melia azedarach, 670.
composita, 670.
Japonica, 622
Melianthus comosus, 1001.
major, 970.
minor, 981.
Melica ciliata, 840.
nutans, 921.
papilionacea, 982.
pyramidalis, 971.
speciosa, 978.
uniflora, 898.
Melicocca trijuga, 993.
Melilotus alba, 221.
cærulea, 644.
Cretica, 271.
Indica, 802.
Italica, 802.
Messanensis, 338.
officinalis, 221.
Melissa altissima, 364.
Cretica, see *Thymus Barrelieri*.
grandiflora, 932.
officinalis, 363.
Melittis melissophyllum, 824.
Melochia concatenata, 1000.
corchorifolia, 974.
depressa, 1012.
nodiflora, 983.
pyramidata, 950.
tomentosa, 983.
Melon, 72, 229, 929.
Melothria pendula, 992.
Memecylon capitellatum, 970.
tinctorium, 671.
Memluks, 735, 741, 862, 1058.
Memphis, city in Egypt, 63.
Men with tails, 305.
Mendang Kamulan, capital of Java, 623.
Mendes, city in Egypt, 65, 292.
Mendicant orders of Monks, 755, 757.
Mendoza, city of, in Chili, 1070.
Menispermum (*Clypea*) *Burmanni*, 521.
Canadense, 993, 1000.
(*Anamirta*) *cocculus*, 541.
(*Tinospora*) *cordifolia*, 690.
fenestratum, 521.
Menispermum (*Cocculus*) *leæba*, 541.
peltatum, 970.
Mentha aquatica, 190, 935.
arvensis, 227.
auricularia, 966.
borealis, 968.
Canadensis, 935.
cervina, 894.
citrata, 686.
crispa, 242.
gentilis, 475.
gracilis, 919.
piperita, 671.
pulegium, 199, 969.
rotundifolia, 242.
rubra, 870.
sylvestris, 263.
tomentella, 492.
viridis, 886.
Mentzelia aspera, 986.
Menyanthes trifoliata, 450, 818.
Menziesia cœrulea, see *Phyllodon*.
empetriformis, 1046.
ferruginea, 1046.
globularis, 1041.
Mephitis Americana, 909.
Merchant adventurers, an association so-called, 887–88, 920.
Merchants of the Staple, an association so-called, 773.
of the Steelyard, an association so called, 773.
Mercurialis annua, 138.
elliptica, 961.
perennis, 354.
tomentosa, 889.
Mercury, the planet, 382.
worship of, 139, 151, 291.
Mergui Archipelago, 233.
Mergus merganser, 453.
Meriandra Bengalensis, 578.
Meroe, city in Upper Nubia, 228, 441, 477, 571.
Merovingian dynasty of French kings, 620.
Mertensia dichotoma, 976.
furcata, 987.
paniculata, 1043.
Merulius lobatus, 921.
Mesembryanthemum acinaciforma, 1004.
albidum, 1004.
bellidifolium, 1011.
bicolor, 982.
bractiatum, 1011.
calamiforme, 1004.
caninum, 1004.
Copticum, 506.
crassifolium, 1004.
crystallinum, 990.
difforme, 990.
dolabriforme, 1004.
edule, 230.
emarcidum, 230.
expansum, 975.
falcatum, 1004.
Mesembryanthemum filinum, 1009.
filamentosum, 1011.
geniculiflorum, &c., 997.
glaucum, 1004.
glomeratum, 1011.
hispidum, 1004.
latum, 1011.
linguiforme, 1010.
longum, 1011.
loreum, 1011.
micans, 1004.
molle, 975.
muricatum, 1004.
nodiflorum, 315.
obliquum, 1011.
perfoliatum, 1004.
pomeridianum, 1014.
pugioniforme, 1004.
rostratum, 1011.
scabrum, 1011.
scalpratum, 1004.
serratum, 1011.
sp., 1048.
spinosum, 1004.
splendens, 1004.
stipulaceum, 1011.
tenuiflorum, 976.
tenuifolium, 1004.
tortuosum, 1004.
tuberosum, 1004.
uncinatum, 1004.
verruculatum, 1011.
Mespilus Germanica, 201.
Messene, city of Messenia in Greece, 207, 213, 221, 269.
Messerschmidia arguzia, 1013.
Mesua ferrea, 497.
Metacom, 956.
Metallurgy, 220.
Metapontum, city in Southern Italy, 209, 267.
Metastelma parviflorum, 975.
Meteoric stones, 268.
Meteorites, or shooting stars, 541, 1051, 1072.
Methodici, medical sect, 454.
Metonic Cycle, 281.
Metrosideros hispida, 985.
Metroxylon sp., 861.
robusta, 437.
Meum athamantha, 396.
heterophyllum, 902.
inundatum, 976.
mutellina, 889.
Mexican empire, 790.
monuments, 575, 604.
silver mines discovered, 888.
Mexico, 532, 604, 709, 776, 863, 905, 915, 919, 1069.
Mezquite tree, 741.
Miao-tseu, independent tribes in China, 1035.
Michauxia campanuloides, 900.
Michelia champaca, 335.
Nilagirica, 743.
Michigan, N. American State, 1067.

Micranthemum orbiculatum, 1040.
Microglossa attissima, 384.
Microloma lineare, 999.
Micronesians, 870, 884.
Micropus erectus, 468.
Microscopes, 914, 939.
Microstylis monophyllos, 919.
ophioglossoides, 1038.
Middletown, early settlement in New Jersey, 963.
Mignonette, 1020.
Mikania guaco, 1051.
opifera, 1059.
scandens, 993.
Milan, or Mediolanum, Italian city, on the main route across the Alps, 542, 550, 553, 577, 579, 710.
Milan cathedral, 796.
Mildew, 119.
Miletus, Greek city in Asia Minor, 192, 227–28, 256.
Milfoil, 170, 409.
Milium effusum, 840.
glaucum, 1064.
multiflorum, 960.
Milk thistle, 489.
vetch, 399.
weed, 945, 983, 986.
Milkwort, 487.
Millera biflora, 1009.
quinqueflora, 1009.
Millet, 79, 598, 898.
Millingtonia (*Meliosma*) *simplicifolia*, 278.
Milo, Greek island, 157.
Mimetes cucullata, 1006.
Hartogii, 1006.
hirta, 1006.
Mimosa abstergens, 670.
acle, 917.
(*Prosopis*) *agrestis*, 886.
asperata, 950.
balsamica, 662.
Capensis, 766.
casta, 993.
(*Dichrostachys*) *cinerea*, 727.
cornigera, 915.
ettaa, 303.
latispinosa, 384.
polydactyla, 975.
pudica, 888.
rubricaulis, 692.
sensitiva, 975.
viva, 983.
Mimulus alatus, 1043.
Jamesii, 1062.
Lewisii, 1054.
luteus, 1002.
ringens, 962.
Mimusops elengi, 617.
fruticosa, 380.
hexandra, 331.
kauki, 415.
kummel, 427.
Mina castle, 842.
Mindanao, island of, 918.
Minerva, worship of, 147, 265, 302, 322, 442.
Ming, twenty-third Chinese dynasty, 791, 800.
Mingan Isles, 664.
Mint, 190, 227, 263, 475, 935.
Mints for coining money, 680, 1041.
Minyae, (Minyan) Greeks, 186, 193.
Mirabilis dichotoma, 821.
jalapa, 820.
longiflora, 915.
Mishawum, or Charlestown, in Massachusetts, 947.
Mishna, a body of Jewish literature, 532.
Mississippi, North American State, 1061.
River, discovered, 864, 881, 972, 977–78, 1004, 1021.
Missouri, N. American State, 1062.
Mistletoe, 186.
Mitchella repens, 999.
Mitella diphylla, 973.
grandiflora, 1046.
nuda, 1013.
Mithridate mustard, 811.
Mithridatea tambourissa, 707.
Mitreola petiolata, 1043.
sessilifolia, 1012.
Mnium roseum, 937.
Moabites, 153, 194.
Moallakat, seven ancient poems preserved at Mecca, 585, 597.
Mobile, American city, 878.
Mocanera grandiflora, 689.
thurifera, 689.
verniciflua, 689.
Moccasin flower, 772.
Modiola Caroliniana, 1009.
Moehringia muscosa, 912.
Moghulpura, 760.
Mogorium sambac, 537.
Mogul Tartars, 573, 735, 760, 798.
Mohawk tribe of aboriginal Americans, 944, 957.
Mohria thurifraga, 1000.
Moldavia, a country of Eastern Europe, 788.
Mole, 41.
Molina prostrata, 799.
Molinia cærulea, 495.
Mollugo cerviana, 694.
nudicaulis, 984.
oppositifolia, 999.
pantaphylla, 970.
spergula, 737.
stricta, 999.
verticillata, 747.
Molothrus pecoris, cow bunting, 881.
Moltkia cœrulea, 1007.
Molucca Islands, in the Malayan Archipelago, 208, 795, 865, 884.
Moluccella laevis, 890.
spinosa, 899.
tuberosa, 1033.
Mombasa, city in East Africa, first visited by a European ship, 856, 949, 994.
Momordica balsamina, 87.
charantia, 462.
dioica, 843.
elaterium, 249.
muricata, 974.
myxa, 693.
operculata, 1001.
Senegalensis, 1049.
trifoliata, 966.
Monarda didyma, 1015.
fistulosa, 948.
punctata, 999.
Monarrhenus rufescens, 1067.
Monasteries of the East, 621.
of Europe, 629, 797.
Monetia barlerioides, 694.
diacantha, 974.
Money, 105, 161, 614, 621, 892, 955.
first coined in New England, 958; in Maryland, 961.
Money-wort, 655.
Mongol Tartars, 721, 747, 920.
Mongolian race, 275, 780, 1030.
Monimia ovalifolia, 1067.
Monina polystachia, 678.
salicifolia, 678.
Monitor-lizard, 12.
Monitors, a kind of iron-clad vessels, 1071.
Monkey, 68.
Monkeys-face tree, 413.
Monks, 655, 867.
Monk's hood, 160.
rhubarb, 679.
Monoceros unicornu, sea unicorn, 689, 949.
Monotropa hypopitys, 937.
uniflora, 979.
Monsonia speciosa, 977.
tenuifolia, 1016.
Monsoons, 335, 482.
Monte Nuova, elevated near Naples, 877.
Montelia, see *Acnida*.
Months, Peruvian, 799.
Montia fontana, 337.
Montinia acris, 1000.
Montpelier, in France, 919.
Montreal, city on the St. Lawrence, 875, 930, 985, 990, 1023.
Monumental history of Egypt, 3, 217, 224, 228, 603.
of Italy, 252.
Moon, 269, 323, 917, 939, 1060, 1071.
Moon-wort, 849.
Moor grass, 840.
Moors, 817, 925.
or Muslims expelled from Spain, 850, 863, 929.
Moose deer, 948, 955.
Mooshausick, or Providence city, 949.

Moraea iridioides, 1021.
plicata, 986.
sisyrinchium, 901.
Moravia in Austria, 639, 669, 733.
Moravians, Christian sect, 1017.
Morchella esculenta, 475.
Morduans of the Lower Volga, 780.
Morina Persica, 996.
Morinda bracteata, 423.
citrifolia, 561.
tomentosa, 832.
umbellata, 832.
Moringa aptera, 298.
pterygosperma, 298.
Morisonia Americana, 987.
Morning-glory, 628, 941.
Morocco leather, 180.
Mortmain Act, 756.
Morus alba, 195.
Indica, 570.
nigra, 258.
rubra, 770, 877, 880–81, 893.
? tinctoria, 950.
Moschosma polystachya, 381.
Moschus moschiferus, 555.
Moscow, city in Russia, 725, 1059.
Mosques, 614, 620, 641, 656, 658, 665, 676, 787, 830–31, 947.
Mosquito, or gnat, 39.
Mosses, 4, 450.
Mosul, city on the Tigris, 1068.
Moth, the clothes-moth, 56.
Motherwort, 733.
Mould, 475.
Moultan, city in Hindustan, 647.
Mounds (Ohio and Miss.), 756.
Mount Ararat, 800, 1066.
Desert, in Maine, 932.
Mountains, height of, 347.
Mouse, 25, 453.
Mouse-ear, 479, 751.
tail, 551.
Movable types, 676, 815.
Moxa, for cautery in China and Japan, 210, 781, 808.
Mozambique, city of, visited by Europeans, 856, 859.
Mrichchhakati, Sanscrit drama, 605–6.
Mucor mucedo, 475.
Mucuna gigantea, 727.
pruriens, 674.
prurita, 699.
urens, 950.
Mudarine, 596.
Mugwort, 82.
Muhlenbergia capillaris, 1039.
cephalophora, 1053.
conoidea, 1053.
diffusa, 1033.
festucacea, 1053.
fullata, 1053.
glomerata, 1044.
granularis, 1053.
grisea, 1053.
hystricina, 1053.
Muhlenbergia lacustris, 1053.
lagopodioides, 1053.
lupulina, 1053.
Mexicana, 1028, 1031.
miliacea, 1053.
oligocarpa, 1053.
peduncula, 1053.
pubescens, 1053.
retroflexa, 1053.
rosea, 1053.
scoparia, 1053.
sobolifera, 1060.
sparganioides, 1053.
stipata, 1053.
straminea, 1053.
sylvatica, 1060.
tentaculata, 1053.
tetanica, 1053.
trichocarpa, 1053.
umbellata, 1053.
varia, 1053.
vestita, 1053.
virescens, 1053.
Willdenovii, 1049.
Mukdishu, city in East Africa, 652.
Mukia scabrella, 700.
Mulamuli, Buddhist book, 438.
Mulberry, 195, 258, 538, 570, 584, 591, 770, 909, 945.
Mulgedium alpinum, 828.
Floridanum, see *leucophæum*.
leucophæum, 969.
macrophyllum, 1016.
perenne, 888.
pulchellum, 1057.
Sibericum, 828.
Mullein, 284, 287, 637, 914.
Mullera moniliformis, 1004.
Mullet, the fish, 24.
Mummy cases, 106, 221.
rags, 1071.
Mummies, 122, 130, 443, 548, 1071.
Munchausia speciosa, 845.
Muntingia calabura, 986.
Muraena, or speckled eel, 32.
Murex trunculus, 142.
Muricia Cochinchinensis, 399.
Murraya exotica, 608.
may-kay, 278.
sp., 590.
Murrhine vases, 483.
Murucuia ocellata, 987.
Mus decumanus, 757, 862.
musculus, the mouse, 25.
rattus, 665.
sylvaticus, 452.
Musa basho, 561.
? ensete, 818.
nov. sp., 369
paradisica, 277, 917.
sapientum, 663, 976.
troglodytarum, 966.
Musca domestica, house-fly, 878.
vomitoria, 24.
Muscari comosum, 273.
moschatum, 889.
Muscari racemosum, 351.
spicatum, 494.
Muscat, city on the Persian Gulf, 527, 831, 960.
Musci incert., 418.
Muscicapa tyrannus, king-bird, 954.
Mushrooms, 155, 392, 407, 521, 532.
Music, 3, 154, 293, 668.
Musical instruments, 218, 800.
Musk, 555, 884.
Musk-duck, 615.
Musk-melon, 944.
Muslim Cycle, 30 lunar years, 203.
garrison, 668.
Period, 603.
Muslims, 601–3, 605, 607, 611, 613, 615, 618–21, 623, 629, 631, 641, 664, 667, 678, 683, 740, 846.
Mussænda frondosa, 300.
Mustard, 246, 387, 504, 634, 847.
tree, 426.
Mustela erminea, 124, 452, 758.
ferret, 52.
foina, 136, 452.
martes, 52, 136, 452.
putorius, 136, 452.
zibellinus, 752, 758.
Myagrum dentatum, 1009.
perenne, 937.
perfoliatum, 894.
rugosum, 894.
saxatile, 918.
Mycenae, city of, 155.
Myddfai, family of Welsh physicians, 722.
Myginda myrsinites, 1046.
Mylocarium ligustrinum, 1033.
Myosotis Apula, 934.
arvensis, 837.
glomerata, 1057.
palustris, 870.
pectinata, 1032.
rupestris, 1032.
scorpioides, 850.
Myosurus minimus, 551.
Myoxus glis, dormouse, 320.
Myrica Aethiopica, 1000.
Carolinensis, 771.
cerifera, 771, 908.
cordifolia, 229.
Faya, 960.
gale, 635, 969.
inodora, 1033.
nageia, see *Nageia*.
quercifolia, 993.
sapida, 268.
serrata, 1000.
Myriophyllum alternifolium, 1058.
heterophyllum, 1040.
scabratum, 1040.
spicatum, 409.
tenellum, 1063.
verticillatum, 895.
Myristica amygdalina, 278.
Malabarica, 595.
microcarpa, 966.

Myristica moschata, 603.
salicifolia, 966.
sphærocarpa, 278.
tomentosa, 974.
Myrobalans, 408.
Myrospermum Peruiferum, 717.
toluiferum, 889.
Myrrh, 142.
Myrrhis aromatica, 912.
aurea, 903.
bulbosa, 930.
bunium, 357.
colorata, 975.
hirsuta, 911.
odorata, 488.
temula, 506.
Myrsine Africana, 975.
dependens, 1064.
neriifolia, 622.
Myrtle, 110, 635.
Myrtus communis, 110.
coriacea, 986.
nummularia, 902.
pimenta, see *Eugenia*.
(*Rhodomyrtus*) *tomentosa*, 745.
virgultuosa, 986.
Zeylanica, 982.
Mysia, country in Asia Minor, 784, 798.
Mysore thorn, 737.
Mythology of the Egyptians, 64.
Greek, 196, 209.
Hindu, 68.

NABALUS ALBUS, 944.
altissimus, 992.
asper, 1044.
Bootii, 1063.
crepidineus, 1041.
Fraseri, 1061.
nanus, 1063.
racemosus, 1044.
serpentarius, see *N. albus*.
virgatus, 1040.
Nabatean tribe of Arabs, 410.
Naci Era, 562, 601.
Nageia Arabica, 601.
Japonica, 762.
putranjiva, see *Putranjiva*.
Nahualtec Mexicans, 714.
Najas flexilis, 1044.
Indica, 1051.
major, 932.
tetrasperma, 1010.
Nandina domestica, 632.
Nankin, city in China, 535, 546, 564, 689, 1068.
Nankin cotton, 624.
Nantucket, island of, 964, 986.
Napaea dioica, 962.
laevis, 982.
Naples, city in Italy, 192, 580, 677.
Narbonne, city in France, 411, 566.
Narcissus anceps, 975.
biflorus, 470.
Narcissus bulbocodium, 921.
calathinus, 863.
dubius, 938.
incomparabilis, 952.
jonquilla, 672.
laetus, 945.
minor, 921.
moschatus, 921.
odorus, 494.
Orientalis, 188.
poeticus, 166.
pseudo-narcissus, 752.
radiatus, 930.
serotinus, 271.
? sp., 465.
tazetta, 166, 419.
trilobus, 997.
viridiflorus, 945.
Nardosmia fragrans, 1047.
Japonica, 419.
palmata, 1043.
Nardostachys jatamansi, 321.
Nardus stricta, 903.
Naregamia alata, 726.
Narraganset River, in New England, 947.
Narthecium ossifragum, 905.
Narwhal, 752.
Nasamonians, inhabiting the North African Desert, 269.
Nasturtium amphibium, 885.
armoracia, 432.
lacustre, 1069.
officinale, 376.
palustre, 1024.
sylvestre, 882.
Nat Mandir, dancing-hall of the Siva Temple, 684.
Natchez, aborig. Amer. tribe, 1010.
Natron, or carbonate of soda, 181.
Nauclea cadamba, 554.
cordifolia, 462.
lutea, 689.
ovalifolia, 642.
parvifolia, 738.
purpurea, 966.
? sp., 278.
Naucrates, city in Egypt, 227.
Naumkeak, or Salem in New England, 942–43.
Nautaka, city in Central Asia, 327.
Naval combats, 133, 224, 231, 256, 265, 267, 280, 298, 302–3, 348, 382, 386, 388, 456–57, 544, 607, 783, 792, 863, 900, 913, 1050, 1055, 1071.
Naval pre-eminence, 151–52, 167, 180, 192–93, 195, 200, 207, 212–13, 222, 236, 243, 249, 252, 254, 259, 265, 298.
warfare, revolution in, 1071.
Navarretia heterophylla, 1066.
Navidad, in Mexico, 925.
Navigation acts, 956, 958, 960.
Navigation on the Mediterranean, 69, 123.
Navigation on Red Sea, 74, 1066.
Naxian Greeks, 252.
Naxos, city in Sicily, 213.
Nebraska, N. American State, 1070.
Neckera pennata, 937.
Nectandra cinnamomoides, 845.
puchury-major, 855.
puchury-minor, 855.
Nectris aquatica, 1025.
Negretia inflexa, 799.
Negrillo race of man, 240, 916–17, 925.
Negro race of man, 69, 108, 118, 120, 956.
Negro slaves, in Portugal, 831.
in South Carolina, 1015.
in Virginia, 939.
in the West Indies, 864, 1009, 1015.
Neilgherry grass, 1065.
Nelsonia canescens, 1051.
Nelumbium luteum, 777.
speciosum, 111.
Nemesia bicornis, 1016.
Nemopanthes Canadensis, 804.
lanceolata, &c., 987.
Neottia diuretica, 1002.
Nepenthes destillatoria, 972.
Madagascarensis, 707.
phyllamphora, 966.
Nepeta Apuleii, 972.
cataria, 563, 935, 969.
glechoma, 409, 969.
graveolens, 971.
lanata, 993.
Madagascarensis, 974.
melissaefolia, 998.
multifida, 1013.
Mussini, 1007.
nepetella, 888.
nuda, 931.
scordotis, 905.
tuberosa, 894.
violacea, 993, 1029.
Nephelium lichi, 763.
longanum, 608.
Nephrite, 133.
Nephrodium acrostichoides, 1044.
Neptune, or Poseidon, worship of, 118, 152, 160, 440.
the planet, 1069.
Neptunia oleracea, 974.
Nerium obesum, 720.
odorum, 336.
oleander, 336.
Nertera depressa, 1002.
Nerves, of sensation and motion, 372, 520.
Nesaea verticillata, 1016.
Neskhi Arabic, 620.
Neslia paniculata, 733.
Nestorian Christians, 531, 742, 756.
Nets, 852.
Nettle, 280, 406, 511, 641, 763, 973.
Neurada procumbens, 720.
Neustadt, city in Thuringia, 680.

New Britain, island near New Guinea, 994.
New England, in North America, 933, 939–40, 943, 952, 957, 981, 986, 1010, 1023.
New England Colonies, union of, 953, 957.
New England tradition, beginning of, 924.
New Englander, the, characteristics of, 1071.
New Guinea, 869, 933, 953, 994.
New Hampshire, North American State, 940, 977, 1036.
New Hebrides, 925.
New Holland, 882.
New Jersey, North American State, 963, 1036.
New Mexico, 916.
New moons, 565.
New Orleans, city of, on the Lower Mississippi, 1004, 1060.
New Providence, one of the Bahama Islands, 1004.
New Style, in chronological reckoning, 905, 994, 1021.
New Testament, versions of, 531.
New Year's day, date of, fixed by Act of Parliament, 1021.
New York, city in America, 940, 963, 975, 992, 1035–36, 1038, 1043.
New York, North American State, 981, 986.
New Zealand, 437, 953, 1060, 1066.
Newark, city in New Jersey, 963.
Newcastle, in Pennsylvania, 959.
Newfoundland, 829, 856–57, 859–60, 863, 866, 872, 887, 902, 905, 939.
Newport, in Rhode Island, 956, 995, 1036.
Newspapers, 999, 1053.
New Zealand flax, 437.
New Zealand spinach, 437.
Nicandra physalodes, 1002.
Nicaragua, country in Central America, 865.
Nicariagas, aboriginal N. American tribe, 1007.
Nickel, the metal, 1022.
Nicobar Islands, in the Malayan Archipelago, 981.
Nicomedia, city in Asia Minor, 217, 550.
Nicotiana paniculata, 1002.
pusilla, 1021.
quadrivalvis, 741.
rustica, 742, 876, 928.
tabacum, 741.
? urens, 986.
Nigella aristata, 403.
arvensis, 403.
damascena, 653.
Hispanica, 937.
Orientalis, 937.
sativa, 141.
Night-heron, 16.
Nightshade, 184, 636.
Nile, 1062.
Nilometers, 90, 612, 616, 629, 638, 683.
Nineveh, city of, 198, 227, 230, 1068.
Ninia quassioides, see *Brucea*.
Niobe group, in Greek art, 320.
Nipa fruticans, 269.
Nitraria Shoberi, 587.
Nitric Acid, 443.
Nolina Georgiana, 995.
Nomadic life, 3.
Nonea nigricans, 960.
violacea, 972.
Non-importation agreement between the English colonies in N. America, 1029.
Nonsuch, 871.
Nootka Sound, in Northwest America, 1034.
Normandy, 719.
Normans, 632, 643, 667, 672, 677, 679, 860.
Norridgwog language, dictionary of, 1007.
North America, aboriginals of, 970.
North Carolina, one of the United States, 1003, 1069.
Notonia grandiflora, 728.
Nova Scotia, or Acadia, in North America, 940, 942, 948, 1020.
Nova Zembla, 888, 891, 916, 918, 927.
Nov. Gen. near Copaifera, 731.
Novogorod, city in Russia, 639, 802.
Nubia, 441, 477, 571, 1062, 1068.
Nubian language, 1068.
Nubians, 64, 228.
Nukuhivan, or Marquesan, Islands, in the Pacific, 441.
Numantians, of Spain, 403, 407.
Numerals, 53.
Numida meleagris, 270.
Numidia, in North Africa, 424.
Nummulites, fossil animals, 464.
Nuphar advena, 777.
Kalmianum, 1019.
luteum, 135, 450.
pumilum, 135, 450.
sagittæfolia, 1040.
Nut-galls, 124, 151.
grass, 209.
Nutmeg, 573, 595, 693, 816, 860–61.
Nux vomica, 707.
Nuxia verticillata, 1067.
Nyctanthes arbor-tristis, 334.
Nymphæa alba, 135, 450.
ampla, 1056.
cærulea, 54, 72.
edulis, 592.
lotus, 274.
Madagascarensis, 706.
odorata, 935, 950.
rubra, 387.
stellata, 277.
Nyssa biflora, 769.
candicans, 1021.
denticulata, 1003.
multiflora, 769.

Oak, 100–1, 128, 134, 174, 772, 866, 943, 989.
Oak ferns, 344, 879.
galls, 124.
Oannes, Babylonian deity, 72, 195.
Oars, 47.
Oases, 326.
Oat, 340, 935, 944.
Obelisks, 84, 111, 117, 124, 550, 680. removed, 348, 457, 547.
Obolaria Virginica, 962.
Observatories, magnetic, meteorological, &c, 1065.
Obsidian, 80.
Occultations, 372, 376, 518, 625.
Ocean Steam-navigation, beginning of, 1066.
Ochroma lagopus, 673.
Octopus, cuttle-fish, 58.
Ocymum Americanum, 891.
basilicum, 624, 917.
canum, 701.
cinnamomeum, 381.
crispum, 146.
gratissimum, 701.
monachorum, 931.
? salinum, 660.
sanctum, 687.
scutellarioides, 966.
suave, 578.
tenuiflorum, 966.
villosum, 695.
viride, 545.
Odina fruticosa, 730.
Schimperi, 378.
wodier, 347.
Oenanthe apiifolia, 961.
crocata, 465.
fistulosa, 358.
globulosa, 912.
incrassata, 291.
peucedanifolia, 291.
phellandrium, 506.
pimpinelloides, 291.
prolifera, 291.
virgata, 291.
Oenothera albicaulis, 1057.
biennis, 930, 970.
caespitosa, 1054.
Fraseri, 1039.
fruticosa, 995.
grandiflora, 1033.
linearis, 995.
molissima, 1011.
pinnatifida, 1057.
pumila, 961.
purpurea, 1046.
sinuata, 999.
tenuifolia, 1002.
Ohio, one of the United States, 1053.

Ohio Land Company, 1021.
Oil, 1070.
Creek, in Pennsylvania, 1070.
painting, 682.
Oil-of-ben, 298.
Oil-of-Namur, 336.
Oil tree, 565.
Okra, 274.
Oldenlandia biflora, 693.
corymbosa, 988.
glomerata, 992, 1009.
herbacea, 974.
umbellata, see *Hedyotis*.
Olea Americana, 908.
aquifolia, 632.
Capensis, 766.
dioica, 332.
fragrans, 540.
robusta, 735.
sylvestris, 73.
verrucosa, 766.
Oleander, see *Nerium*.
Olibanum, or *frankincense*, 110.
Olive, 73, 332, 779, 909.
Olympia, in Greece, temple there, 281, 313.
Olympiads, 67, 174, 200, 208, 546, 573.
Oman, or Eastern Arabia, 227, 503, 612, 937.
Omphalobium scandens, 380.
Omphalodes linifolia, 978.
verna, 903.
On, or Heliopolis, city of, 219.
Onager, or dziggetai, 111.
Onagraceæ, not found in Egypt, 4.
Oncidium variegatum, 983.
Oncoba spinosa, 390.
Ondatra zibethicus, muskrat, 875.
Onion, 104, 909, 944.
Onobrychis crista-galli, 286.
sativa, 895.
Onoclea scandens, 974.
sensibilis, 973.
sorbifolia, 983.
Ononis antiquorum, 283.
Cenisia, 971.
Cherleri, 283.
Columnae, 934.
crispa, 988.
fruticosa, 919.
minutissima, 971.
mitissima, 977.
natrix, 505.
pinguis, 912.
pubescens, 919.
rotundifolia, 903.
tridentata, 988.
variegata, 972.
viscosa, 971.
Onopordum acanthium, 792.
acaulon, 885.
Arabicum, 270.
Græcum, 489.
Illyricum, 239.
rotundifolium, 894.
virens, 1058.
Onosma divaricata, 1030.
echioides, 343, 1029.
erecta, 998.
Orientalis, 998.
sericea, 998.
simplicissima, 905.
stellulata, 405.
Onosmodium Carolinianum, 1044.
multiflora, 746.
Virginicum, 961.
Onthong Java, islands in the Pacific, 953.
Ophelia elegans, 746.
Ophioglossum bulbosum, 514.
Lusitanicum, 513.
palmatum, 987.
pendulum, 966.
reticulatum, 987.
vulgatum, 513, 969.
Ophiorhiza mungos, 693.
Ophioxylon serpentinum, 694.
Ophiucus, constellation of, 923.
Ophrys andragnitis, 1023.
apifera, 827.
arachnitis, 896.
aranifera, 894.
atrata, 1065.
bombylifera, 1050.
ciliata, 1003.
densiflora, 998.
ferrum-equinum, 273.
fusca, 906.
iricolor, 998.
lutea, 979.
mammosa, 998.
muscifera, 838.
myodes, 870.
picta, 1003.
scolopax, 979.
speculum, 1003.
tenthredinifera, 827.
umbellata, 998.
villosa, 998.
Opium, 1068.
Opium war of the English on the Chinese, 1068.
Oplismenus Burmanni, 967.
polystachyus, 966.
Opopanax, 158.
Opuntia coccinellifera, 717.
Curassavica, 950.
ficus-Indica, 658.
moniliformis, 986.
sp., 742.
tuna, 1011.
vulgaris, 769.
Orach, 248.
Oraciones, Christian rite, 757.
Oracles, 259, 529, 841.
Orange, 604, 636.
mandarin, 216.
Orange Islands, 916.
Orangs, 268, 743, 775.
Orchard-grass, or *cock's foot*, 852.
Orchidaceæ, not found in Egypt, 4.
Orchis (*Habenaria*) *bifolia*, 512.
Orchis Branciforti, 1056.
coriophora, 502.
cucullata, 1013.
ensifolia, 1002.
fuscescens, 1013.
globosa, 912.
lactea, 1003.
latifolia, 905.
longibracteata, 1056.
longicornis, 1050.
maculata, 672.
mascula, 502.
militaris, 838.
morio, 502.
nigra, 838.
ornithis, 1003.
pallens, 1018.
papilionacea, 311.
pyramidalis, 884.
sambucina, 883.
simia, 934.
spectabilis, 1016.
Susannae, 966.
undulatifolia, 392.
variegata, 880.
Orchomenus, city in Greece, 179.
Order of the Garter, 788.
Origanum Ægyptiacum, 30.
Creticum, 159.
dictamnus, see *Amaracus*.
Heracleoticum, 318.
marjorana, 248.
maru, 364.
Onites, 406.
sipyleum, 364.
Smyrnæum, 262.
Tournefortii, 317.
vulgare, 261, 944, 958.
Orinoko, river in South America, 870, 916, 1018.
Orissa, country in Southeastern Hindustan, 651, 800, 897, 1021, 1053.
Orleans, city in France, 813.
Ormocarpum sennoides, 523.
Ormuz, city on the Persian Gulf, 337, 817, 859, 862, 937.
Ornithogalum altissimum, 978.
Arabicum, 896.
arvense, 996.
bulbiferum, 1027.
chloranthum, 961.
circinnatum, 1033.
comosum, 907.
elatum, 851.
fimbriatum, 1039.
latifolium, 912.
luteum, 837.
minimum, 837, 1029.
nanum, 1008.
Narbonnense, 906.
nutans, 924.
pusillum, 907.
pyramidale, 932.
Pyrenaicum, 233.
roccense, 961.

Ornithogalum spathaceum, 1047.
stachyoides, 233.
thyrsoides, 1024.
umbellatum, 194.
villosum, 934
Ornithopus compressus, 449.
ebracteatus, 449.
perpusillus, 912.
repandus, 961.
sativus, 961.
scorpioides, 889.
tetraphyllus, 983.
Ornithrophe cominia, 982.
Ornus Europæa, 169.
rotundifolia, 169.
Orobanche alba, 1007.
Americana, 1003.
arenaria, 998.
caryophyllacea, 435.
coerulea, 1007.
cruenta, 363.
elatior, 889.
grandiflora, 435.
ramosa, 921.
uniflora, 962.
Orobus angustifolius, 1013.
canescens, 931.
croceus, 998.
hirsutus, 1007.
lathyroides, 1013.
laxiflorus, 998.
? longifolius, 1057.
luteus, 937.
niger, 835.
Pyrenaicus, 1090.
sessilifolius, 1007.
tuberosus, 435.
vernus, 835.
Orontium aquaticum, 771.
Japonicum, 976.
Orris root, 290.
Ortegia Hispanica, 901.
Orvieto cathedral, 760.
Oryx antelope, 25, 64.
Oryza, or *rice*, 79, 323.
Oryzopsis asperifolia, 1044.
juncea, 1044.
melanocarpa, 1059.
Osbeckia princeps, 1061.
Zeylanica, 999.
Osier, 153.
Osiris, or Bacchus, 131, 145, 584.
Osmerus eperlanus, 875.
Osmites asteriscoides, 1014.
camphorata, 1014.
Osmorhiza Claytoni, 975.
longistylis, 945.
Osmunda cinnamomea, 962.
hirta, &c., 987.
interrupta, 1016.
regalis, 786.
spectabilis, 1000.
Osteospermum ciliatum, 1016.
ilicifolium, 1016.
moniliferum, 975.
pisiferum, 1016.
Osteospermum polygaloides, 1000.
spinescens, 990.
Ostiaks, of Siberia, 781.
Ostrea, oyster, 154, 520
Virginica, 926.
Ostrich, traffic in the eggs and feathers, 36.
Ostrya Virginica, 927; 1000.
vulgaris, 214.
Oswego, on Lake Ontario, 1023.
Osyris alba, 459.
peltata, see *Macaranga*.
Othonna abrotanifolia, 990.
arborescens, 1011.
bulbosa, 975.
cheirifolia, 999.
denticulata, 1016.
parviflora, 990.
pectinata, &c., 993.
Otranto, in Southern Italy, 842
Ottelia alismoides, see *Damasonium*.
Otter, 136, 752.
Oufa, in West Siberia, 779.
Ouigours, Turkish tribe of E. Tartary, 525, 602, 610, 719, 747, 920.
Outai, five short Chinese dynasties, 647.
Ovieda spinosa, 986.
Ovis aries, 2, 26, 452.
bighorn, 877, 880.
Owl, 60, 1032.
Oxalis acetosella, 625.
Barrelieri, 971.
Burmanni, 1016.
caprina, 1016.
cernua, 1030.
coniorhiza, 1002.
corniculata, 644.
crenata, 668.
Dillenii, 1011.
flava, 1016.
grandiflora, 1014.
hirta, 1000.
incarnata, 993.
megalorhiza, 1002.
pectinata, 1016.
Plumieri, 986.
polyphylla, 1016.
rosea, 1002.
rubella, 1016.
(*Biophytum*) *sensitiva*, 966.
speciosa, 975.
stricta, 967.
tomentosa, 1000.
tuberosa, 668.
versicolor, 1000.
violacea, 1000.
Oxford, university at, 725.
Ox-plough, introduced in Peru, 887.
Ox-tongue, 391.
Oxus, river flowing into Lake Aral, 326, 605.
Oxybaphus albidus, 1040.
angustifolius, 1057.
nyctagineus, 1044.
ovatus, 1054.
Oxycoccus macrocarpon, 806.
palustris, 508, 788.
Oxygen gas, discovered, 959, 1034.
Oxyria digyna, 929, 937, 970.
Oxytropis ambigua, 1013.
campestris, 1028.
Lamberti, 1057.
lanata, 1013.
Lapponica, 1058.
leptophylla, 1013.
lunata, 1007–8.
myriophylla, 1013.
Pallasii, 971.
uralensis, 1028.
Oyster, 154, 520.

PACHACAMAC, ancient temple in Peru, 662, 841.
Pachyma cocos, 761, 929.
? sp., 212.
tuber-regium, 209.
Pachyrhizus angulatus, 680.
Pachysandra procumbens, 1041.
Pacific Ocean, discovered by Europeans, 861–62, 1002.
Pack-fong, or German silver, 1063.
Padina pavonia, 937.
Pæderia fœtida, 693.
Pæderota bonarota, 918.
Pæonia anomala, 812.
corallina, 81.
humilis, 903.
moutan, 544.
officinalis, 81, 632.
tenuifolia, 1013.
Paeonians, 135, 252.
Paestum, in Italy, 274, 325.
Pagodas, Hindu, 643, 718–19, 734.
Painters and Paintings, 120, 213–14. 393, 402, 618, 629, 721.
Paintings of plants, 432.
on glass, 558.
Paitan, city in Hindustan, 515.
Pajajaran, Hindu capital of Java, 709, 741.
Palafoxia integrifolia, 1059.
Palanquins, 786.
Palembang, in Sumatra, 814–15.
Palestine, 370, 391, 656, 684, 1068.
Pali, or ancient Sanscrit language and inscriptions, 669.
Palicours, tribe in the West Indies, 964.
Palisades, 944.
Paliurus aculeatus, 278.
Pallas, the planet, 1052.
Palm oil, 426, 820.
Palmetto, 262, 761.
Palmyra, city in the Syrian Desert, 540.
Palo Alto, in Mexico, 1069.
Panacea lapsorum, 724.
Panama, city on the Isthmus, 665, 864, 919.
Panathenæa instituted, 139.

Panax fruticosum, 966.
quinquefolium, 558.
trifolium, 995.
Pancratium amoenum, 898.
Caribaeum, 1009.
Illyricum, 647.
maritimum, 899.
Mexicanum, 1011.
Zeylanicum, 982.
Pandanus furcatus, 234, 917, 925.
hoffa, 385.
hsat-thiva-gyee, 816.
humilis, 966.
odoratissimus, 142.
sessilis, 382.
sp., 543.
Pandean pipe, 3.
Pandosia, city in Italy, 209.
Panicum agrostoides, 1045.
amarum, 1061.
anceps, 1041.
autumnale, 1050.
brevifolium, 982.
brizoides, 999.
capillare, 748, 982.
clandestinum, 982, 1019.
colonum, 375.
crus-galli, see *Echinochloa*.
debile, 1041.
depauperatum, 1053, 1056.
dichotomum, 1016.
elongatum, 1056.
fluitans, 375.
frumentaceum, 414.
glutinosum, 982.
hirtellum, 993.
Italicum, see *Setaria*.
jumentorum, 1038.
latifolium, 979.
melicarium, 1041.
Michauxii, 1041.
microcarpon, 1060.
miliaceum, 79, 451.
nitidum, 1041.
proliferum, 1041.
pubescens, 1041.
ramulosum, 1041.
scoparium, 1041.
striatum, 1039.
verrucosum, 1060.
virgatum, 1016.
viscidum, 1059.
xanthophysum, 1064.
Pannonia, or Western Hungary, 543, 624.
Pansy, 353.
Pantheon, at Rome, 461, 597.
Papacy, temporal or political power of, ended, 1072.
Papal hierarchy, 681.
influence, 798.
Papaver alpinum, 937.
argemone, 432.
Cambricum, 937.
dubium, 203.
floribundum, 998.
Papaver hybridum, 23.
nudicaule, 970.
Orientale, 996.
rhoeas, 204, 419.
somniferum, 182, 451.
Paper, 402, 591, 600, 663, 789, 1071.
cloth, or *tapa*, 591.
money, 758, 786, 986, 1041.
Paper rush, 13, 72, 465.
shrub, 789.
Papuan Race, 787, 869, 917, 924–25, 953.
Papyri, rolls of, or books, 103, 116, 119, 124–25, 131, 326, 620.
Papyrus antiquorum, the *paper rush*, 13, 72.
Pangorei, 465.
Paradise birds, 816, 960.
Paradisea, 861, 960.
Paraguay, in South America, 900, 1017.
Paraguay tea, 683.
Paratropia digitata, 588.
Parchment, 447.
Pardanthus Chinensis, 476.
Parechites Thunbergii, 632.
Paremboleh, in Nubia, 398.
Parietaria debilis, 1031.
Lusitanica, 972.
officinalis, 276.
Pensylvanica, 1055.
platyphyllos, 960.
polygonoides, 1009.
Paris, city of, 550, 572, 643, 814, 964, 1047, 1060, 1072.
Paris incompleta, 998.
quadrifolia, 419, 829.
Paritium tiliaceum, 428.
Parkinsonia aculeata, 988.
Parliament, 887, 958, 992, 1027, 1071.
Parmelia centrifuga, 1012.
fuciformis, 920.
Parnassia asarifolia, 1054.
Caroliniana, 1041.
palustris, 834.
Paronychia argyrocoma, 1041.
capitata, 898, 980.
echinata, 972.
herniarioides, 1041.
Hispanica, 921.
Paropamisus, Western prolongation of the Himalaya, 327.
Parrot, 304, 743, 816.
Parsees, 328, 641, 651, 755.
Parsley, 155, 205, 399, 909, 929, 935.
Parsnep, 451, 474, 909, 929, 935, 944.
Parthenians, 218.
Parthenium hysterophorus, 993.
integrifolium, 929.
Parthians, see Persians.
Partridge, red-legged, 36.
Pascataqua River, 940.
Paschal Cycle, 536, 568, 600.
Paspalum digitaria, 1041.
dissectum, 999.
distichum, 1024.
Paspalum Floridanum, 1043.
fluitans, 1061.
laeve, 1041.
paniculatum, 982.
plicatum, 1041.
scrobiculatum, 332.
serotinum, 1040.
setaceum, 1040.
stoloniferum, 1037.
villosum, 845.
Passerina capitata, 1016.
ciliata, 1016.
dioica, 365.
gampi, see *Wickstroemia*.
hirsuta, 492.
juniperifolia, 902.
polygalaefolia, 902.
uniflora, 1016.
Passiflora angustifolia, 950.
coerulea, 900.
cuprea, 1009.
filamentosa, 950.
foetida, 991.
hederacea, 964.
hibiscifolia, 1000.
hirsuta, 991.
holoserieca, 1009.
incarnata, 777.
laurifolia, 1000.
lunata, 1009.
lutea, 976.
maliformis, 950.
minima, 1000.
pedata, 997.
peltata, 992.
perfoliata, 915.
punctata, 1002.
quadrangularis, 754.
rotundifolia, &c., 986.
serratifolia, 1009.
tiliaefolia, 1002.
vespertilio, 1011.
Passion flower, see *Passiflora*.
Passover, 139, 144, 149.
Pastinaca opopanax, 158.
sativa, 451, 474, 969.
secacul, 682.
Pasto, volcano in South America, 1049.
Pastoral life, 3, 67.
Patagonula Americana, 1011.
Pataliputra, or Patna, city on the Ganges, 277, 345, 347, 369, 602.
Patchouly perfume, 862.
Patrinia rupestris, 1013.
scabiosaefolia, 321.
Siberica, 1013.
Paullinia Curassavica, 986.
cururu, 986.
pinnata, 950.
Paulownia imperialis, 632.
Paumotuan coral archipelago, 705, 924, 933.
Pavetta Indica, 738.
pentandra, 982.
Pavia Indica, 735.

Pavo, the peacock, 147, 180, 762.
Pavonia coccinea, 987.
odorata, 691.
racemosa, 983.
spinifex, 987.
Zeylanica, 1000.
Pea, 283, 435, 451, 935, 946.
Pea field, 89.
Pea-bug, 283, 292.
Pea-nut, 736.
Peach, 192, 327, 909, 960.
Peach-wort, 705, 844.
Peacock, 147, 180, 762.
Pear, 109, 451, 804, 909, 958, 960.
thorn, 866.
Pearls, 147, 403, 573, 630, 663, 857.
Pearl-wort, 848.
Pecan hickory, 749.
nuts, 749.
Pecten, 154.
Pectis ciliaris, 987.
humifusa, 987.
linifolia, 983.
punctata, 987.
Pedalium murex, 249.
Pedicularis asplenifolia, 1056.
Canadensis, 1025.
comosa, 1029.
elata, 1013.
euphrasioides, 1013.
fasciculata, 906.
flammea, 1011.
flava, 1032.
foliosa, 894.
Groenlandica, 1042.
gyroflexa, 1028.
incarnata, 894.
lanata, or *verticillata*, 607.
lanceolata, 1044.
Lapponica, 1011.
myriophylla, 1032.
palustris, 450.
recutita, 1028.
resupinata, 1013.
rostrata, 907.
sceptrum Carolinum, 960.
spicata, 1032.
striata, 1032.
sylvatica, 878.
tuberosa, 898.
uncinata, 1013.
Pedilanthes thymaloides, 985.
Peganum Dauricum, 1013.
harmala, 138.
Pegu, city and kingdom in Burmah, 588, 619, 812, 856, 861.
Pekin, city in China, 753, 761, 956, 1010, 1065, 1070.
Pelargonium acetosum, 998.
alchemilloides, 982.
angulosum, 997.
auritum, &c., 993.
betulinum, 1000.
bifolium, 1016.
capitatum, 982.
carnosum, 1011.
Pelargonium coriandrifolium, 982.
cucullatum, 982, 1009.
ferulaceum, 1016.
fulgidum, 1007.
gibbosum, 982.
grossularioides, 982.
hybridum, 1011.
inquinans, 1009.
lacerum, 975.
longifolium, 1016.
melananthum, 1014.
myrrhifolium, 982.
odoratissimum, 1011.
papilionaceum, 1009.
peltatum, 998.
pinnatum, 998.
ramosissimum, 1016.
trifidum, 997.
triste, 947.
vitifolium, 997.
zonale, 998.
Pelasgians, or Pelasgian Greeks, 132, 154, 186.
Peleiads, 132.
Pelican, 15.
Pellitory, 276, 390.
Peloponnesian war, 282.
Peloponnesus, 825.
Peltaria alliacea, 907.
Peltidea apthosa, 436.
canina, 436.
crocea, 1012.
Pemphis acidula, 966.
Penaea sarcocolla, 999.
Penang lawyer, walking sticks, 411.
Pendulum, applied to clocks, 960.
Pennisetum Benthami, 432.
dichotomum, 591.
typhoideum, 898.
Pennsylvania, State in N. America, 978.
Pennyroyal, 199, 944.
Penny-wort, 700.
Penobscot River, in Maine, 947.
Pensacola, in Florida, 1037.
Pentapetes phoenicea, 555.
Pentaptera arjuna, 617.
glabra, 412.
sp., 240.
tomentosa, 412.
Pentateuch, Hebrew, translated, 651, 885.
Penthorum Chinense, 1047.
sedoides, 1016.
Penthsaoyan, Chinese writing, 686.
Pentstemon angustifolium, 1057.
campanulatus, 973.
cristatum, 1057.
erianthera, 1057.
frutescens, 1052.
grandiflorum, 1057.
laevigatus, 977.
pubescens, or *hirsutum*, 962.
Pentzia flabelliformis, 1016.
Peony, or *piony*, 81.
Peperomia pellucida, 986.
Peperomia peltata, 783.
quadrifolia, 986.
umbellata, 783.
Peplis portula, 244.
Pepper, 306, 312, 344, 438, 573, 682.
Peppergrass, 94, 867.
Peppermint, 671.
Pepperwort, 94, 473, 540.
Pequots, N. American tribe, 949.
Perca fluviatilis, perch, 453, 503.
Perdix Graeca, 36.
Peresk̃ia aculeata, 993.
portulacifolia, 950.
Perfumes, traffic in, 63.
Pergamus, in Asia Minor, 407.
Pergularia tomentosa, 671.
Perilla ocymoides, 787.
Period, or full stop, in writing, 703.
Periploca angustifolia, 1028.
Græca, 765.
Periwinkle, 477, 509.
Perotis latifolia, 973.
Persea Carolinensis, 778, 866, 869.
gratissima, 824.
Persepolis, antiquities at, 257.
Persia, 257, 383, 439, 454, 457, 534, 552, 571, 598, 599, 600, 602.
Persian Gulf, becomes known to the Greeks, 330, 348, 860.
Persian lilac, 930.
Persimmon, 770.
Persoon Synopsis Plantarum, 1055.
Peru and Peruvians, 665, 862, 900, 917, 1063–64.
Peruvian bark, 717, 920.
willow, 789.
Pescadores, islets between China and Formosa, 796, 961.
Pestilence, 282, 285, 313, 529, 539–41, 580, 585, 602, 619, 666, 676, 787, 964.
Petaloma myrtilloides, 982.
Petalostemum candidum, 1044.
carneum, 1043.
corymbosum, 1040.
gracile, 1057.
violaceum, 1044.
Peter Pence, tax of, 618.
Peterborough cathedral, 716.
Petition, right of, asserted by Massachusetts and other colonies, 1028.
Petiveria alliacea, 987.
Petra, city of, also called Selah and Joktheel, 199, 461, 519.
Petrea volubilis, 1012.
Petroleum, 1070.
Petroselinum sativum, 969.
Peucedanum album, 1013.
cervaria, 205.
fœniculaceum, 604.
Isetense, 1013.
nodosum, 34[illegible].
officinale, 294.
oreoselinum, 358.
palustre, 450, 520.

Peumus Dombeyi, 661.
Peziza auricula, 921.
Phaca aboriginorum, 641.
alpina, 1007.
Boetica, 323.
Gerardi, 1007.
salsula, 1032.
triphylla, 1057.
Phacelia bipinnatifida, 1044.
fimbriata, 1041.
glabra, 1061.
heterophylla, 1055.
hirsuta, 1061.
linearis, 1054.
parviflora, 992.
Purshii, 1055.
Phacochœres Aeliani, Abyssinian boar, 322.
Phaethusa Americana, 1000.
Phalacroloma annua, see *Erigeron*.
Phalangium coeruleum, 1002.
croceum, 1043.
eccremorrhizum, 1002.
Phalaris aquatica, 971.
arundinacea, 839.
Canariensis, 734.
intermedia, 1050.
paradoxa, 349.
phleoides, 839.
Phallus Hadriani, 971.
impudicus, 880.
sp., 532.
Pharbitis nil, 629.
purpurea, 941.
Pharnaceum albens, 999.
distichum, 999.
glomeratum, 999.
Pharos, or lighthouse, at Alexandria, 373, 613.
Pharsalia, battle at, 455.
Pharus latifolius, 983.
Phaselis, city in Asia Minor, 220.
Phaseolus aconitifolius, 832.
alatus, 1011.
coccineus, 575.
diversifolius, 1040.
helvolus, 1011.
lathyroides, 983.
lunatus, 1018.
max, 188.
mungo, 373.
perennis, 1016.
radiatus, 146.
sphaerospermus, 983.
trilobus, 332.
vexillatus, 1011.
vulgaris, *kidney-bean*, 575, 866, 874, 876, 926, 939, 954.
Phasianus Colchicus, 286.
Phasis, at the foot of Caucasus, 311.
Pheasant, 286.
Phelypaea lutea, 436.
Tournefortii, 995.
Philadelphia, city in North America, 978, 980, 1035–36.
Philadelphus coronarius, 411.
Gordonianus, 604.
grandiflorus, 1057.
inodorus, 1003.
Lewisii, 604.
Philæ, island at the first cataract of the Nile, 312, 528, 584, 1068.
Philippines, Northeastern portion of the Malayan Archipelago, 147, 689, 846, 865, 896, 900, 916.
Philippopolis, city in Greece, 538.
Philistines, 170.
Phillyrea angustifolia, 362.
latifolia, 184.
media, 884.
Philosophers banished from Rome, 400.
Philoxerus vermicularis, see *Iresine*.
Phleum alpinum, 840.
arenarium, 989.
asperum, 971.
Boehmeri, 894.
Michelii, 894.
pratense, 941.
Phlomis fruticosa, 272.
herba-venti, 894, 1029.
Italica, 898.
leonitis, 979.
lunarifolia, 998.
lychnitis, 901.
Nissolii, 1021.
purpurea, 971.
tuberosa, 793.
Phlox Carolina, 995, 1009.
divaricata, 1024.
glaberrima, 1011.
maculata, 1019.
paniculata, 1011.
pilosa, 961.
reptans, 1041.
Siberica, 1013, 1032.
speciosa, 1055.
subulata, 992.
Phoca, seal, 718.
Phocaea, Greek city in Asia Minor, 231, 236, 241, 243.
Phocian Greeks, 271.
Phœnicia, 86, 94, 133, 157, 201.
Phœnician, or Punic, inscriptions, 302, 534.
Phœnix, period of time, 1, 60, 69, 122, 212.
Phœnix dactylifera, *date palm*, 16, 61, 72, 254, 464.
Equinoxialis, 382.
farinifera, 729.
paludosa, 702.
reclinata, 266.
sp., 264.
sylvestris, 330.
Phoradendron flavescens, 1039.
purpureum, 990.
rubrum, 1005.
Phormium tenax, 437.
Phosphorus, 756.
Photography, art of, 1068.
Phour dynasty of Hindustan, 397.
Phragmites communis, 149, 425, 450, 605.
Phrygia, country in Asia Minor, 193.
Phryma leptostachya, 1000.
Phrynium capitatum, 537.
Phylacteries, 137, 140.
Phylica acerosa, 999.
brunioides, 975.
buxifolia, 1015.
capitata, 1015.
cordata, 998.
ericoides, 993.
plumosa, 999.
pubescens, 998.
stipularis, 1015.
Phyllanthus atropurpureus, 381.
Carolinensis, 1039.
dumosus, 1000.
falcatus, 1000.
multiflorus, 832.
niruri, 528.
ramiflorus, 1032.
rhamnoides, 975.
simplex, 528.
stipulaceus, 385.
urinaria, 528.
virosus, 577.
Phyllis nobla, 1011.
Phyllocladus trichomanoides, 437.
Phyllodoce coerulea, 991.
Daboeci, 997.
Phyllolobium Zanzibarense, 380.
Phyllophora Menziesii, 582.
Physalis alkekengi, 313, 419.
angulata, 429.
arborescens, 1021.
Curassavica, 999.
lanceolata, 1024.
Peruviana, 755.
pruinosa, 1011.
pubescens, 950.
somnifera, see *Withania*.
totorep, 419.
viscosa, 1011.
Physalus, fin-back whale, 666.
Physeter, sperm whale, 536, 752.
Physic-nut, 868.
Physospermum Cornubiense, 901.
Physostegia Virginiana, 971.
Phytelephas macrocarpa, 717.
Phyteuma comosa, 918.
hemisphaerica, 911.
lanceolata, 998.
limonifolia, 998.
orbicularis, 934.
ovata, 997.
pauciflora, 939.
pinnata, 920.
Scheuchzeri, 997.
spicata, 878.
Phytolacca decandra, 750.
dioica, 1025.
icosandra, 1024.
octandra, 989.
Pichurim beans, 855.

Pico, one of the Azores islands, 830.
Picramnia albidum, 894.
antidesma, 983.
Picrasma ailanthoides, 601.
Picridium Orientale, 894.
perenne, 501.
Tingitanum, 178.
vulgare, 563.
Picris asplenioides, 324.
hieracioides, 140.
Sprengeriana, 931.
Picrorhiza kurroo, 497.
Picts of Scotland, 545, 550, 552, 629.
Piddingtonia nummularia, 1045.
Pider, in Sumatra, 860.
Pierardia sapota, 112.
Piers Ploughman's Vision, an old English writing, 791.
Pig, 64, 104, 917.
Pigeon, 28, 136.
Pigeon-pea, 443.
Pilgrims, 684.
Piliostigma Thonningii, 730.
Pill-wort, 849.
Pilularia globulifera, 849.
Pimpernell, 200, 501, 508, 626.
Pimpinella anisum, see *Sison*.
dioica, 898.
dissecta, 759.
magna, 759.
saxifraga, 626.
tenuis, 435.
tragium, see *Tragium*.
Pinckneya pubens, 1033.
Pine, 73, 328, 808–9, 816, 870.
Pineapple, 674, 976.
Pine-nuts, 73.
Pingrass, 706.
Pinguicula acutifolia, 1044.
alpina, 907.
elatior, 1040.
lutea, 1040.
pumila, 1043.
villosa, 988.
vulgaris, 653.
Pink, 353, 765, 796, 834.
Pinnotheres, parasitic crab, 22.
Pinos Island, discovered, 855.
Pinus australis, 908.
Banksiana, 1043.
cembra, 652.
contorta, 604.
densiflora, 457.
deodara, see *Cedrus*.
excelsa, 328.
flexilis, 869, 880.
inops, 1024.
Koraiensis, 1063.
Lambertiana, 583.
longifolia, 328.
maritima, 168.
Massoniana, 127.
montana, 451.
monticola, 581.
Morgai, 917.
Pinus mughus, 455.
Occidentalis, 987.
palustris, 877, 893.
parviflora, 1035.
pauciflora, 418.
peuce, 367.
pinaster, 512.
pinea, 73.
ponderosa, 583.
pumilio, 455.
pungens, 1053.
resinosa, 927, 1010.
rigida, 808, 940.
Sabiniana, 605.
serotina, 1043.
strobus, 876.
sylvestris, 167, 198, 451.
tæda, 761, 869, 877, 893, 909.
variabilis, 1024.
Piony, 81, 544.
Piper acuminatum, 986.
aduncum, 986.
Afzelii, 844.
amalago, 973.
betel, 344.
caninum, 629.
caudatum, 950.
chabā, 682.
cubebs, 629.
decumanum, 986.
diffusum, 966.
distachyum, 986.
excelsum, 438.
geniculatum, 915.
longum, 306.
macrophyllum, 982.
maculosum, 986.
methysticum, 344, 438.
obtusifolium, 986.
peltatum, 950.
portulacoides, 1067.
reticulatum, 986.
ribesioides, 588.
rotundifolium, 986.
rugosum, 950.
siriboa, 445.
subpeltatum, 966.
sylvaticum, 579.
sylvestre, 312.
trifolium, 986.
umbellatum, 986.
Pipewort, 1026.
Piqueria trinervia, 790.
Pirates, and buccaneers, 843, 888, 918, 963–64, 976, 1005.
Piratinera Guayanensis, 936.
Pisa, city in Italy, 132, 678, 708, 714, 751, 885.
Pisatis, city in the Peloponnesus, 153.
Piscidia Carthaginensis, 1000.
erythrina, 987.
Pisonia aculeata, 984.
Pistachio nut, 327.
Pistacia lentiscus, 275.
reticulata, 898.
Pistacia terebinthus, 93.
trifolia, 994.
vera, 327.
Pistia stratiotes, 32.
Pisum arvense, 89.
maritimum, 923, 935, 940.
ochrus, 345.
sativum, 451.
Pitcairnia coarctata, 1002.
latifolia, 986.
Pitch, 794.
Pithecus satyrus, 775.
Pittosporum Moluccanum, 966.
tobira, 631.
Pittsburg, city on the Ohio, 1023.
Plague, the pestilential disease, 519, 586, 668.
Plane-tree, 157.
Planera abelicea, 355.
aquatica, 1040.
Japonica, 622.
Plantago albicans, 898.
alpina, 912.
Bellardi, 894.
Caroliniana, 1016.
cordata, 1044.
coronopus, 346.
crassa, 870.
Cretica, 916.
cucullata, 949.
(Psyllium) cynops, 365.
graminea, 906.
interrupta, 1041.
ispaghula, 498.
lagopus, 454.
lanceolata, 480.
macrorhiza, 972.
major, 156, 419, 958, 969.
maritima, 894, 969.
media, 97.
minuta, 1033.
Patagonica, 1042.
psyllium, 197.
serpentina, 930.
serraria, 919.
stricta, 978.
subulata, 903.
Virginica, 961.
Wulfenii, 889.
Plantain, 156, 419, 663, 917, 962, 976.
Platanthera blephariglottis, 1016.
bracteata, 1016.
ciliaris, 761.
cristata, 1041.
dilatata, 1059.
fimbriata, 1038.
fissa, 1055.
flava, or *virescens*, 968.
hyperborea, 1025.
latera, 968.
obtusata, 1060, 1064.
orbiculata, 1056.
psychodes, 962.
rotundifolia, 1060.
Platanus Occidentalis, 961.
Orientalis, 157.

Plectranthus aromaticus, see *Coleus*.
crassifolius, 377.
Mauritianus, 1067.
ternatus, 385, 1067.
Plectronia ventosa, 1015.
Pleea tenuifolia, 1041.
Plegorhiza guaicuru, 662.
Pleiades, the constellation, 186, 517.
Pleurogyne Carinthiaca, 1038.
Pleurotoma Babylonica, 144.
Trapezii, 144.
Plica polonica, disease of the hair, 1001.
Plinia crocea, 950.
Plocama pendula, 764.
Plocamium coccineum, 368.
Ploearia candida, see *Gracilaria*.
tenax, see *Gracilaria*.
Pluchea bifrons, 992.
camphorata, 1011.
Dioscoridis, 464.
fœtida, 1011.
Marilandica, 1016.
sp., 731.
Plukenetia corniculata, 966.
volubilis, 987.
Plum, 210, 219, 692, 805, 909, 960.
Plumbago Europæa, 896.
lapathifolia, 998.
rosea, 696.
scandens, 950.
Zeylanica, 415.
Plumiera alba, 713.
incarnata, 663.
obtusa, 987.
purpurea, 663.
rubra, 713.
Plumieriæ gen., 600.
Plymouth, town in Massachusetts, 939, 943.
Po, the river, 133, 390.
Poa Abyssinica, 818.
alpina, 841.
annua, 750.
brevifolia, 1060.
bulbosa, 937.
Cilianensis, 971.
compressa, 937.
decumbens, 841.
flexuosa, 1060.
glutinosa, 982.
laxa, 997.
maritima, 904.
nemoralis, 841.
pratensis, 279.
see *Eragrostis*.
Sicula, 972.
supina, 997.
trivialis, 279.
Podalyria calyptrata, 1014.
myrtillifolia, 1000.
Podocarpus ferruginea, 437.
maki, 631.
nageia, 632.
Podophyllum peltatum, 767, 970.
Podostemon ceratophyllum, 1000.
Poetry, Greek, 132, 164, 218.
Hebrew, 74.
Pogonia divaricata, 1003.
ophioglossoides, 1000.
parviflora, 1000.
verticillata, 1000.
Pogostemon patchouli, 862.
Poinciana elata, 729.
pulcherrima, 632.
regia, 384.
? spinosa, 661.
Poitiers, in France, 789.
Poke, 750.
Poland, 733, 994, 1032, 1047, 1048, 1060.
Polanisia chelidonii, 737.
graveolens, 1057.
icosandra, 736.
Polar bear, 758.
Polar night of six months, 202.
Polemonium cœruleum, 906.
reptans, 1016.
Police, 753.
Pollinia gryllus, 940.
Polyanthes tuberosa, 915
Polycarpon tetraphyllum, 485.
Polychroite, 115.
Polycnemum Americanum, 1057–58.
arvense, 913.
erinaceum, 903.
malacophyllum, 1007.
monandrum, 1029.
oppositifolium, 1007, 1029.
sclerospermum, 1007, 1033.
Sibericum, 1013.
Polygala alba, 1055.
amara, 487.
bracteolata, 1007.
clinclin, 662.
crotalarioides, 497.
cruciata, 962.
cymosa, 1040.
diversifolia, 983.
flavescens, 888.
grandiflora, 1040.
Heisteria, 1000.
incarnata, 962.
lutea, 962.
major, 921.
Monspeliaca, 912.
myrtifolia, 993.
paucifolia, 1052.
penaea, 987.
polygama, 1039.
ramosa, 1050.
sanguinea, 995.
senega, 768.
setacea, 1041.
Siberica, 1013.
stipulacea, 993.
supina, 1007.
telephioides, 737.
teretifolia, 975.
theezans, 970.
thesioides, 1002.
umbellata, 1016.
Polygala venenosa, 444.
venulosa, 487.
verticillata, 962.
viridescens, 992.
vulgaris, 487.
Polygamy, 82.
Polygonatum ambiguum, 961.
giganteum, 1054.
Japonicum, 418.
latifolium, 419.
multiflorum, 495.
pubescens, 958, 968.
verticillatum, 882.
vulgare, 495.
Polygonella articulata, 1019.
Polygonum acre, 951, 968.
alpinum, 993.
amphibium, 844.
arifolium, 948.
aviculare, 393, 419, 969.
barbatum, 476.
Bellardi, 971.
bistorta, 511.
bistortoides, 1055.
Careyi, 1064.
(*Helxine*) *cilinode*, 1044.
dumetorum, 904, 929.
(*Helxine*) *emarginatum*, 743.
(*Helxine*) *fagopyrum*, 841.
hirsutum, 1040.
hydropiper, 450, 492, 969.
hydropiperoides, 1041.
lapathifolium, 904.
maritimum, 393.
minus, 918.
mite, 968.
nodosum, see *P. lapathifolium*.
ocreatum, 1013.
Orientale, 996.
Owenii, 381.
Pennsylvanicum, 1019.
perfoliatum, 999.
persicaria, 705, 969.
ramosissimum, 1044.
sagittatum, 948.
scandens, 983.
sericeum, 1013.
(*Helxine*) *Tataricum*, 743.
tenue, 1044.
tinctorium, 605.
tomentosum, 999.
undulatum, 779.
Virginianum, see *Tovaria*.
viviparum, 780, 970.
Polylepis tomentella, 885.
Polymnia Abyssinica, see *Verbesina sativa*.
Canadensis, 1025.
uvedalia, 979.
Polynesians, earliest notice of, 427.
subsequent notices, 583.
Polypodium acrostichoides, 974.
arvonicum, 1000.
asplenioides, 983.
calaguala, 717.
calcareum, 921.

Polypodium crassifolium, 717, 987.
dissimile, 1000.
dryopteris, 879.
effusum, 1000.
fragrans, 753.
griseum, 1000.
hexagonopterum, 1000.
incanum, 978.
leptophyllum, 988.
lycopodioides, 898.
phegopteris, 558.
phymatodes, 1000.
piloselloides, &c, 987.
quercifolium, 924.
reptans, 1000.
sanctum, 1000.
scolopendroides, 1000.
serrulatum, 983.
speluncæ, 1000.
stigmosum, 997.
trapezoides, 983.
vulgare, 344, 958.
Polypogon Monspeliense, 349.
Polyporus, or *spunk*, 451, 808.
Polypremum procumbens, 997.
Polytaenia tenuifolia, 1060.
Polytheism, 103.
Pomegranate, 41, 909.
Pompeii and Herculaneum, 515.
Pongamia glabra, 412.
tetrapetala, 590.
Pontederia cordata, 976.
hastata, 555.
vaginalis, 729.
Ponthieva pubera, 1016.
Pontifex maximus, office of, 464.
Pontifical books, 464.
Pontus, country on the Black Sea, 108.
Poon spars, 332, 728.
Popayan, in South America, 877.
Popish Plot in England, 975.
Poplar, 96, 108, 133, 201, 419.
Poppy, 23, 182, 203–4.
Populus alba, 96.
angulata, 1021.
balsamifera, 812.
dcro, 201, 419.
fastigiata, 672.
grandidentata, 1044.
heterophylla, 1016.
monilifera, 965.
nigra, 168.
tacamahaca, 1021.
tremula, 133.
tremuloides, 935, 943.
Porcelain, 630, 903.
Porcupine, 70.
Porliera hygrometrica, 760.
Porphyra laciniata, 704.
Porphyry quarries, 534.
Porpoises, 182, 432.
Port of Boston, closing of, by Act of Parliament, 1034.
Port Possession, in California, 880.
Porto Rico, island of, 919.
Porto Santo, a small island near Madeira, discovered, 803, 810.
Portraits of early Egyptian kings, 67, 71, 84, 126.
Portsmouth, city and seaport in New England, 977.
Portugal, or Lusitania, 401, 434, 568, 683, 842, 951, 1024, 1056, 1063.
Portuguese, their first entry in China, 862.
Portulaca halimoides, 950.
Meridiana, 729.
oleracea, 611, 891, 929, 935.
pilosa, 950.
quadrifida, 729.
Portulacaria Afra, 1011.
Postal Establishments, 214, 834.
Potamogeton compressus, 450.
crispus, 62.
densus, 198.
fluitans, 450.
gramineus, 306.
heterophyllus, 918.
lucens, 665.
natans, 62.
pectinatus, 472.
perfoliatus, 450.
pusillus, 896.
Robbinsii, 1065.
serratus, 892.
setaceus, 937.
Potato, 660, 668, 753, 853, 929.
Potentilla agrimonoides, 1013.
alba, 878.
anserina, 636, 923.
argentea, 636.
arguta, 1056.
aurea, 907.
bifurca, 998.
Canadensis, 963.
canescens, 907.
caulescens, 894.
cinerea, 892.
Clusiana, 907.
comarum, 557.
dissecta, 1060.
emarginata, 1059.
fragariastrum, 241.
frigida, 1064.
fruticosa, 813.
geoides, 1005.
grandiflora, 1013.
hirsuta, 977.
hirta, 315.
intermedia, 937.
multifida, 889.
nemoralis, 889.
nitida, 918.
nivea, 970, 1014.
Norwegica, 959.
opaca, 907.
Pennsylvanica, see *P. strigosa*.
pimpinelloides, 1007.
recta, 760.
reptans, 289.
rupestris, 793.
Potentilla simplex, 968.
speciosa, 357.
stipularis, 1013.
strigosa, 1014.
subacaulis, 898.
supina, 851.
tormentilla, 563.
tridentata, 1043.
verna, 878.
verticillaris, 1013.
villosa, 1058.
Poterium hybridum, 972.
polygamum, 487.
sanguisorba, 487, 969.
spinosum, 202.
Pothos acaulis, 986.
cordatus, 986.
crenatus, 986.
lanceolatus, 986.
macrophyllus, 986.
(*Scindapsus*) *officinalis*, 697.
palmatus, 986.
pinnata, 966.
scandens, 973.
Potosi, 580.
silver mines, 827, 885, 906.
Potter's varnish, 782.
wheel, 618.
Pottery, art of making, 17, 98, 235, 721.
Pounce, 152.
Pragmatic Sanction, 815–16, 1010.
Prangos pabularia, 328.
Prasias Lake, 252.
Prasium majus, 225.
Precession of Equinoxes, 400, 571.
Precious stones, the traffic in, 403, 663, 686, 689.
Premna esculenta, 735.
integrifolia, 579.
latifolia, 746.
odorata, 689.
tomentosa, 746.
Prenanthes chondrilloides, 361.
hieracifolia, 934.
juncea, 1057.
muralis, 361.
purpurea, 911.
sarmentosa, 1015.
spinosa, 952.
viminea, 934.
Presbyterians, 1005.
Prickly Glasswort, 646.
pear, 658, 717, 769.
Primogeniture, 403.
Primula auricula, 557.
elatior, 635.
farinosa, 419.
integrifolia, 894.
longifolia, 998.
marginata, 894.
minima, 894.
Mistassinica, 1044.
nivalis, 1052.
Palinuri, 915.
veris, 637.

Prince William's Islands, in the Pacific, 953.
Prince's feather, 996.
Principe, African island, 833.
Prinos ambiguus, 1040.
coriaceus, 1052–53.
glaber, 1019.
laevigatus, 1056.
lanceolatus, 1055.
verticillatus, 957.
Printing, art of, 649, 676, 815, 828, 830, 896, 951, 1024.
press, first, set up in North America, 951.
Priva lappulacea, 983.
Mexicana, 1011.
Private wars, or wager of battle, 753.
Privet, 460.
Proclamations, 950, 1047, 1070–71.
Prome, city in Burmah, 278, 517, 519, 812.
Proserpinaca palustris, 1017.
pectinata, 1041.
Prosopis dulcis, 663.
horrida, 668.
sp., 741.
spicigera, 88.
Protea acaulis, 1006.
argentea, 999.
barbata, 766.
conocarpa, 999.
cucullata, 999.
cyanoides, 999.
cynaroides, 1006.
grandiflora, 766.
hypophylla, 999.
lepidocarpon, 1006.
Levisanus, 997.
longiflora, 1006.
longifolia, 1006.
melaleuca, 1006.
mellifera, 1006.
nana, 997.
nereifolia, 924.
repens, 1006.
saligna, 999.
scolymus, 1006.
serraria, 999.
speciosa, 1006.
Protestant Reformation, 863, 869–70, 872, 877, 886, 892.
Protestants, religious sect, 939, 952.
Protococcus nivalis, red snow, 936.
Proverbs, 83.
Providence, city and seaport in New England, 949, 956.
Province rose, 506.
Prunella, see *Brunella*.
Prunus Americana, 805, 875, 929, 940, 958.
capulin, 1000.
chicasa, 747, 878, 880, 896, 929
domestica, 345, 969.
hiemalis, see *P. Americana*.
insititia, 167, 218, 451.
Prunus Kaempferi, 210.
maritima, 805, 866, 928.
mume, 632.
prostrata, 356.
Sinensis, 989.
spinosa, 451.
umbellata, 878.
Prussia, 994, 1056, 1059.
Psamma arenaria, 605, 969.
Pseudocacia fol. mucr., 661.
Pseudocerasus, 601.
Psidia linearifolia, 1067.
Psidium aromaticum, 950.
guayava, 627, 882.
pumilum, 966.
Psilotum triquetrum, 987.
Psittacus, 960.
sp., *lory*, 564.
Psophocarpus tetragonolobus, 823.
Psoralea Americana, 901.
aphylla, 975.
argophylla, 1055, 1057.
bituminosa, 270.
bracteata, 993.
canescens, 1041.
corylifolia, 461.
cuspidata, 1057.
esculenta, 748.
glandulosa, 1002.
lanceolata, 1055.
lupinellus, 1041.
melilotoides, 1016.
Palæstina, 851.
physoides, 604.
pinnata, 982.
tenuiflora, 1054.
virgata, 1059.
Psychine stylosa, 1015.
Psychotrea herbacea, see *Geophila*.
myrtiphyllum, 982.
sp., 423, 731.
Ptelea trifoliata, 992.
Pteris aquilina, 97, 450, 891, 969.
arguta, 1000.
biaurita, 1000.
crenata, 970.
Cretica, 894.
ensifolia, 905.
heterophylla, 983.
lanceolata, &c., 987.
longifolia, 979.
pedata, 990, 1000, 1017.
piloselloides, 989.
sp., 418.
thalictroides, 966.
Pterocarpus dalbergioides, 597.
draco, 913.
erinaceous, 825.
Indicus, 423.
lunatus, 987.
marsupium, 643.
pallidus, 917.
santalinus, 574.
Wallichii, 643.
Pterocarya sorbifolia, 621.
Pterocaulon pycnostachyum, 1040.
Pterocles, sand grouse, 589.
Pterolobium lacerans, 573.
Pteronia camphorata, 1000.
oppositifolia, 977.
Pterospermum acerifolium, 244, 444.
aceroides, 244.
rubiginosum, 743.
subacerifolium, 244.
suberifolium, 592.
Pterygodium catholicum, 1009.
Ptolemais, city of, 760.
Ptychotis ajowan, 307.
Coptica, 307.
involucrata, 497.
sylvestris, 497.
verticillata, 404.
Puccoon, 767.
Pueraria Thunbergiana, 561.
tuberosa, 593.
Puerto Rico, island, discovered, 855, 861.
Pugan, city in Burmah, 519, 1063.
Pugionium cornutum, 1007.
Pulex, flea, 47.
Pulicaria dysenterica, 343.
odora, 215, 889.
vulgaris, 906.
Pulmonaria lanceolata, 1057.
maritima, 933.
officinalis, 567.
Siberica, 1013.
suffruticosa, 940.
(*Mertensia*) *Virginica*, 978.
Pulo Condore, island in the East Indies, 981.
Pulsatilla patens, 1029.
Pumpkin, 606, 709, 869, 929.
Pumps, invention of, 136.
Punica granatum, 41.
Puranas, Sanscrit writings, 687, 691, 843.
Puritans, 887, 939.
Purple Yam, 714.
Purshia tridentata, 1055.
Purslane, 244, 611, 915, 935.
Putranjiva Roxburghii, 691.
Pycnanthemum aristatum, 979.
clinopodioides, 1040.
incanum, 962.
lanceolatum, 946.
montanum, 1041.
muticum, 946.
Virginicum, 979.
Pygeum acuminatum, 462.
Pyramids, 63, 91, 533, 629, 951.
Pyrethrum Indicum, 1048.
inodorum, 882.
parthenium, 336.
Pyrola chlorantha, 1044.
minor, 989, 1064.
rotundifolia, 844, 969.
secunda, 849.
uniflora, 813.
Pyrrhopappus Carolinianus, 1040.
Pyrularia oleifera, 908.
Pyrulus rivularis, 581.

Pyrus aria, 285, 451.
baccata, 759.
Chinensis, 622.
communis, 109, 167, 451.
cuneifolia, 356.
malus, see *Malus sylvestris*.
parviflora, 998.
Poltveria, 931.
prunifolia, 1024.
salicifolia, 121.
(*Aria*) *torminalis*, 505.
Pythian Games, 235, 256.
Python, genus of gigantic serpents, 81, 369, 378.
Pyxidanthera barbulata, 1044.

QUADRANT, 815.
Quaestors, Roman, 273, 288, 292.
Quakers, a religious sect, 959–60, 978, 980, 995.
Quaking grass, 880.
Quamoclit coccinea, 1001.
pennata, 820.
Quarry marks, 67, 70–1.
Quassia simaruba, see *Simaruba*.
Quebec, city in Canada, 875, 927, 930, 944, 1023.
Quelpaerts Island, south of Corea, 608, 666, 765.
Quercus acutifolia, 1045.
ægilops, 101.
agrifolia, 989.
alba, 772, 929, 940.
aquatica, 896, 1003.
aristata, 1064.
Austriaca, 921.
ballota, 101
Banisteri, see *ilicifolia*.
barbinervis, 1067.
Benthami, 1067.
beroni, 418.
bicolor, 946.
calophylla, 1065.
callosa, 1067.
canditans, 1045.
castanea, 1044–45.
Catesbœi, 1003.
cerris, 101.
cinerea, 1003.
circinata, 1045.
coccifera, 86.
coccinea, 992.
confortifolia, 1054.
corrugata, 1067.
crassifolia, 1054.
crassipes, 1054.
crispula, 622.
densiflora, 1064.
dentata, 621.
depressa, 1054.
Douglasii, 1064.
dysophylla, 1067.
elliptica, 1045.
esculus, 126.
falcata, 896, 1016.
Quercus Garryana, 1046.
germana, 1065.
Ghiesbreghtii, 1067.
glabrescens, 1067.
glauca, 989.
glaucoides, 1067.
Grahami, 1067.
Humboldtii, 1051.
humilis, 465.
ilex, 174.
ilicifolia, 965.
imbricaria, 1044.
infectoria, 124.
insignis, 1067.
laeta, 1067.
lanceolata, 1054.
lanigera, 1067.
laurifolia, 1065.
laurina, 1054.
lobata, 1045.
Lusitanica, 902.
lutescens, 1067.
lyrata, 1039.
macrocarpa, 1044.
magnoliæfolia, 1045.
microphylla, 1045.
Moluccana, 966.
nigra, 896, 962, 1003.
nitens, 1067.
Oaxacana, 1068.
obtusata, 1054.
obtusiloba, 957.
palustris, 1031.
phellodrys, 961.
phellos, 962.
phillyroides, 622.
polymorpha, 1065.
prinoides, 1039.
prinus, 893, 957, 962, 992.
pseudosuber, 889
pubescens, 101.
pulchella, 1054.
pumila, 992.
repanda, 1054.
reticulata, 1054.
robur, 100, 451.
rubra, 875, 924–25, 927, 940, 942–43, 957.
rugulosa, 1067.
salicifolia, 867.
serrata, 610.
Skinneri, 1067.
Sonomensis, 1067.
sp., 582.
sp., of Burmah, 416.
splendens, 1045.
suber, 256.
tauzin, 902.
tinctoria, 943, 957.
Tlapuxahuensis, 1067.
Tolimensis, 1051.
tomentosa, 1045.
Tournefortii, 101.
undulata, 1062.
virens, *live oak*, 761, 868, 896.
Xalapensis, 1054.
Queue, in hair-dressing, 946.
Quiché, city on Lake Atitan in Guatemala, 649.
Quicksilver, 291, 296, 897, 900.
Quillaia smegmadermos, 660.
Quillwort, 837.
Quiloa, city in East Africa, 860.
Quince, 177, 239, 688, 909, 960.
Quinchamalium Chilense, 662.
Quippus, or knotted cord to assist memory, 77, 783, 1009.
Quiriyelia Zeylanica, 970.
Quisqualis Indica, 608, 690.
Quitch grass, 666.
Quito, city and country in Equatorial America, 659, 825, 834, 868, 874.

RABBIT, 87, 465, 869, 908.
Radack coral archipelago, 1061.
Radiola millegrana, 899.
Radish, 207, 473, 909, 935, 944.
Rad-zerumbeth, 833.
Rafnia amplexicaulis, 1014.
Ragged robin, 504.
Rahtor dynasty of kings of Canoj, 716.
Railroads, 1065.
Rain, in Egypt, 121.
remarkable, 531.
Rajania cordata, 987.
hastata, 987.
quinata, 976.
quinquefolia, 987.
Rajpoots, people of Northern Hindustan, 897.
Ramalina fastigiata, 514.
Ramana, island in the China Sea, 743.
Ramayana, Sanscrit secular poem, 592, 616.
Ramboutan, 608.
Ramleh, city in Palestine, 616, 772.
Ramondia Pyrenaica, 912.
Rampion, 685.
Rana esculenta, 136, 453.
temporaria, 453.
Randia dumetorum, 413.
latifolia, 999.
Rangoon, city in Burmah, 244, 643, 812.
Ranunculus abortivus, 982.
aconitifolius, 556.
aeris, 653, 958.
alpestris, 907.
amplexicaulis, 924.
aquatilis, 450, 531.
arvensis, 882.
Asiaticus, 293.
auricomus, 882.
bulbosus, 786.
bullatus, 902.
Cassubicus, 919.
chærophyllus, 934.
Creticus, 921.

Ranunculus cymbalaria, 1056.
falcatus, 894.
fascicularis, 1059.
flammula, 268, 450.
glacialis, 894.
Gouani, 889.
gramineus, 653.
grandiflorus, 998.
hederaceus, 450.
Hyperboreus, 1013.
Illyricus, 906.
lanuginosus, 484.
Lapponicus, 970.
lingua, 450.
montanus, 931.
muricatus, 535.
nivalis, 931, 970.
nodiflorus, 997.
Orientalis, 296.
parviflorus, 484.
Pennsylvanicus, 1037.
philonotis, 888.
plantagineus, 931.
polyanthemus, 503.
Purshii, 1057.
pusillus, 1039.
pygmaeus, 970, 1011.
Pyrenaeus, 931.
recurvatus, 1050.
repens, 451, 958.
reptans, 972.
rutaefolius, 918.
salsuginosus, 1013.
sceleratus, 183.
spicatus, 1015.
sulphureus, 970.
thora, 161.
Rapa, or Lapa, island in the Pacific, 705.
Rape-seed, 320.
Raphanistrum arvense, 88.
maritimum, 207.
Raphanus caudatus, 1028.
cheiranthifolius, 1003.
lyratus, 850.
sativus, and *var. oleifer.*, 473.
Tauricus, 1007.
Raphia vinifera, 427.
Raphis acicularis, 414.
Rarotongan Islands, in the Pacific, 680, 704–5.
Raspberry, 134, 805.
Rat, 453, 665, 757, 862.
Ratanhy root, 799.
Rathor dynasty of Hindu kings, 568.
Ratisbon, city in Germany, 630.
Rattans, 304, 369, 515, 758, 776.
Rattlesnake weeds, 962, 967.
Rauwolfia canescens, 986.
nitida, 986.
Ravenna, city near the mouth of the Po, 580, 619–20, 690.
Ray grass, 93.
Reaping grain, 59.
Reaumuria hypericoides, 1007.
vermiculata, 724.
Red bay, 778.
clover, 473.
currant, 856.
pepper, 560.
snow, 323, 936.
Red chalk, 67.
leather, 576.
River, 881.
Sea, 130, 843, 1066; first visited by a European ship, 861.
wood, traffic in, 597, 663.
Reed, 57, 149, 425, 950.
Refraction of light, 527, 905.
Regensburg cathedral, 755.
Registry of deeds, 431.
Reign of Terror, in France, 1047.
Reindeer, 80, 758, 780–81, 1031.
Remiria maritima, 950.
Reseda alba, 504.
luteola, 451, 457.
Mediterranea, 670.
odorata, 1020.
phyteuma, 481.
purpurascens, 921.
undata, 971.
Reservoirs, artificial, 457, 525, 800.
Resolution, an island, when discovered, 1032.
Respiration, 268.
Rest-harrow, 283.
Restio dichotomus, 766.
triticeus, 1005.
Revival of learning, 685.
of literature, 830.
Rhagadiolus edulis, 361.
Koelpinia, 998.
Rhamnis flabelliformis, 632.
Rhamnus alaternus, 184.
alnifolius, 1039.
alpinus, 937.
catharticus, 386.
colubrinus, 993.
Dauricus, 1013.
erythroxylum, 793.
frangula, 451.
infectorius, 354.
lanceolatus, 1053.
lycioides, 902.
minutiflorus, 1041.
oleoides, 386.
prinoides, 1015.
sp., 425.
Rhapis arundinacea, 776.
Rhaponticum uniflorum, 1013.
Rhazya stricta, 736.
Rhea, American ostrich, 859.
Rhegium, Greek city in Southern Italy, 210, 583.
Rhetoric, 269.
Rheum compactum, 1024.
palmatum, 550.
Rhaponticum, 389.
ribes, 642.
sp., 817.
undulatum, 1017.
Rhexia ciliosa, 1041.
Rhexia glabella, 1040.
lutea, 1040.
Mariana, 995.
stricta, 1056.
Virginica, 992.
Rhinanthus alpinus, 501.
Capensis, 1000.
elephas, 934.
minor, 501.
Orientalis, 996.
trifidus, 1007.
Rhine, river in Europe, 133, 552.
Rhinoceros, 630, 663, 686, 689.
African, 442.
Rhipsalis parasitica, 986.
Rhizobolus butyrosus, 921.
Rhizophora candel, 974.
conjugata, 324.
cylindrica, 974.
mangle, 622.
Rhode Island, N. American State, 949, 953, 956, 963, 981, 985, 1043.
Rhodes, Greek island, 192, 389, 402, 605, 772, 867.
Rhododendron arboreum, 745.
Catawbiense, 1041.
chamaecistus, 890.
chrysanthum, 759.
Dauricum, 582.
ferrugineum, 894.
hirsutum, 903.
Kamtchaticum, 1018.
Lapponicum, 940.
lepidotum, 614.
maximum, 1003.
Ponticum, 299.
punctatum, 1041.
Rhodomenia sp., 582, 849.
Rhodora Canadensis, 1022.
Rhone, the river, 192.
Rhubarb, garden, 389.
the drug, 550, 1017.
Rhus angustifolia, 999.
aromatica, 1039.
copallina, 741, 908.
coriarea, 289.
cotinus, 232.
elegans, 1005.
glabra, 909, 937.
lucida, 993.
metopium, 986.
pumila, 1041.
rosmarinifolia, 1015.
semialata, 622.
sp., 230, 730.
succedanea, 788.
sylvestris, 774.
tomentosa, 993.
toxicodendrum, or *radicans*, 804
typhina, 804.
venenata, 992.
vernicifera, 634.
villosa, 999.
Rhynchosia inflata, 380.
malacophylla, 380.
rufescens, 412.

Rhynchospora alba, 918.
aurea, 977.
capitellata, 1041.
ciliata, 1041.
cymosa, 1049.
distans, 1041.
Elliottii, 959.
fascicularis, 1041.
fusca, 1031.
glomerata, 1016.
inexpansa, 1041.
longirostris, 1041.
micrantha, 1041.
sparsa, 1041.
Ribbon grass, 839.
Ribes alpinum, 937.
aureum, 1055.
(*Grossularia*) *cynosbati*, 873.
divaricatum, 581.
floridum, or *recurvatum*, 958.
(*Grossularia*) *hirtellum*, 916, 923.
lacustre, 1044.
laxiflorum, 1046.
Menziesii, 1046.
nigrum, 871.
niveum, 604.
(*Grossularia*) *oxyacanthoides*, 1001.
procumbens, 759.
prostratum, 1039.
(*Grossularia*) *reclinata*, 980.
resinosum, 1039.
(*Grossularia*) *rotundifolia*, 1041.
rubrum, 856, 874, 935, 969, 1064.
sanguineum, 1055.
(*Grossularia*) *saxatile*, 582.
speciosum, 1046.
(*Grossularia*) *uva-crispa*, 611.
viscosissimum, 1055.
Riccia fluitans, 1006.
glauca, 1006.
Rice, 79, 374, 771, 820.
Rice-beer, 613.
Richardia scabra, 1012.
Rich-weed, 770.
Ricinus communis, 225.
? *Tanarius*, see *Mac. Rox.*
Ricotia Aegyptiaca, 1021.
Riedleia capitata, 380.
Riga, on the Baltic, 802, 812.
Right of search on the high seas, assertion of, by British government, leading to war with the U. S., 1056.
Rimac, valley of Western Peru, 789, 841.
Riobamba, city on the Andes, 1049.
Rio de la Plata, ascended by Europeans, 868.
Rio de Ouro, in West Africa, 267, 817, 819.
Rivina laevis, 993.
octandra, 986.
Roanoke country, 908–9, 913.
Robbers, in Egypt, 900.
Robinia hispida, 929, 1003.
pseudacacia, 768.
viscosa, 941.
Roc, fabulous bird, 762, 775.
Rocambole, 145.
Roca Partida, island in the Pacific, 884.
Rocella purpura-antiquorum, 467.
tinctoria, 236.
Rochelia Borbonica, 1067.
Rochelle, city in France, 800, 939.
Rocket, 281, 288.
Roella ciliata, 993.
Rolandra argentea, 983.
Rome, 232, 321, 377, 389, 402, 442, 498, 517, 528, 538, 540, 569, 583, 616, 620, 798, 1072.
Roman ritual, 681, 703.
Romish church, 619–20, 623–24, 687.
Rondeletia Americana, 986.
Roridula dentata, 766.
Rosa Abyssinica, 185.
agrestis and *sepium*, see *R. montana.*
alba, 506.
arborea, 963.
arvensis, 584.
blanda, 873, 935, 940.
canina, 454, 499, 969.
Carolinensis, 866, 958.
centifolia, 150.
cinnamomea, 991.
damascena, 304.
eglanteria, 461.
fraxinifolia, 581.
glandulifera, 817.
glutinosa, 324.
Indica, 817.
lævigata, 1020.
lucida, 873, 923, 929, 940.
micrantha, 1051.
microphylla, 817.
montana, 506.
multiflora, 790.
pendulina, 1011.
pimpinellifolia, 506.
Provincialis, 506.
pumila, 471.
rubiginosa, *sweet-brier*, 506, 960, 969.
rugosa, 417.
sempervirens, 148.
setigera, 1041.
Sinica, 817.
spinosissima, 584.
tomentosa, 931.
villosa, 505.
Rosaceæ, rare in Egypt, 3.
Rosaries, 44.
Rose, 150, 282, 304, 417, 461, 471, 499, 505, 553, 873.
Rose of Jericho, 516.
Rose-apple, 699.
Roselle, 797.
Rosemary, 459, 935, 984.
Rose-root, 487.
Rosetta stone, 43, 369, 410.
Rose-water, 150, 652, 965.
Rose-wood, of Tropical America, 876.
Rosmarinus officinalis, 459, 814, 969.
Rotala verticillata, 973.
Rottboella dimidiata, 1037.
monandra, 993.
Rottlera tinctoria, 413.
Roubieva multifida, 1011.
Rouen, city in France, 683, 687, 719.
Roxalani, of Eastern Europe, compare Russians, 434, 525.
Royena glabra, 993.
lucida, 993.
villosa, 766.
Rubia Bocconi, 993.
Brownei, 1023.
Chilensis, 661.
cordifolia, 421, 526.
lucida, 307.
peregrina, 488.
tinctorum, 275.
Rubiac, 425.
Rubies, 573.
Rubus arcticus, 951.
cæsius, 357.
Canadensis, 968.
chamæmorus, 792, 969.
corylifolius, 634.
cuneifolius, 1040.
fruticosus, 134, 177, 451.
hispidus, 1019.
Idæus, 134, 451.
Jamaicensis, 982.
leucodermis, 604.
Moluccanus, 159, 418.
Nutkanus, 581.
Occidentalis, 805, 940.
odoratus, 945.
palmatus, 417.
parvifolius, 966.
pedatus, 1046.
pistillatus, 1044.
sanctus, 998.
saxatilis, 780.
sp., 909, 926.
spectabilis, 581.
stellatus, 1046.
strigosus, 805, 874, 923, 926–27, 940.
triphyllus, 417.
trivialis, 777.
villosus, 893, 968.
Rudbeckia amplexifolia, 1037.
columnaris, 1057.
digitata, 978.
discolor, 1033.
hirta, 962.
laciniata, 941.
purpurea, 962.
subtomentosa, 1044.
triloba, 1000.
Rudolphia peltata, 987.
Rue, 246, 271, 525.

Ruellia clandestina, 1011.
coccinea, 986.
guttata, 721.
indigofera, 305.
infundibuliformis, 973.
paniculata, 983.
repanda, 966.
sp., 425.
strepens, see *Dipteracanthus*.
tuberosa, 983.
Rumex Abyssinicus, 465.
acetosa, 365, 944.
acetosella, 366, 878, 929.
acutus, 625.
Aegyptiacus, 1007.
alpinus, 679
altissimus, 807.
amplexicaulis, 993.
aquaticus, 470.
bucephalophorus, 447.
conglomeratus, 1031.
crispus, 262, 419, 969.
dentatus, 1011.
(*Acetosella*) *hastatula*, 1059.
lunaria, 930.
luxurians, 993.
maximus, 638.
multifidus, 993.
nervosus, 645.
obtusifolius, 377.
palustris, 635.
patientia, 262, 969.
pulcher, 931.
roseus, 182.
sanguineus, 638, 969.
scutatus, 618.
spinosus, 365.
thyrsoides, 961.
Tingitanus, 937.
tuberosus, 511.
venosus, 1057.
verticillatus, 1016.
vesicarius, 937.
Rumphia Amboinensis, 973.
Running a muck, 816.
Ruppia maritima, 897.
Ruscus aculeatus, 316.
hypoglossum, 167.
hypophyllum, 167.
Rush, 19, 201, 204, 255, 400, 825, 838
Russia and the Russians, 639, 663, 711, 725, 827, 896, 915, 956, 985, 1028, 1038, 1070.
Russia leather, 785.
Russian language, 999.
Ruta angustifolia, 886.
graveolens, 271, 969.
Halepensis, 271.
linifolia, 525.
montana, 246.
parviflora, 998.
Patavina, 246.
tuberculata, 217.
villosa, 1007.
Rye, 513, 935, 944.
Rynchosia tomentosa, 1011.
SABAL ADANSONI, 761, 866, 869, 877.
Sabal palmetto, 893.
serrulata, 1043.
Sabbatia angularis, 1019.
brachiata, 1061.
calycosa, 1033.
chloroides, 1016.
gracilis, 1019.
lanceolata, 1039.
paniculata, 1016.
stellaris, 1033.
Sabicea cinerea, 950.
Sabines, 254, 268.
Sable, fur-bearing animal, 752, 758.
Island, on the North American coast, 863, 914, 948.
Saccharum officinale, 266, 441, 917.
Ravennæ, 259.
sara, 422.
sp., 432.
spontaneum, 595.
Sacrifices, 3, 64, 441, 548.
Sacsahuaman, Peruvian fortress, 709.
Saddharma pundarika, Buddhist writing, 537.
Safflower, or *dyers' saffron*, 161, 526.
Saffron, 115.
Sagapenum, 342.
Sage, 287, 510, 579, 736.
Saghalien, island north of Japan, 953, 1055, 1059, 1070.
Straits, discovered, 1042.
Sagina apetala, 1027.
decumbens, 1056.
erecta, 989.
Linnæi, 1006.
nodosa, 937.
procumbens, 848.
subulata, 1025.
Sagittaria alpina, 1032.
graminea, 1041.
heterophylla, 1053.
lancifolia, 987.
natans, 1041.
obtusifolia, see *S. variabilis*.
sagittifolia, 419, 847.
subulata, 1016.
trifolia, 997.
variabilis, 771, 974.
Sago, 304, 335-36, 630, 788.
Sagu, 925.
Saguenay River, 875, 920, 958.
Saguerus Rumphii, see *Arenga*.
Saguntum, city in Spain, 136.
Sagus farinifera, 630.
laevis, 630.
ruffia, see *Raphia vinifera*.
Sails, navigation by, 862.
Saïmur, city in Hindustan, 658.
Sainfoin, 895.
Salacia Sinensis, 845.
Salamander, 37.
Salamis, city on Cyprus, 175.
naval combat at, 265.
Salaxis abietina, 1067.
arborescens, 1067.
montana, 1067.
Salem, seaport of New Eng., 975, 990, 1004, 1012, 1034, 1039, 1060.
Salep, 311, 728.
Salicornia ambigua, 929.
Arabica, 671.
brachiata, 519.
Caspica, 1008.
herbacea, 510, 969.
Indica, 518.
mucronata, 1063.
strobilacea, 1007, 1029.
Salisbury Cathedral, 721.
Salix acuminata, 919.
alba, 171.
Amanniana, 931.
amygdalina, 889.
angustata, 1056.
arbuscula, 919.
arbutifolia, 931.
arenaria, 785.
argentea, 460.
aurita, 919.
Babylonica, *weeping-willow*, 672.
berberifolia, 1014.
Buergeriana, 561.
candida, 1044.
caprea, 457.
cinerea, 451.
cordata, 946.
cordifolia, 1060.
discolor, 946.
formosa, 919.
fragilis, 171.
fusca, 996.
glauca, 1011.
hastata, 1012.
helix, 366.
herbacea, 937, 1064.
Houstoniana, 1012.
Humboldtiana, 789.
humilis, 1039.
Japonica, 325, 681.
lanata, 1011.
Lapponum, 1012.
longifolia, 1055.
lucida, 946.
murina, 460.
myrsinites, 992.
nigra, 909, 958.
nigricans, 1041.
obovata, 1058.
obtusifolia, 1012.
pedicellaris, 1056.
petiolaris, 1051.
phylicifolia, 1012, 1063.
planifolia, 1060.
Polaris, 970.
praecox, 475.
repens, 451, 1064.
reticulata, 931.
retusa, 937.
rhamnifolia, 1014.
rubra, 882.

Salix Scouleriana, 604.
sericea, 1039.
serotina, 236.
sp., 875.
subserrata, 3, 62.
tenuifolia, 1012.
tetrasperma, 617.
toisjusju, 419.
toppikara, 419.
triandra, 460.
tristis, 777.
uva-ursi, 1060.
vestita, 1060.
viminalis, 153.
Sallow, 457.
Salmon, 453, 664.
Salmo salar, 453.
Salonka dynasty of kings of Guzerat, 650.
Salpiglossis sinuata, 1002.
Salsola arbuscula, 1029.
articulata, see *Anabasis aphylla*.
crassa, 1007.
ericoides, 1013.
foliosa, 1007.
glauca, 1007.
Indica, 519.
kali, 646, 929, 969.
laniflora, 1030.
nudiflora, 519.
polyclonos, 971.
rigida, 1007.
rosacea, 902.
sativa, 646.
soda, 646.
tragus, 646.
vermiculata, 971, 1007.
verrucosa, 1013.
Salt, 881.
Salt-lakes, 269.
Salvadora Persica, 426.
Salvia aethiopis, 297.
Africana, 993.
argentea, 998.
aurea, 993.
Austriaca, 907.
azurea, 1033.
Barrelieri, 971.
calycina, 510.
Canariensis, 999.
ceratophylla, 894.
colorata, 978.
crassifolia, 998.
disermas, 436.
glutinosa, 894, 903.
grandiflora, 932.
Hispanica, 913.
horminum, 162.
Indica, 978.
lanata, 736.
leonuroides, 915.
(*Dicerandra*) *linearifolia*, 1059.
Lusitanica, 971.
lyrata, 978.
marrubioides, 936.
Mexicana, 1011.
Sclvia multifida, 971.
nemoralis, 1029.
odorata, 932.
officinalis, 287, 969.
oppositifolia, 798.
paniculata, 975.
pinnata, 1003.
plebeia, 736.
polymorpha, 960.
pomifera, 296.
pratensis, 630.
sclarea, 292, 969.
sylvestris, 364.
Syriaca, 932.
trichostemoides, 1054.
triloba, 889.
urticaefolia, 978.
Valentina, 971.
verbenaca, 446.
verticillata, 439.
virgata, 989.
Salvinia cucullata, 698.
natans, 907, 1029.
Salwen, river in Burmah, 240.
Salwen tree, 240.
Samadera Indica, 726.
Samara laeta, 970.
Samarcand, or Maracanda, city in Bokhara, 800.
Samaria, city of, 192, 215, 217.
Samarians, 1068.
Sambucus Canadensis, 958, 968.
ebulus, 409, 451.
nigra, 126, 134, 451.
racemosa, 967.
Samnites, people of Italy, 319, 328, 338–39, 371, 373, 376.
Samoan Islands, 299, 338.
Samolus Valerandi, 508.
Samos, Greek island, 217, 245, 279.
Samoyedes, 779.
Samp, 954.
Samphire, 294.
Samyda serrulata, 986.
San Bernardo, an island, 924.
Sandalwood, 386, 591.
red, 574.
white, 816.
Sandarach resin, 152.
Sandbox-tree, 915.
Sandoricum Indicum, 208.
Sandwich Islands, 1046.
Sangita-Ratnakara, Hindu treatise on music and the drama, 823.
Sanguinaria Canadensis, 767, 958.
Sanguisorba Canadensis, 949.
media, 972.
officinalis, 848.
sp., 753.
Sanhedrim, a court of law, 402.
Sanicula Canadensis, 995.
elata, 418.
Europæa, 636.
Marylandica, 961.
San Miguel, city of, founded, 870.
Sanscrit poets, 420.
Sanscrit writings, 320, 616, 623, 1062.
Sanseviera cylindrica, 382.
Guineensis, 993.
sp., 269.
Zeylanica, 95.
Santa Cruz, island in the West Indies, 845, 917, 924, 1012.
Santa Elana, 753.
Santalum ka-ra-mai, 591, 816.
myrtifolium, 386.
sp., 814.
Santa Polonia, an island, 924.
Santiago, city in Chili, 881, 902.
Santolina alpina, 971.
chamæcyparissus, 453, 969.
fragrantissima, 644.
maritima, 468.
rosmarinifolia, 907.
squarrosa, 889.
tinctoria, 661.
Sapindus detergens, 421.
emarginatus, 230.
laurifolius, 974.
mukurosi, 622.
rigidus, 999.
rubiginosus, 84.
saponaria, 993.
Sapium aucuparium, 1000.
ilicifolium, 987.
Indicum, 577.
obtusifolium, 1067.
sebiferum, 908, 997.
Sapodilla, 659
Saponaria bellidifolia, 934.
Cretica, 905.
ocymoides, 889.
officinalis, 288.
vaccaria, 505.
Sapota achras, 659.
Sappan wood, 642.
Saracens consoud, 863.
Saraï, city on the Volga, 751.
Sarca, volcanic island in the East Indies, 990.
Sarcocol, 480.
Sarcostemma Swartzianum, 982.
viminale, 420.
Sarcostigma Kleinii, 744.
Sardinia, island in the Mediterranean, 389.
Sardis, city in Asia Minor, 227, 241, 255, 264.
Sargassum natans, 319.
Sarmatians, 434, 539, 546.
Sarmienta repens, 1002.
Sarothra gentianoides, 999.
Sarracenia flava, 899.
psittacina, 1043.
purpurea, 922.
rubra, 1040.
variolaris, 1040.
Sarsaparilla, 805, 829–30, 901, 927, 951.
Sassafras, 772, 923.
nuts, 855.
officinale, 772, 875, 923.

Sassia tinctoria, 661.
Satellites of Jupiter, 928, 971.
of Saturn, 959–60.
Satin-wood tree, 726.
Satire, in literature, 255.
Satureja capitata, 280.
Græca, 343.
hortensis, 470, 969.
juliana, 343.
montana, 343.
? rigida, 1033.
thymbra, 279.
Saturn, the planet and its satellites, 160, 929, 981.
Satyrium coriifolium, 1009.
cucullatum, 1009.
hircinum, 483.
nigrum, 882.
plantagineum, 983.
viride, 654.
Saul timber, 238.
Saururus cernuus, 992.
Saussurea alpina, 889.
amara, 587.
discolor, 921.
multiflora, 1013.
salicifolia, 1013.
Sauvagesia erecta, 673.
Savannah, city in North America, 1012, 1017, 1036, 1071.
Savine, 454, 772.
Savoury, 343, 470.
Saw-wort, 774
Saxifraga adscendens, 891.
aizoides, 790.
aizoon, 893.
androsacea, 934.
aspera, 930.
autumnalis, 891.
biflora, 970.
bronchialis, 1013.
bulbifera, 934.
Burseriana, 903.
bryoides, 934.
cæsia, 894.
cernua, 970, 1011.
cespitosa, 893.
cotyledon, 885.
crassifolia, 793.
cuneifolia, 889.
cymbalaria, 996.
erosa, 1055.
geum, 976.
granulata, 653.
Groenlandica, 1011.
hederacea, 1007.
hirculus, 928.
hirsuta, 988.
leucanthemifolia, 1041.
media, 488.
moschata, 930.
muscoides, 1016.
mutata, 1028.
nivalis, 889, 970.
oppositifolia, 894.
pectinata, 1046.
Saxifraga Pennsylvanica, 992.
petræa, 937.
punctata, 978.
rivularis, 970, 1011, 1064.
rotundifolia, 894.
rupestris, 918.
sarmentosa, 688.
sedoides, 891.
serpyllifolia, 1058.
setigera, 1058.
Siberica, 1031.
stellaris, 893, 970.
tricuspidata, 1048.
tridactylites, 556.
umbrosa, 988.
Virginica, 1016.
Saxons, 543, 552, 566, 615, 680.
Scabiosa Africana, 585.
(*Cephaleria*) *alpina*, 898.
argentea, 932.
arvensis, 773.
atropurpurea, 922.
Bannatica, 932.
columbaria, 379.
graminifolia, 980.
integrifolia, 894.
Isetensis, 1013.
limonifolia, 930.
maritima, 919.
micrantha, 998.
ochroleuca, 911.
Palaestina, 915.
prolifera, 851.
Pyrenaica, 993.
stellata, 902.
succisa, 824.
(*Trichera*) *sylvatica*, 921.
Ucranica, 1013.
urceolata, 972.
Scammony, the drug, 121.
Scandinavian countries, 613.
Scandinavians, 640.
Scandix Australis, 265.
grandiflora, 998.
pecten, 266.
pinnatifida, 937.
Scarabæi, of stone, 20.
Scardinius erythrophalmus, 453.
Scarlet runner, 575.
Scarus, the fish, 58.
Schaefferia completa, 983.
Scheuchzeria palustris, 450.
Schinus molle, 853.
Schisandra coccinea, 1041.
Schizaea dichotoma, 997.
pectinata, 1000.
pusilla, 1055.
Schizolaena rosea, 957.
Schleichera kyet-mouk, 112.
trijuga, 521.
Schmidelia serrata, 521.
Schoenocaulon gracile, 1043.
Schoenus mucronatus, 297.
nigricans, 201.
setaceus, 1036.
Schollera graminea, 1016.
School-boards, in Hindustan, 396.
School of Alexandria, 377.
Schools, 663, 896, 939, 1004.
Schotia speciosa, 229.
Schouten's Island, near New Guinea, 933.
Schrankia aculeata, 1012.
leptocarpa, 1064.
uncinata, 1039.
Schrebera swietenioides, 728.
Schultesia stenophylla, 1062.
Schwalbea Americana, 1000.
Schweinitzia odorata, 1061.
Schwenkia Americana, 1027.
Sciadopitys verticillata, 632.
Scilla amœna, 178.
autumnalis, 922.
bifolia, 871.
hyacinthoides, 350.
Indica, see *Urginea*.
Italica, 921.
Japonica, 976.
lilio-hyacinthus, 903.
Lusitanica, 932.
maritima, 243.
monophyllos, 961.
Morisoni, 921.
pancratium, 494.
Peruviana, see *S. Morisoni*.
unifolia, 930.
verna, 921.
Scilly Isles, 182.
Scio, Greek island, 1063.
Scirpus acicularis, 940.
articulatus, 973.
atrovirens, 1059.
(*Trichelostylis*) *autumnalis*, 1016.
baeothryon, 1005.
cæspitosus, 375, 792.
campestris, 1005.
(*Oncostylis*) *capillaris*, 970.
debilis, 1053.
fluitans, 937.
(*Isolepis*) *holoschoenus*, 204.
kysoor, 698.
lacustris, 388, 450, 903, 909.
maritimus, 665, 818.
minimus, 999.
mucronatus, 999.
planifolius, 1059.
polyphyllus, 1055.
pungens, 999.
(*Isolepis*) *setaceus*, 456.
subterminalis, 1062.
sylvaticus, 930.
Tabernaemontani, 913.
triqueter, 937.
Sciurus, 875.
cinereus, 948.
Europæus, squirrel, 136, 299, 452.
rufus, 948.
Scleranthus annuus, 565.
perennis, 913.
polycarpus, 934.

Scleria Caroliniana, 1041.
ciliata, 1041.
flagellum, 983.
lithosperma, 974.
pauciflora, 1041.
reticularis, 1040.
tesselata, 966.
triglomerata, 1041.
verticillata, 1041, 1055.
Sclerocarya birrea, 425
Sclerolepis verticillata, 1040.
Scollop, 154.
Scolopendrium hemionitis, 551.
officinarum, 407, 958.
Scolymus Hispanicus, 187.
maculatus, 187.
Scoparia dulcis, 740.
Scopolia lurida, 736.
Scorpion, 40.
Scorpion-grass, 850.
Scorpiurus muricata, 977.
subvillosa, 404.
sulcata, 403.
vermiculata, 404.
Scorzonera angustifolia, 1013.
calcitrapifolia, 971.
caricifolia, 587.
elongata, 996.
graminifolia, 1008.
hirsuta, 934.
Hispanica, 863.
humilis, 907.
laciniata, 197.
lanata, 978.
multifida, 961.
pinifolia, 961.
purpurea, 907.
pusilla, 1030.
resedifolia, 563.
rosea, 907.
tuberosa, 118.
Scotch thistle, 792.
Scotland, or Caledonia, 517, 534, 552, 560, 565.
Scots, 597.
Screwpine, 142, 234, 543.
Scriptures translated into German, 627.
Scrophularia aquatica, 637.
bicolor, 998.
canina, 510.
frutescens, 991.
lucida, 158.
Marylandica, see *nodosa*.
minima, 998.
nodosa, 637.
peregrina, 206.
rupestris, 1044.
sambucifolia, 930.
scorodonia, 1000.
tanacetifolia, 921.
trifoliata, 994.
vernalis, 908.
Scrub-oak, 965.
Sculptors, 629.
Scurvy, 470.
Scurvy cress, 470.
Scutellaria albida, 931.
alpina, 937.
angustifolia, 1055.
canescens, 1033.
Columnæ, 918.
galericulata, 848.
hirta, 510.
integrifolia, 962.
lateriflora, 979.
minor, 919.
nervosa, 1055.
pallida, 1013.
peregrina, 949.
pilosa, 992.
serrata, 1033.
Scythians, 116, 227, 234, 320, 408, 453, 600.
Sea-holly, 74, 507.
kale, 473.
purslane, 887.
rocket, 679.
weeds, 368, 417, 524, 582, 610.
Sea-horse, 948.
otter, 937, 1006.
purple, or Tyrian dye, 142.
turtle, 276, 427.
unicorn, 949.
voyages, 231.
water, mach. for distilling, 863.
Seal, marine quadruped, 154, 718, 810, 814, 816, 819, 872.
Searle coral-island, Paumotuan, 1050.
Sebæa albens, 1015.
aurea, 999.
cordata, 999.
Sebesten, 108.
Secale cereale, 513.
Secamone emetica, 524.
Securidaca virgata, 987.
volubilis, 987.
Sedge, 458. 839.
Sedum acre, 633.
aizoon, 1013.
album, 585.
altissimum, 173.
anacampreros, 921.
Anglicum, 988.
atratum, 937.
cepaea, 487.
coeruleum, 1015.
collinum, 921.
confertum, 236, 537.
dasyphyllum, 889.
eriocarpum, 537.
Hispanicum, 1011.
hybridum, 1013.
populifolium, 1032.
pulchellum, 1016.
quadrifidum, 1031.
reflexum, 848.
rhodiola, 487.
rubens, 937.
rupestre, 837.
saxatile, 920.
Sedum sexangulare, 837.
spinosum, 812.
spurium, 1007.
stellatum, 341.
stenopetalum, 1055.
telephioides, 1041.
telephium, 303.
ternatum, 1016.
villosum, 635, 907.
virescens, 921.
Seiks, religious sect in Hindustan, 940.
Selaginella apus, 1017.
Selaginoides, 988.
Selago corymbosa, 993.
rapunculoides, 1016.
spuria, 1016.
Select-men, first, chosen in Boston, 948.
Selfheal, 636.
Selinum Austriacum, 907.
Chabraei, 964.
linteare, 890.
palustre, see *Peucedanum*.
peucedanoides, 952.
Selinunt, city in Sicily, 241.
Seljuk Tartars, 676, 678, 708.
Selungs, a Malayan tribe, 233.
Semecarpus anacardium, 447.
cuneifolium, 522.
Semneh, 87, 117.
Sempervivum arachnoideum, 934.
arboreum, 293.
Canariense, 993.
tectorum, 439, 969.
Senators, Roman, 396.
Senebiera coronopus, see *Coronopus*.
didyma, 1027.
Seneca tribe in Northeast America, 747, 982.
Senecio abrotanifolius, 921.
aquaticus, 931.
Arabicus, 2.
artemisiaefolius, 898.
aureus, 962.
Barrelieri, 971.
cacalioides, 1067.
Canadensis, 1019.
Carniolicus, 894.
cernuus, 1067.
chrysanthemifolius, 972.
coriaceus, 1011.
crassifolius, 971.
cymbalaria, 1058.
delphinifolius, 972.
dentatus, 1003.
Doria, 864.
doronicum, 921.
elegans, 990.
grandiflorus, 1000.
halimifolius, 1011.
hastatus, 1011.
hieracifolius, 989.
ilicifolius, 1001.
incanus, 918.
jacobæa, 630.

Senecio linifolius, 937.
longifolius, 975.
Nebrodensis, 971.
nemorensis, 931.
nilgue, 662.
paludosus, 911.
penicillatus, 1067.
pollicaris, 1067.
pseudo-china, 1011.
pubigerus, 975.
purpureus, 975.
rigidus, 990.
rotundifolius, 971.
Saracenica, 863.
squalidus, 659.
sylvaticus, 1005.
tomentosus, 1041.
uniflorus, 1000.
viscosus, 906.
vulgaris, 969.
Senegal river, discovered by Europeans, 819, 823.
Senna, 139, 355, 526, 602.
Sensitive plants, 888.
Sepiadæ, or cuttle fish, 29, 503.
Septas Capensis, 999.
Septfoil, 563.
Sepulchral images, 105.
vases, Egyptian, 92.
Serapias grandiflora, 494.
microphylla, 952.
palustris, 884.
rubra, 574.
Serapis, worship of, 371, 528, 532, 555.
Sericocarpus conyzoides, 995.
solidagineus, 992.
tortifolius, 1040.
Seriola urens, 992.
Serjana sinuata, 986.
triternata, 999.
Serpent-charming, 18, 24, 179.
Serpentine, the mineral, 133.
Serratula behen, 641.
Caspica, 1029.
centauroides, 973, 1013.
coronata, 994.
cyanoides, 1014.
cynaroides, 978.
dubia, 898.
heterophylla, 919.
humilis, 994.
nudicaulis, 991.
polyclonos, 1013.
simplex, 921.
tinctoria, 774.
Servia, country on the Danube, 812.
Service-tree, 102, 505.
Sesamum Orientale, 223.
Sesbania aculeata, 974.
Ægyptiaca, 722.
grandiflora, 699.
Seseli ammoides, 472.
annuum, 205, 911.
divaricatum, 1057.
elatum, 1033.
glaucum, 899.
Seseli gracile, 912.
hippomarathum, 907.
montanum, 912.
rigidum, 993.
saxifragum, 919.
tortuosum, 342.
turbith, 919.
Sesleria cærulea, 840.
? dactyloides, 1058.
echinata, 937.
Sestos, city on the European side of the Hellespont, 266.
Setaria aurea, 733.
glauca, 513.
Italica, or *glomerata*, 79, 451, 543, 898.
verticillata, 146.
viridis, 513.
Sethia Indica, 592.
Seville, city in Spain, 795.
Seville Cathedral, 799.
Seymeria cassioides, 1005.
pectinata, 1005.
Shaddock, 216.
Shakua excelsa, 383.
minor, 383.
Shalot, 68.
Shamrock, 557.
Shans (Siamese) of Burmah, 588.
Sharks, 182.
Sharuhen, city in Palestine, 106.
Shawmut, or Boston in New England, 947.
Sheathing ships, 520.
Sheep, 2, 154, 452, 985.
the Somali variety, 2, 322.
Sheepskin, 924.
Sheep's-bane, 450.
bit, 490.
Shepherdia argentea, 1054.
Canadensis, 1020.
Shepherd's needle, 266.
purse, 773.
Sherardia arvensis, 826.
erecta, 934.
fruticosa, 994.
Sherbro Sound, in West Africa, 267.
Shetland Islands, 325, 798.
Shingle tree, 744.
Ships and galleys, 133, 137, 155, 424, 685, 719, 775, 951.
Shoe-flower, 675.
Shoes, ancient Egyptian, 180.
Shorea laccifera, 691.
robusta, 238.
tumbagaia, 593.
Siam, 143, 399, 788, 861.
Sibbaldia erecta, 1013.
procumbens, 938.
Siberia, or Northern Asia, 1030–31.
Sibir, old city in Siberia, 812.
Sibola, in Mexico, 877.
Sibthorpia Europæa, 1004.
Sibylline books, 244, 540, 542.
Sicily, 131, 154, 265, 285, 312, 407, 583, 605, 629, 679, 757.
Sicyon, city in Greece, 347.
Sicyos angulata, 989.
Sida, see *Abutilon*.
acuta, 577.
alnifolia, 1011.
altheaefolia, 983.
Americana, 987.
Capensis, 1000.
carpinifolia, 972.
ciliaris, 983.
cordifolia, 697.
crispa, see *Abutilon*.
Dilleniana, 1011.
hederaefolia, 987.
hirta, 966.
? hispida, 1053.
humilis, 1000.
linifolia, 1017.
mutica, 850.
napaea, 982.
nudiflora, 987.
Occidentalis, 1011.
periplacifolia, 1000.
populifolia, 974.
retusa, 726.
rhombifolia, 972.
rhomboidea, 734.
rotundifolia, 1000.
spinosa, 859.
stipulata, 577.
viscosa, 983.
Sideritis Canariensis, 1000.
candicans, 993.
glauca, 971.
hirsuta, 902.
incana, 993.
linearifolia, 971.
montana, 248.
Romana, 931.
rosea, 998.
scordioides, 898.
Syriaca, 889.
Sideroxylum inerme, 1011.
melanophleum, 993.
toxiferum, 766.
Side-saddle flower, 922.
Sidon, city in Phœnicia, 319, 686.
Sidonian needle-work, 86, 155.
Sieges of fortified places, 980.
Siena, in Italy, 751, 811.
Sienite, 67.
Sigesbechia flosculosa, 1039.
Orientalis, 408, 1009.
Sikhs, a religious sect, 877.
Silene acaulis, 918, 1064.
alpestris, 922.
Altaica, 1031.
Anglica, 1011.
antirrhina, 1011.
arenaria, 961.
armeria, 826.
Baldwini, 1059.
behen, 353.
bupleuroides, 996.
Catesbaei, 1005.
catholica, 894.

Silene cerastoides, 1011.
chlorantha, 978.
conica, 902.
conoidea, 903.
Cretica, 451.
fimbriata, 1007.
fruticosa, 910.
Gallica, 1006.
gigantea, 1014.
glutinosa, 992.
inaperta, 1011.
inflata, 289.
Italica, 1025.
longiflora, 971.
Lusitanica, 973.
maritima, 903.
mollissima, 993.
muscipula, 902.
noctiflora, 910.
nocturna, 973.
nutans, 922.
otites, 911.
ovata, 1055.
paradoxa, 973.
pendula, 1011.
Pennsylvanica, 1040.
polyphylla, 902.
psammites, 961.
pumilio, 907.
quinquevulnera, 973.
regia, 1056.
rubella, 1011.
rupestris, 937.
sabuletorum, 961.
saxifraga, 889.
Sicula, 1003.
spergulaefolia, 998.
spinescens, 504.
stellata, 962.
Tartarica, 785.
tridentata, 902.
Vallesia, 993.
Virginica, 1000.
viridiflora, 991.
viscosa, 996.
Silesia, 733.
Silk, 195, 583, 630, 663, 965.
fowl, 776.
worm, 195, 538, 583.
Silphium asteriscus, 1011.
compositum, 1040.
elatum, 1060.
integrifolium, 1044.
laciniatum, 1025.
laevigatum, 1056.
perfoliatum, 1024.
reticulatum, 1060.
terebinthaceum, 1028.
trifoliatum, 962, 978.
Silsilis, 124, 131.
Siluridæ, 57.
Silurus electricus, 43.
Silver, 105, 106, 380, 571, 611–14, 630, 689, 870, 888, 900, 918.
Silver Age, 107.
Silverweed, 636.
Silybum marianum, 489, 958.
Simaruba amara, 674.
Sin Puerto, an island, 924.
Sinabaro, fortress in Japan, 951.
Sinai, mount, 145, 441, 576.
Peninsula, 63.
Sinapis alba, 246.
Allioni, 181.
arvensis, 455.
Chinensis, 607.
dichotoma, 387.
erucoides, 486.
glauca, 387.
incana, 455.
juncea, 504.
nigra, 246.
Sind, border country of Hindustan, 615, 620–21.
Singapore, city of, 709.
Sinope, city on the Black Sea, 207.
Siphomeris lingua, 384.
Siphonia, see *Hevea*.
Sirach, book of, 268.
Sirius, rising of, 59, 69.
Sison ammi, see *Seseli ammoides*.
amomum, 320.
anisum, 248, 969.
segetum, 918.
Sistrum, 51.
Sisymbrium altissimum, 288.
asperum, 937.
Barrelieri, 971.
bursifolium, 1011.
canescens, 1016.
Columnae, 934.
integrifolium, 1013.
irio, 288.
Monense, 1011.
obtusangulum, 931.
officinale, 371.
polyceratium, 340.
Pyrenaicum, 977.
salsuginosum, 1031.
sophia, 870, 1031.
supinum, 1004.
tanacetifolium, 973.
tenuifolium, see *Diplotaxis*.
Thalianum, 911.
Valentinum, 994.
vimineum, 894.
Sisyrinchium anceps, 776.
Bermudianum, 968.
bulbosum, 661.
Sitang, city in Pegu, 590.
Sitolobium punctilobulum, 1044.
Sium angustifolium, 625.
bulbocastanum, 585.
Graecum, 998.
latifolium, 172.
lineare, 1038.
Siculum, 972.
sisarum, 261, 960.
verticillatum, 912.
Siva, Hindu deity, 606.
Skimmia Japonica, 989.
Skirret, 261.
Skullcap or *helmet flower*, 848.
Skunk cabbage, 808.
Slate, 928.
Slave-holders' rebellion of Southern States in North America, 1070–71.
Slavery, 191, 721, 803, 877, 939, 951.
Slavonian language, 640, 680, 999.
Slavonians, 274, 326, 583, 623, 639, 711, 787.
Slavonic book, first printed, 843.
writing, the earliest, 678.
Slings, 150, 193, 875.
Slippery elm, 757.
Sloanea dentata, 986.
Sloe, 134, 451.
Small pox, 586, 648, 1006, 1021.
Smallage, 175.
Smalt, or cobalt-blue, pigment, 888.
Smelting of metals, 583.
Smilacina bifolia, 418, 969.
ciliata, 1050.
racemosa, 419, 944, 949.
stellata, 941.
trifolia, 1013.
Smilax aristolochiaefolia, 1005.
aspera, 148.
China, 601.
excelsa, 1008.
glabra, 601.
glauca, 944, 962.
herbacea, 962.
hispida, 1059.
Kraussiana, 732.
lanceaefolia, 601.
lanceolata, 1003.
laurifolia, 1003.
Mauritiana, 901.
officinalis, 830.
pseudo-china, 761, 923.
rotundifolia, 1020.
sarsaparilla, 829.
siphilitica, 951.
tamnifolia, 1041.
tamnoides, 992, 1003.
Walteri, 1039.
Zeylanica, 950.
Smithia sensitiva, 251.
Smoke-bush, 232.
Smolensko, city in Russia, 1059.
Smyrna, city of, 610.
Smyrnium apiifolium, 998.
olusatrum, 250.
perfoliatum, 397.
Snails, 30, 154.
Snake-gourd, 723.
head, 968.
root, 748, 768, 944.
weed, 944.
Snowball tree, 456.
Snowdrop, 350.
Snow-berry, 604.
Soap, 503.
Soap acacia, 423.
nut, 230, 421.
wort, 288.

Soc. hist. nat. paris, 1047.
Socotra, island at the mouth of the Red Sea, 424, 573, 642.
Sodada decidua, 464.
Sodom, city in Palestine, 107.
Sofala, city in Africa, 860.
Soja hispida, 763.
Solanum Æthiopicum, 831.
aggregatum, 993.
anghivi, 381.
Arabicum, 724.
Bahamense, 950.
Balbisii, 381
Bonariense, 1011.
Campechiense, 1011.
Capense, 1030.
Cari, 660.
Carolinense, 419.
chenopodioides, 1002.
coagulans, 530.
cordatum, 181.
dulcamara, 530.
ferox, 985.
Forskalii, 724.
Hermanni, 979.
(*Nycterium*) *heterandrum*, 1057.
heterocanthum, 381.
incanum, 724.
indicum, 695.
insanum, 656.
Jacquini, 694.
lycopersicum, see *Lycopersicum*.
macrocarpon, 950.
mammosum, 999.
melongena, 602, 909.
miniatum, 314.
muricatum, 1002.
nigrum, 748, 969.
nodiflorum, 381.
paniculatum, 950.
polyacanthum, 986.
pseudo capsicum, 893.
quercifolium, 1002.
sanctum, 181.
sp., 419.
suaveolens, 381.
trilobatum, 728.
tuberosum, the *potato*, 660, 882.
vascifolium, 701.
Virginianum, 999.
Solar spots, 928.
year, 375, 683.
Soldanella alpina, 921.
montana, 937.
Solea concolor, 1049.
Soleb in Nubia, 120.
Solidago altissima, 1009.
arguta, 1043.
aspera, 1011.
bicolor, 1000.
caesia, 962.
Cambrica, 1004.
Canadensis, 968.
diuca, 662.
elliptica, 1021.
flexicaulis, 991.
gigantea, 1043.
glomerata, 1041.
latifolia, 992.
limonifolia, 941.
minuta, 991.
multiradiata, 1043.
nemoralis, 1043.
odora, 1000.
patula, 1052.
pauciflosculosa, 1041.
petiolaris, 1043.
pilosa, 1021.
rigida, 991.
rugosa, 1011.
Saracenica, see *Senecio*.
sempervirens, 949.
serrotina, 1043.
squarrosa, 1059.
stricta, 1043.
ulmifolia, 1052.
virgata, 1041.
virgaurea, 766.
Soliva nasturtiifolia, 1054.
Solomon Islands, in the Pacific, 898, 920, 925.
Solomon's seal, 495.
Solonka dynasty of Hindu, 722.
Solstices, 377.
Somali country, 322.
Sonchus alpinus, 910.
arvensis, 490.
asper, 256.
dichotomus, 894.
maritimus, 937.
oleraceus, 165, 969.
palustris, 490.
Sibericus, 1013.
tenerrimus, 937.
Sonneratia acida, 727.
Sophora alopecuroides, 1007.
heptaphylla, 966.
Japonica, 621.
Orientalis, 587.
robusta, 278.
tomentosa, 982.
Sopubia ramosa, 732.
Sorbonne, college at Paris, 751.
Sorbus Americana, 968.
aucuparia, 451, 505.
chamaemespilus, 356.
domestica, 102.
Sorghum saccharatum, 723.
vulgare, 475.
Sorindeia Madagascariensis, 383.
Sorrel, 365-66, 511.
Soui, fourteenth Chinese dynasty, 589, 597, 599.
Soulamea amara, 208.
Soung, Northern, tenth Chinese dynasty, 564.
twenty-first Chinese dynasty, 655, 664, 668, 756.
Soursop, 754.
South Carolina, one of the United States, 1001, 1004, 1009-10, 1042.
Southernwood, 358.
Sow thistle, 165.
Soy bean, 763.
Soymida sp., 269.
Spain (Spanish), 498, 572, 842, 854, 965, 967, 1016, 1018, 1024, 1038.
Spanish bayonet, 761.
needles, 748.
Spanish Language in Palestine, 850.
settlements in America, 957.
Sparganium angustifolium, 1044.
curycarpum, 1063.
natans, 835.
ramosum, 495.
simplex, 495.
Sparrow, 19.
Sparta, city in Greece, 222, 391.
Spartina cynosuroides, 1016.
fluviatilis, 1044.
glabra, see *stricta*.
juncea, 1041.
stricta, 886.
Spartium aphyllum, 1033.
horridum, see *Genista*.
junceum, 168.
multiflorum, 913.
purgans, 931.
radiatum, 934.
scorpius, 355.
sphaerocarpum, 902.
villosum, 243.
Spathelia simplex, 982.
Spearmint, 886.
Spearwort, 268.
Spectacles, for assisting eyesight, 756.
Specularia hybrida, 542.
pentagonia, 998.
perfoliata, 806.
speculum, 827, 894.
Speedwell, 633.
Spelt, 167, 176.
Spergula arvensis, 847.
nodosa, see *Sagina*.
pentandra, 451.
Spergularia media, 520.
rubra, 520.
Spermaceti, 752.
Spermacoce articularis, 970.
diodina, see *Diodia teres*.
glabra, 1044.
hispida, 738.
involucrata, 1039.
linifolia, 950.
tenuior, 999.
Sphæranthus Africanus, 1000.
suaveolens, 374.
Sphenoclea Zeylanica, 374.
Sphinx, 70, 106, 118, 482.
Spice-bush, or *fever-bush*, 770.
Spider-orchis, 896.
Spielmannia Africana, 1001.
Spigelia anthelmia, 997.
Marylandica, 961.
Spikenard, 321, 805, 944.
Spilanthes acmella, 966.
insipidus, 977.

Spinach, 909.
Spinacia oleracea, 648.
Spindle tree, 259.
Spinifex squarrosus, 546.
Spiræa aruncus, 419, 670.
betulaefolia, 1039.
capitata, 1046.
crenata, 781.
discolor, 1055.
filipendula, 686.
hypericifolia, 940.
Kamtchatica, 1018.
laevigata, 582.
lobata, 1034
opulifolia, 993.
salicifolia, 921.
sorbifolia, 1014.
thalictroides, 1032.
tomentosa, 962.
ulmaria, 634.
Spiranthes aestivalis, 1018.
autumnalis, 848.
cernua, 1025.
gracilis, 1063.
Spitzbergen, island in the Arctic Sea, 918, 932, 970.
Spleenwort, 175.
Spondias acuminata, 699.
dulcis, 441.
mangifera, 371.
mombin, 673
myrobalanus, 673.
Sponge, 182.
Sporobolus Indicus, 984.
junceus, 1041.
Virginicus, 1017.
Spruce, 123, 367, 582, 621, 809, 830, 920.
Spunk, 187.
Spurge, 89, 273, 306, 313, 467, 698, 713, 778, 800, 827.
Spurry, 847.
Spurt-grass, 665.
Squash, 747.
Squinancy, 850.
Squirrel, 136, 299.
Sri Bhagavata, Sanscrit writing, 719.
St. Anne's Islands, 915.
St. Bartholemew, island in the Pacific, discovered, 868.
St. Bernard Islands, 917.
St. Christopher, island in the West Indies, 940, 965.
St. Croix Island, 923.
in Canada, 927.
St. Germain, treaty of, 947.
St. Helena Island, discovered, 848, 1060.
St. John's, town in Newfoundland, 905, 1024.
St. John's Island, in the Pacific, 953.
River, 893, 896, 923.
St. John's wort, 394.
St. Lawrence river, discovered, 664; subsequent history, 860, 875, 884, 920, 923, 927.
St. Louis, city in North America, 1022.
St. Paul's Church, in London, 973.
Island, discovered, 992.
School, in London, founded, 861.
St. Petersburg, city in Russia, 999.
St. Peter's Church, 860.
St. Peter's wort, 486.
St. Salvador, city in Brazil, 887.
island in the West Indies, 852.
St. Thomas, island in the Pacific, 833, 884.
Staavia radiata, 975.
Stachys Aethiopica, 1000.
alpina, 932.
annua, 915.
arvensis, 510, 937.
betonica, 340.
Cretica, 937.
Germanica, 883.
glutinosa, 972.
Heraclea, 934.
hirta, 894.
hyssopifolia, 1039-40.
lanata, 324.
maritima, 993.
Palaestina, 993.
palustris, 530, 919.
recta, 832.
spinosa, 916.
spinulosa, 998.
sylvatica, 878.
Stachytarpha Jamaicensis, 983.
orubica, 999.
prismatica, 999.
Staehelina arborescens, 905.
chamaepeuce, 489.
dubia, 360.
fruticosa, 904.
Staff, 59.
Stag, 59, 323.
Stagmaria verniciflua, 215.
Stamp Act of the English parliament, 1026.
Stanleya pinnatifida, 1057.
Stapelia articulata, 229.
hirsuta, 990.
incarnata, 229.
mamillaris, 1015.
? variegata, 390.
Staphylea Occidentalis, 982.
pinnata, 354.
trifolia, 965.
Star apple, 754.
hyacinth, 871.
Star-of-Bethlehem, 194.
Star-shot, or *Star-jelly*, 790.
Stare, or *Starr*, 790.
Stars, maps of, and catalogues, 103, 323, 372, 400, 407, 975.
Staten Island, near Terra del Fuego, 933.
Statice acerosa, 1007.
angustifolia, 961.
aurea, 1013.
bellidifolia, 993.
cordata, 937.
dichotoma, 971.
diffusa, 999.
echinus, 905.
echioides, 919.
Gmelini, 1013.
limonium, 492.
minuta, 937.
monopetala, 972.
mucronata, 952.
oleaefolia, 898.
reticulata, 894.
sinuata, 492.
speciosa, 1013.
spicata, 1013.
suffruticosa, 1013.
Tatarica, 1003.
Statues, 68, 393, 618–19, 735.
Stauntonia hexaphylla, 632.
Steam, 390, 1065–66.
Steam-engine, the, 1065.
Steatite, 423.
Steel, 120.
Steganotænia sp., 731.
Stelis ophioglossoides, 987.
Stellaria alsine, 913.
borealis, 968.
cerastoides, 1012.
dichotoma, 780.
graminea, 878.
holostea, 486.
humifusa, 1030.
longifolia, 968.
media, 419, 452, 969.
prostrata, 1061.
pubera, 1044.
Stellera chamaejasme, 1013.
passerina, 878.
Stemodia durantifolia, 982.
maritima, 982.
viscosa, 695.
Stenotaphrum dimidiatum, 1030.
Sterculia alata, 112.
balanghas, 333.
fœtida, 332.
guttata, 333.
ornata, 240.
plantanifolia, 1007.
sp., 466.
tomentosa, 269.
(*Southwellia*) *tragacantha*, 825.
(*Cavallium*) *urens*, 333.
villosa, 369.
Stereospermum sp., 732.
Stereoxylon patens, 799.
Sternbergia citrina, 1040.
colchiciflora, 907.
lutea, 827.
Stevia punctata, 915.
Stewartia malachodendron, 1003.
pentagyna, 1018.
Sticta pulmonacea, 514.

Stilbe pinastra, 993.
Stillingia ligustrina, 1041.
sebifera, see *Sapium*.
sylvatica, 830.
Sting-ray, 51.
Stipa avenacea, 1016.
capillata, 793.
juncea, 973.
pennata, 785.
Siberica, 1013.
stricta, 1039.
tenacissima, 465.
Virginica, 1040.
ychu, 799.
Stipulicida setacea, 1041.
Stitchwort, 486.
Stock, 375.
Stocks for the feet, 29.
Stoebe cinerea, &c., 997.
ericoides, 975.
gnaphaloides, 1016.
plumosa, 997.
Stokesia cyanea, 1035.
Stomoxys, 25.
Stone age of nations, 12, 135, 1069.
art of squaring, 66, 373, 569.
column at Tugu, in Java, 775.
implements, 12, 862, 1069.
Stone-crop, 341, 633.
Stonehenge, in Britain, 569, 580.
Stoneware, 721.
Stonor, or *Stonehore*, 848.
Storax, 117, 884.
liquid, 639.
Stork, 44.
Stork's bill, 518, 706.
Stramonium, 880.
Strangle-tare, 355.
Strap-wort, 734.
Strasburg, city on the Rhine, 716.
Stratiotes aeroides, 966.
aloides, 558.
Strawberry, 378, 771, 892.
spinage, 940.
tree, 101.
Streblus aspera, see *Epicarpurus*.
Strelitzia sp., 229.
Strepsiceros kudu, 818.
Streptopus amplexifolius, 495.
(*Prosartes*) *lanuginosus*, 1041.
roseus, 1041.
Strix aluco, 453.
flammea, 60, 1032.
Strobilanthus citiatus, 703.
strobus, 940.
vulgaris, 935.
Strobus Amer., 809, 875, 924, 942.
Strombus lentiginosus, 144.
Strumpfia maritima, 986.
Struthiola angustifolia, 1015.
longiflora, 1015.
Struthiopteris Germanica, 911.
Strychnos colubrina, 813.
ignatia, 671.
ligustrina, 208.
nux-vomica, 638.
Strychnos potatorum, 422.
spinosa, 707.
tieute, 445.
toxifera, 715.
Sturgeon, 274.
Sturnella Ludoviciana, 875.
Sturnus vulgaris, starling, 453.
Stylisma alsinevuloides, 992.
Styloceryne racemosa, 990.
Webera, 333.
Stylophorum diphyllum, 1044.
Stylosanthes elatior, 1004.
mucronata, 970.
procumbens, 983.
viscosa, 983.
Styrax benzoin, 551.
grandifolium, 1039.
laeve, 1039.
officinalis, 117.
pulverulentum, 1043.
Suæda baccata, 236.
depressa, 1057.
Monica, 645.
vera, 648.
Subularia aquatica, 988, 1064.
Succory, or *chicory*, 256, 507, 929.
Suevi, of Germany, 448.
Suez canals, 127, 255, 1072.
Suffrenia filiformis, 898.
Sugar, 267, 330.
cane, 266, 441, 623, 909.
Sukuh, city in Java, 816.
Sula bird, the booby, 573.
Sulphur, 182.
Sulphur-wort, 294.
Sultan, the title first used, 664.
Sultanieh, city in Persia, 765.
Sulu Island, 918, 1021.
Sumach, 232, 289, 741, 864, 992.
Sumatra, 860, 918.
Sumbawa, 861.
Sumpit, tube for blowing poisoned darts, 776.
Sun, 626, 675, 680, 815, 889, 928, 971.
worship of, 599, 659, 834, 926.
Sun-dials, 372.
Sunday, 813.
Sundew, 529, 634, 737.
Sunflower, 296, 749, 914.
Sunn-hemp, 422.
Suriana maritima, 1000.
Surinam, 965, 1045.
Surya Siddhanta, Hindu writ, 681.
Sus scrofa, swine, 104, 136.
Susa, city in Persia, 562.
Suspension bridges, 705, 949.
Susquehanna River, 927.
Sutras, Buddhist scriptures, 552.
Sutta sagitti, Buddhist writing, 555.
Swallow-wort, 476.
Swallows, 17.
Swan, 31, 154.
Swartzia marginata, 731.
Sweating houses, 956.
Sweden, Swedes, 797, 951, 1038.
Sweet alison, 894.
Sweet briar, 506.
cicely, 945.
flag, 142.
gum, 741.
marjoram, 935.
potato, 753–54, 862, 917, 1017.
scabious, 935.
william, 825.
Swertia dichotoma, 1013.
fastigiata, 1054.
perennis, 897.
pusilla, 1056.
Swietenia mahagoni, 673.
Swine, 154, 957.
Swiss cantons, 767.
Switzerland, 133, 450, 834.
Sword-bean, 300, 686.
Swords, 147, 237, 266, 436, 590.
Sybaris, city in S. Italy, 215, 277.
Sybilline Oracles, 464.
Sycamore, 106, 961.
Symphoricarpus racemosus, 604.
vulgaris, 1011.
Symphytum asperrimum, 998.
brochum, 347.
officinale, 346, 958, 969.
Orientale, 1007.
Tauricum, 998.
tuberosum, 903.
Symplocarpus foetidus, 808, 968.
Symplocos ferruginea, &c., 594.
tinctoria, 1005.
Syncarpha gnaphaloides, 1014.
Syndesmis Tavoyana, 588.
Synedrella nodiflora, 983
Synods, 538–39, 542, 545, 548–49, 570–73, 583, 591, 597, 609, 612–13, 615, 619–21, 628–29, 631–32, 640–1, 663, 666, 668, 676, 678, 680–87, 689–90, 703–5, 708–15, 718–20, 722–25, 730, 734–35, 740, 743, 747, 751, 753, 755–60, 762, 764–65, 767, 772–73, 776, 779–80, 783, 780, 793, 795–96, 798, 801, 812–13, 815–16, 822, 861, 896.
Syphilis, 829.
Syracuse, city in Sicily, 296, 393.
Syria, 598, 602.
Syriac, inscr'ns and mss., 531, 543.
Syringa Persica, 930.
vulgaris, 362.
Syzygium Guineense, 425.
jambolanum, 238.
sp., 278.

TABAKATI NASIRI, a history of Persia and India, 737.
Tabernæmontana alternifolia, 974.
citrifolia, 986.
coronaria, 387.
dichotoma, 613.
laurifolia, 982.
Neronhiana, 384.
Tacamahaca resin, 673, 706, 1021.
Tacca Madagascariensis, 386.
pinnatifida, 416.

Tacsonia sp., 754.
Tadousac, at the mouth of the Saguenay, 920, 923.
Tagalo language, 689.
Tagetes minuta, 1011.
patula and *erecta*, 820.
Taheitian Islands, in the Pacific, 338, 686, 705.
Tai-thsing, twenty-fourth Chinese dynasty, 934, 956.
Ta-ka-seki, Japanese city, 618, 621, 623.
Taluma Plumieri, 986.
Sieboldii, 632.
Talieria Bengalensis, see *Carypha*.
Talinum arnacampseros, 993.
fruticosum, 993.
teretifolium, 1053.
triangulare, 1009.
Talipot palm, 347.
Tallow tree, 998.
Talmis, city in Nubia, 441.
Talmud, 723; Yerushlami, 553, 568; Babeli, 568.
Tamarindus Indica, 516, 917.
Tamarix dioica, 318.
Gallica, or *Africana*, 74.
Germanica, 447, 753.
Tamboura, musical instrument, 199.
Tambourine, 199.
Tame-tomo dynasty, Loo Choo Islands, 716, 741, 788.
Tamias Striatus, 948.
Tamil language, 143, 180.
Ta-ming-lin, Chin. code of laws, 798.
Tamonea spinosa, 999.
Tamus communis, 162.
Cretica, 162.
Tanacetum annuum, 889.
incanum, 998.
Sibericum, 1013.
suffruticosum, 993.
vulgare, 448, 969.
Tanæcium jaroba, 950.
pinnatum, 380.
Tanarius major, 860.
Tanier, 714.
Tanks, or artificial ponds, 708.
Tanna, volcano of, 925.
Tansy, 448.
Taomaco, an island, 924–25.
Tapa, or *paper-cloth*, 378, 925.
Tape-worm, 490.
Tapioca plant, 575.
Taprobane, island of, 481.
Tar, 981.
Tarawan coral-islands, 752, 884.
Taraxacum dens-leonis, 419, 969.
Tarchonanthus camphoratus, 982.
Tare, 555, 557.
Tarentum, Greek city in Southern Italy, 218, 325, 378, 393, 583, 639.
Taro, 373–74, 414.
Tarragon, 283.
Tarragon, or Tarraco, seaport in Spain, 525, 540.
Tarsus, or Tarshish, city in Cilicia, 148, 714.
Tartar empire, 751.
Tartar lamb, 647.
Tartars, 269, 663, 716, 719, 721, 735, 733, 736, 747, 915, 934.
Tattooing, 191, 499, 781, 869, 944.
Taug, 703.
Tauris, in Persia, 843.
Taxation of the English colonies by the Mother country, resisted, 1027.
Taxes, 70, 618, 630, 764, 1027.
Taxodium distichum, 842, 866, 869, 893, 908.
Taxus baccata, 129, 134, 451.
brevifolia, 583.
Canadensis, 1025.
cuspidata, 607.
macrophylla, 989.
verticillata, 812.
Tcheou, fifth Chinese dyn., 159, 383.
the later, twentieth Chinese dynasty, 653
Tchin, thirteenth Chinese dynasty, 584, 586, 589.
Tchin-la, see Cambodia, 599.
Tchouds, ancient miners of Siberia, 581, 779.
Tcin, ninth Chinese dynasty, 540, 564.
or Tsin, the later, eighteenth Chinese dynasty, 650–51.
Tea, 540, 718, 753, 818.
destruction of, in Boston harbor, 1033–34.
Tea-tax, the, imposed by England on the Massachusetts and other colonies, 1030, 1033.
Teak, 244.
Teasel, 237.
Tecoma pentaphylla, 1005.
Tectona grandis, 244.
ternifolia, 245.
Teesdaliæ nudicaulis, 906.
regularis, 973.
Telanthera frutescens, 1022.
maritima, 1051.
Telephium Imperati, 920.
oppositifolium, 1015.
Telescopes invented, 928.
Telfaria pedata, 380.
Telingan race, 444, 783.
Temoe, coral islet in the Pacific, 1033.
Temples, 611, 615, 619, 626, 659, 725, 743, 752, 782, 816, 859, 942.
formal destruction of Heathen, 540, 549, 554, 559, 630.
Temus moschata, 661.
Tenasserim, province of Burmah, 860, 1063.
Teneriffe, one of the Canary Islands, 467, 821.
Tennessee, one of the United States, 1048.
Teo-amoxtli, Mexican book of history and laws, 614.
Teocallis, or pyramids of Mexico, 604, 845.
Teotihuacan, in Mexico, 604.
Tephrosia argentea, 1000.
chrysophylla, 1036.
colutea, 1000.
hirta, 380.
hispidula, 1041.
maxima, 970.
noctiflora, 380.
piscatoria, 1034.
purpurea, 578.
spicata, 995.
toxicaria, 987.
villosa, 1000.
Virginiana, 992.
Vogelii, 730.
Teramnus volubilis, 987.
Terebinth tree, 93.
Teredon, city on the Persian Gulf, 234.
Terminalia angustifolia, 1028.
badamia, 797.
belerica, 408.
catappa, 304, 580, 917.
chebula, 408.
citrina, 411.
coriacea, 744.
fatræa, 707.
latifolia, 855.
Moluccana, 304.
sp., 425.
violata, 245.
Ternaté Island, 741, 747, 765, 776, 788, 855, 876.
Ternstroemia Japonica, 632.
Terra del Fuego, 933.
Testudo, military engine, 278.
Galapagos sp., 775.
Tetragonia decumbens, 1021.
expansa, 437.
fruticosa, 993.
herbacea, 993.
Tetragonotheca helianthoides, 1011.
Tetranthera geniculata, 1003.
monopetala, 739.
Roxburghii, 696.
Tetrao, 154, 875.
bonasia, 453.
Tetrapteris citrifolia, 986.
Teucrium Achaemenis, 894.
angustissimum, 971.
betonicum, 982.
botrys, 883.
campanulatum, 989.
Canadense, 958.
capitatum, 169.
chamædrys, 364.
coeleste, 971.
Creticum, 905.
flavescens, 971.
flavum, 364.
fruticans, 902.
gnaphalodes, 906.

Teucrium iva, see *Ajuga*.
Japonicum, 1000.
libanotis, 971.
lucidum, 364.
marum, 477, 851.
microphyllum, 998.
montanum, 405.
multiflorum, &c., 993.
Nissolianum, 978.
Orientale, 989.
polium, 169.
pseudokyssopus, 934.
pumilum, 971.
pycnophyllum, 971.
scorodonia, 759.
spinosum, 510.
thymifolium, 971.
Valentinum, 971.
Teutones, 424, 432, 545.
Teutonic military Order of monks, 716, 802.
Texas, North American State, 1069.
Tezcuco, lake and city in Mexico, 736, 831.
Thale cress, 911.
Thalia dealbata, 1046.
geniculata, 950.
Thalictrum alpinum, 979.
anemonoides, 1000.
angustifolium, 937.
aquilegifolium, 563.
Calabricum, 978.
Cornuti, 949.
dioicum, 1016.
flavum, 484.
foetidum, 894.
foliolosum, 735.
galioides, 931.
minus, 484.
rugosum, 978.
tuberosum, 892.
Thames River, in England, 951.
Thamud tribe of Arabs, 410.
Thang, fifteenth Chinese dynasty, 600, 605, 615, 620.
later, seventeenth Chinese dynasty, 648–49.
Thapsia asclepium, 156.
fœtida, 342.
Garganica, 285.
silphium, 226.
villosa, 357.
Thaspium aureum, 923.
barbinode, 1041.
pinnatifidum, 1067.
trifoliatum, 1016.
Thea bohea, 540.
laxa, 755.
Thebes, city in Greece, 121, 152, 285, 323, 442, 448, 457, 464, 843, 1068.
Thelygonum cynocrambe, 197.
Theobroma cacao, 657.
Theodosian codex of laws, 566, 572.
Theophrasta Americana, 986.
Thera, or Calliste, isl. of, 150, 236.
Thermae, or baths, 548.
Thermopsis mollis, 1041.
Thesium linophyllum, 774.
Thespesia populnea, 427, 438.
Thessaly, country in Greece, 120, 798.
"The Wright's chaste wife," an English tale of the time of Edward IV., 829.
This, city in Egypt, 62.
Thistles, 211, 239, 360, 433, 508, 827.
Thlaspi alliaceum, 931.
alpestre, 922.
arvense, 419, 811.
bursa-pastoris, 419, 773, 958.
Buxbaumii, 1007.
campestre, see *Lepidium*.
ceratocarpum, 1031.
cordatum, 998.
hirtum, 937.
montanum, 921.
peregrinum, 931.
perfoliatum, 934.
saxatile, 530.
Thorn-apple, 596. 622.
Thoung-tian, Chinese encyclopædia, 620.
Thrace, 552, 784, 798.
Thracians, 153, 180.
Three-kings Island, near New Zealand, 953.
Thrift, 510.
Thrinax parviflora, 854.
Thrincia hirta, 361, 571.
Thsin, sixth Chinese dynasty, 383.
Thule, island north of Britain, 325.
Thunbergia alata, 381.
Thunder, in Egypt, 34, 139.
in Greenland, 767.
Thuringia, 680.
Thurium, or Sybaris, city in Southern Italy, 277.
Thuya cupressoides, 1029.
gigantea, 604.
Occidentalis, 866, 874–75, 942.
Orientalis, 886.
? retinosperma, 419.
Thujopsis dolabrata, 621.
laetevirens, 621.
Thylachium sumanqui, 383.
Thymbra spicata, 656.
verticillata, 912.
Thyme, 262, 295, 654, 718, 935.
Thymus alpinus, 907.
Barrelieri, 904.
glabratus, 272.
graveolens, 574
incanus, 295.
lanuginosus, 907.
mastichina, 906.
Pannonicus, 907.
Pativinus, &c., 993.
serpillum, 272, 969
vulgaris, 718, 969.
zygis, 376.
Ti, title of Chinese emperors, 686.
Ti plant, 438.
Tiahuanuco, ruins near Lake Titicaca, 580.
Tiarella biternata, 1054.
cordifolia, 991.
Menziesii, 1046.
trifoliata, 1017.
Tiaridium Indicum, 694.
Tiberias, city in Palestine, 553.
Tibet, 645, 735.
Tibetan literature, 623.
Tibor jars, 788.
Tiburtes, city in Italy, 174.
Ticonderoga, fortified post on Lake Champlain, 1035.
Tides, 389, 852.
Tiedemannia Carolinensis, 1040.
Tiflis, city on the West side of the Caspian, 678.
Tiger, figured, 87.
Tiger-flower, 650.
Tigridia pavonia, 650.
Tikopia, island near the New Hebrides, 888.
Tiles, 608.
Tilia Americana, 958, 968.
argentea, 227.
cordata, 561.
Europæa, 214, 451.
heterophylla, 1053–54.
parviflora, 418.
parvifolia, 451.
pubescens, 1021.
Tillæa aquatica, 1019.
muscosa, 972.
Vaillantii, 1006.
Tillandsia lingulata, &c., 986.
recurvata, 982.
tenuifolia, 984.
usneoides, 866, 869, 893.
utriculata, 901.
Tin, 80, 182, 575, 623, 642, 925.
Tinea, sp., 56.
Tine-tare, 557.
Tipularia discolor, 1016.
Tiryns, city in Greece, 153.
Tirzah, capital city of the kings of Israel, 191.
Titicaca Lake, in Peru, 580, 665, 667.
Toad-flax, 478, 774.
Tobacco, 741–42, 926, 929, 933, 954.
Tobolsk, capital of Siberia, 781, 812, 913, 1004.
Toddalia aculeata, 623.
angustifolia, 1067.
Toddy, crude sap of palms, 336, 642.
Todea Africana, 1000.
Tofieldia alpina, 907.
glutinosa, 1044.
palustris, 894.
pubens, 1016.
Toghlakabad, fort at Delhi, 775.
Toledo cathedral, 722.
Tolpis barbata, 934.
quadriaristata, 1003.
Toltec Mexicans, 580, 582-83, 604, 676.

Toluifera balsamum, see *Myrospermum*.
Tomato, 615.
Tombigbee River, 1021.
Tondo, 949.
Tongan Islands, in Pacific, 299, 953.
Tonka bean, 1025.
Tooth-cress, or *tooth-violet*, 848.
Toothwort, 557.
Torch-tree, 712.
wood, 1005.
Tordylium Apulum, 934.
humile, 992.
maximum, 321.
officinale, 307.
Syriacum, 906.
Torenia Asiatica, 974.
parviflora, 1051.
pumila, 731.
Torilis anthriscus, 472.
Helvetica, 889.
nodosa, 889.
Torres Straits, 925.
Torreya nucifera, 632.
taxifolia, 853.
Tortoise, 42, 136.
shell, 147, 639, 925.
Touch-me-not, 479, 803.
Toungoo, city of, 757.
Tourah, quarries at, 118.
Tourgaouts, the, 1030.
Tournaments, 690.
Tournefortia argentea, 966.
bicolor, 915.
cymosa, 982.
foetidissima, 986.
gnaphalodes, 999.
hirsutissima, 986.
humilis, 986.
serrata, 986.
suffruticosa, 982.
volubilis, 999.
Tovaria Virginiana, 952, 962.
Tozzia alpina, 934.
Trachelium coeruleum, 971.
Tracheotomy, 535.
Trachymene incisa, 999.
Tradescantia axillaris, 974.
cristata, 729.
geniculata, 986.
Malabarica, 974.
rosea, 1041.
Virginica, 940.
Trading companies, 891.
Trafalgar, naval combat at, 1055.
Tragacanth gum, 118, 254, 325, 327.
Tragedy, 244.
Tragia cannabina, 737.
chamaelea, 726.
furialis, 381.
involucrata, 577.
macrocarpa, 1044.
mercurialis, 974.
urens, 1000.
urticifolia, 962.
volubilis, 983.
Tragium Columnæ, 196.
peregrinum, 998.
Tragopogon crocifolius, 361.
lanatus, 900.
Orientalis, 910.
parrifolius, 625.
pratensis, 844.
Transmigration, doctrine of, 96.
Trapa bicornis, 124.
incisa, 371, 419.
natans, 133, 451.
Trautvetteria palmata, 1039.
Treason, trial for, where to be held, a matter of dispute between England and her North American colonies, 1029.
Treaty between Russia and China, 1008.
of Aix la Chapelle, between France and England, 1020.
of Amiens, 1053.
of amity, &c., between Holland and the North American States, 1038.
of amity, &c., between the North American States and Denmark, Spain, Sweden, Russia, and England, 1038; Prussia, 1039; second with England, 1048.
of peace, between Whites and Aboriginals of New England, 1008.
of peace, between France and England, 1025.
of Utrecht, between France and England, 1004.
of Vienna, 1015.
Trebizond, or Trapezus, city on the Black Sea, 211, 539, 825.
Tremella nostoc, 790.
Trenton, town in New Jersey, 1035.
Trepan, surgical instrument, 306.
Treres, Cimmerian tribe, 213.
Trianthema crystallina, 1026.
decandra, 738.
monogyna, 1000.
obcordata, 738.
pentandra, 894.
Tribulus cistoides, 991.
lanuginosus, 970.
maximus, 982.
terrestris, 97.
Tribunes, Roman, 288, 291, 296, 301, 308.
Trichecus rosmarus, walrus, 948.
Trichilia Capensis, 766.
emetica, 626.
hirta, 982.
spondioides, 982.
trifoliata, 1022.
Trichodesma Africanum, 563.
Indicum, 400.
Zeylanicum, 400.
Trichodium elatum, 1039.
laxiflorum, 1033.
Trichodium perennans, 1039.
Trichomanes membranaceum, &c., 987.
muscoides, 983.
Trichophorum eriophorum, 961.
lineatum, 1041.
Trichophyllum lanatum, 1055.
Trichosanthes amara, 987.
anguina, 723.
cordata, 578, 974.
cucumerina, 413.
dioica, 413.
nervifolia, 974.
palmata, 523.
Trichostema brachiata, 1011.
dichotoma, 962.
Trichostomum ericoides, 937.
Tricuspis ambigua, 1061.
sesleroides, 1004.
Trientalis Americana, 1019.
Europæa, 911.
Trifolium agrarium, 849.
Alexandrinum, 124.
alpestre, 921.
alpinum, 918.
angustifolium, 898.
arvense, 315.
badium, 971.
campestre, 882.
Carolinianum, 1049.
Cherleri, 937.
clypeatum, 930.
elegans, 1035.
filiforme, 919.
fragiferum, 382.
glomeratum, 1000.
hedysaroides, 1005.
hybridum, 871.
incarnatum, 995.
involucratum, 582.
lappaceum, 918.
macrocephalum, 1055.
maritimum, 919.
medium, 977.
microcephalum, 1055.
montanum, 883.
pratense, 473.
procumbens, 654.
reflexum, 1016.
repens, 557.
resupinatum, 338.
rubens, 906.
saxatile, 937.
scabrum, 937.
spadiceum, 781.
sphaerocephalum, 971.
spumosum, 937.
squarrosum, 479, 902.
stellatum, 826.
stoloniferum, 1059.
striatum, 989.
subterraneum, 973.
tomentosum, 894.
Triglochin maritimum, 903, 969.
palustre, 255.
triandrum, 1041.

Trigonella elatior, 338.
fœnum græcum, 37, 174.
hamosa, 146.
polycerata, 889, 894.
Ruthenica, 1013.
spinosa, 975.
Trillium Camtschaticum, 1058.
cernuum, 1003.
erectum, 938, 970.
erythrocarpum, 1041.
grandiflorum, 1043.
ovatum, 605.
petiolatum, 1055.
pusillum, 1041.
sessile, 999.
Trincomalee wood, 244.
Tænia dioica, 435.
Trinidad, island, discov., 857, 916.
Trinity, doctrine of, 705.
Trinity Church, in New York, 990.
Triodia pungens, 22.
Trionyx, river-tortoise, 42.
Triosteum angustifolium, 999.
perfoliatum, 1011.
Triphasia trifoliata, 608.
Triplasis Americana, 1059.
purpurea, 1039.
Tripsacum cylindricum, 1043.
dactyloides, 964.
Trisetum flavescens, 839.
molle, 1044.
palustre, or *Pennsylvanicum*, 1020.
pubescens, 988.
subspicatum, 904.
Tristegis glutinosa, 1059.
Tristemma virusarum, 384.
Triticum caninum, 876.
junceum, 894.
loliaceum, 930.
monococcum, 167, 451, 456.
Polonicum, 999.
repens, 666, 873, 940.
rigidum, 937.
spelta, 167, 176, 451.
tenellum, 978.
turgidum, 59, 451.
unilaterale, 993.
villosum, 801.
vulgare, wheat, 78, 154, 451.
Triumfetta annua, 1024.
Bartramia, 1000.
lappula, 988.
rhomboidea, 1022.
tomentosa, 380.
Triumphal processions, 542, 545.
Triumvirates, Roman, 448, 456.
Trochetia Candolleana, 1067.
Troglodytes niger, chimpanzee, 268.
Trollius Europæus, 889.
laxus, 1050.
patulus, 1007.
Tropæolum majus, 901.
minus, 898.
peregrinum, 1002.
Tropæolum tuberosum, 678.
Trophis Americana, 987.
aspera, see *Epicarpurus*.
spinosa, 966.
Troximum cuspidatum, 1057.
glaucum, 1057.
Troy, or Ilium, city of, 152, 174.
Truffle, 260.
Trulove, 829.
Trumpet-flower, 899, 942.
Tsin, the later, Chinese dynasty, (see Tcin).
Tsi-tsien, Corean dynasty, 798.
Tsiou-son, dynasty, 711.
Ttahuantin-suyu, earliest inhabitants of Peru, 580.
Tuber cibarium, 260.
Tube-rose, 915.
Tuckaho, 761.
Tulip, 758.
Tulip-tree, 767.
Tulipa biflora, 1034.
Breyniana, 975.
Celsiana, 350.
Clusiana, 483.
Gesneriana, 758, 884.
oculus-solis, 1044.
Sibthorpiana, 350.
sylvestris, 906, 1029, 1034.
suaveolens, 903.
Tumebamba, in Peru, temples there, 799.
Tungusi tribes, 759.
Tupelo, a gum tree, 769.
Turdus Migratorius, 875.
Turgenia latifolia, 934.
Turia moghadd, 390.
Turkestan, in Central Asia, 133.
Turkey, art of printing introduced into, with printing of books in Turkish language, 1024.
war with Russia, 1028.
Turkey, the domestic, 614, 939.
Turkish empire, 764.
Turks ("Tourkoi"), 586, 705, 774, 789, 798, 812, 862, 903, 943, 1062, 1065.
Turmeric, 189, 521, 526, 595.
Turnera cistoides, 982.
pumila, 982.
ulmifolia, 982.
Turnip, 276, 808, 909, 929, 935, 944.
Turnsole, 98.
Turnspit, 20.
Turpentine, 93, 123, 424.
Turquoise, 66, 106.
Turritis glabra, 847, 911, 958.
Loeselii, 882.
pubescens, 1015.
Turtle, 915, 981.
Turtle-dove, 27.
Tuscany, 267.
Tuscaroras, aboriginal N. American tribe, 1003.
Tussilago (*Petasites*) *albus*, 910.
alpina, 889.
Tussilago anandria, 1013.
discolor, 894.
farfara, 259.
frigida, 991.
Japonica, 1000.
lævigata, 1013.
lyrata, 1013.
nivea, 928.
petasites, 395.
sagittata, 1060.
spuria, 928.
Tutui-nut, 216.
Tver, city on the Volga, 8.
Tway-blade, 541.
Twilight, brief between the Tropics, 427.
Tylophora asthmatica, 524.
Typha angustifolia, 68, 418.
elephantina, 746.
latifolia, 68, 96.
media, 898.
Tyre, city in Phœnicia, 139, 179, 326.
Tyrian dye, 142.
Tzompanco, city in Mexico, 720.
Tzukchi, tribe of N. Eastern Asia, 1008.

UJEN, city in Hindustan, 667, 722.
Ulex Europæus, 685.
nanus, 894.
Ulmus alata, 909.
alternifolia, 476.
Americana, 873, 923, 929, 940, 1010.
campestris, 366, 622.
effusa, 171.
fulva, 757.
integrifolia, 252.
microphylla, 759.
suberosa, 171.
Ulva intestinalis, 920.
lactuca, 296.
latissima, 704.
Umbellif. incer., 766.
plicata, 910.
umbilicalis, 904.
Umbrellas, invention of, 198, 338.
Umbrians, original inhabitants of Italy, 132.
Umiri balsam, 673.
Unam Sanctam, papal decretal, 765.
Uncaria gambir, 445.
Unguis odoratus, 144.
Uniformity Act in England, 961.
Unio (margaritaceus) sp., fresh-water muscles, 619.
Uniola gracilis, 1016.
latifolia, 1025.
paniculata, 999.
Union between England and Scotland, signing of, 1001.
United States of America, the, first formation of, 1035.

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